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Knowledge, attitude, difficulty and perceived stress levels regarding COVID-19 among syrians under temporary protection in Türkiye

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Abstract

The coronavirus disease (COVID-19) pandemic altered everyone's lifestyle causing major restrictions in public health practices and social life all over the world. Therefore, refugees who were already living a disrupted life were more affected by this situation. This study was aimed to determine the difficulties, knowledge levels and stress levels of Syrian refugees in Türkiye during the COVID-19 pandemic. This study included 633 Syrian refugees who applied to Migrant Health Centers (MHC) in Gaziantep province between March 2022 and May 2022. Participants filled out a questionnaire consisting of 61 questions including sociodemographic data and knowledge about the COVID-19 pandemic. Additionally, the participants' Perceived Stress Scale (PSS) was evaluated. Three hundred and five of the participants were women and 328 were men, and the average age was 38.46 ± 11.72 years. It was observed that 24.5% of the participants were unemployed, 46.6% were economically supported, and all of them had low income levels. It was determined that the majority of the participants did not have sufficient information about the COVID-19 pandemic and almost half of them had difficulties obtaining clean water, cleaning materials, masks, medicine and healthcare services. It was determined that those who could speak Turkish faced more challenges getting masks and medicines than those who did not speak Turkish. Participants' PSS scores were at the upper limit of moderate stress. It was also revealed that PSS scores decreased as the duration of residence in Türkiye increased. Our findings reveal that Syrian refugees experienced difficulties in many areas during the COVID-19 pandemic. It was also determined that perceived stress among Syrian refugees was quite high.

Keywords: Coronavirus disease refugees, Perceived Stress Scale

Introduction

The coronavirus disease (COVID-19) outbreak was first identified at the end of 2019 in Wuhan, China. According to World Health Organization (WHO), more than 772 million COVID-19 cases and more than 6.9 million deaths due to COVID-19 have been reported as of December 13, 2023 [1]. COVID-19, which spread all over the world in five months, caused major restrictions in public health practices and social life [2]. Self-isolation or quarantine, social distancing, curfews, hygiene measures, and economic isolation during the pandemic have not only led to lifestyle changes but also caused deteriorations in mental health and quality of life [3]. This situation has especially affected vulnerable groups such as people with chronic diseases, older adults and refugees [4].

The global prevalence of anxiety has been reported to have increased by 25% during the COVID-19 pandemic [5]. It has been determined that quarantine practices and difficulties in accessing basic services (medicine, health, food and hygiene supplies) during the pandemic contributed to increased stress and anxiety [6,7]. Although the pandemic had negative effects on anxiety and stress in general, at-risk groups were more vulnerable [8]. Refugees were particularly affected during the pandemic due to extra factors that altered access to healthcare such as cultural, linguistic, low socioeconomic status, and fear of accessing care. Moreover, refugees experience mental health problems at even higher rates due to the trauma they experienced before migration [9].

According to the United Nations High Commissioner for

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Refugees, 26 million refugees fled their countries for various reasons [10]. Due to the internal turmoil that broke out in Syria in 2011, many Syrians were forced to migrate [11]. Refugees from both Syria and other countries in the region made Türkiye the country hosting the most refugees in the world. As of January 2023, the number of Syrians defined as "Temporary Protection" in Türkiye was reported over 3.5 million [12]. The intense migration of Syrian refugees to Türkiye put Türkiye in a difficult situation in many areas. In particular, the health problems of migrating people caused difficulties in the supply of necessary medicines as well as the number of health centers and health personnel in Türkiye. In addition, the COVID-19 pandemic made life even more challenging for Syrian refugees. As a matter of fact, refugees in Türkiye had difficulties in meeting basic needs during the pandemic [13]. Since the majority of Syrian immigrants living in Türkiye consisted of vulnerable groups such as the elderly, women and children, they were at greater social and psychological risk. This study aimed to determine the difficulties, knowledge levels and stress levels of Syrian refugees who applied to Migrant Health Centers (MHC) in Gaziantep province, where 434,962 Syrian refugees lived, during the COVID-19 pandemic.

Material and Methods

This descriptive cross-sectional study was conducted with Syrian refugees between the ages of 18 and 60 who applied to MHCs in Gaziantep between 03.03.2022 and 05.27.2022. Ethical approval for the study was received from İnönü University Health Sciences Non-invasive Research Ethics Committee (numbered 2022/2680 and dated 22.02.2022). In addition, necessary permits and approvals were obtained from Gaziantep Provincial Immigration Administration and Gaziantep Provincial Health Directorate. The sample size was determined to be 633 people (10% more than 576) with 95% confidence interval, 80% power, 5% margin of error and 1.5 pattern effects with the OpenEpi program.

Participants completed a questionnaire, which included 61 questions about socio-demographic characteristics, opinions on the COVID-19 pandemic, and a perceived stress level survey to measure the participants' stress level during the pandemic. Each item in the survey information form was evaluated individually by translators proficient in Arabic and Turkish languages to determine the most appropriate Arabic expressions. When developing the Arabic version of the survey, classical Arabic was used.

Perceived Stress Scale (PSS)

Perceived Stress Scale (PSS)-10 was developed by Cohen and Williamson 1988 [14]. A PSS, consisting of a total of 10 items, measures the perception about stressful situations by an individual. The PSS-10 scale was modified according to the stress that may be experienced during the COVID-19 pandemic. The scale contains ten dimensions; Stress in obtaining sterilization materials, Stress in supplying masks, Economic stress, Stress of being unemployed, Stress in receiving health care, Stress of having COVID-19, Stress experienced in case of psychological need,

Stress experienced when away from crowds, Stress in obtaining medication and Stress in vaccinating children. Participants evaluate each item on a 5-point Likert-type scale ranging from "Never (0)" to "Very often (4)". In the validity and reliability analysis, the internal consistency coefficient of the survey was determined as Cronbach alpha 0.74. PSS-10 scores range from 0 to 40, and a high score indicates a person's perception of stress is high. Scores between 0 and 13 will be considered low stress, scores between 14 and 26 will be considered moderate stress, and scores between 27 and 40 will be considered high perceived stress.

Statistical Analysis

Number Cruncher Statistical System 2007 (NCSS) (Kaysville, Utah, USA) program was used for statistical analysis. Study data are given as mean, standard deviation, median, frequency, percentage, minimum, and maximum. The suitability of quantitative data for normal distribution was tested using the Shapiro-Wilk test and graphical analysis. Independent groups t-test was used for comparisons between normally distributed variables between two groups. A Mann-Whitney U test was used for comparisons between two groups for variables that did not show normal distribution. One-way analysis of variance and binary evaluations with Bonferroni correction were used for comparisons of normally distributed variables between more than two groups. Kruskal-Wallis test and Dunn-Bonferroni test were used for comparisons between more than two groups of variables that did not show normal distribution. Pearson chi-square test and Fisher-Freeman-Halton exact test were used to compare qualitative data. In all evaluations, a p-value of less than 0.05 was found to be significant.

Results

Demographic data of the participants included in the study are given in Table 1. A total of 633 participants were included in the study, 48.0% (n=305) of whom were female and 51.8% (n=328) of whom were male. The mean age of the participants was 38.46±11.72 and ranged between 18 and 60 years old. In addition, 27.7% (n=180) of the participants were married, 24.2% (n=157) were single, 21.2% (n=138) were widowed and 26.9% (n=175) were divorced. It was determined that 11.2% (n=73) of Syrian refugees were literate, 14.6% (n=95) were in primary school, 15.8% (n=103) were in secondary school, 13.5% (n=88) were in high school, 16.3% (n=106) were in university and 17.1% (n=111) had a master's degree. It was observed that 24.5% (n=159) of the participants were unemployed, 21.1% (n=137) had an income between 4001-5000 Turkish Lira and 46.6% (n=303) economically supported. One hundred thirty eight (21.2%) participants lived with other refugees and 126 (19.4%) participants stated that they lived with more than 9 people in their household. The languages spoken by the participants other than their native language were Turkish with 33.2% (n=216), English with 34.2% (n=222) and Kurdish with 32.6% (n=212). The duration of residence of the participants in Türkiye was 1-3 years for 32.6% (n=212), 4-6 years for 34.3% (n=223) and 33.1% (n=215) were 6-10 years.

Table 1. Sociodemographic characteristics of the participants

Variables	n (%)	
Gender	Female	305 (48.2)
	Male	328 (51.8)
Age, years, Mean±SE. Median (Min-Max)		38.46±11.72. 39 (18-59)
Marital status	Married	180 (27.7)
	Single	157 (24.2)
	Widow	138 (21.2)
	Divorced/separated	175 (26.9)
Number of children	None	241 (38.3)
	There is	392 (61.7)
	1	93 (23.2)
	2	78 (19.5)
	3	79 (19.7)
	4	78 (19.5)
	>4	73 (18.2)
Educational status	Illiterate	74 (11.4)
	Literate	73 (11.2)
	Primary school	95 (14.6)
	Middle school	103 (15.8)
	High school	88 (13.5)
	University	106 (16.3)
	Master degree	111 (17.1)
Profession	Unemployed	159 (24.5)
	Tradesman	175 (26.9)
	Instructor	163 (25.1)
	Freelance	153 (23.5)
Working status	Student	88 (13.5)
	Housewife	44 (6.8)
	Retired	78 (12.0)
	Working	139 (21.4)
	Not working	100 (15.4)
	Not working (worked before)	201 (30.9)
Income status (Turkish Liras)	0-1000	132 (20.3)
	1001-2000	120 (18.5)
	2001-3000	132 (20.3)
	3001-4000	129 (19.8)
	4001-5000	137 (21.1)
Do you receive economic support?	Yes	287 (46.6)
	No	329 (53.4)
Total number of people in your household.	1	137 (21.1)
	2-3	130 (20.0)
	4-6	110 (16.9)
	6-8	147 (22.6)
	≥ 9	126 (19.4)
Who they live with?	Alone	125 (19.2)
	Family	204 (31.4)
	Spouse	98 (15.1)
	With his/her spouse and children	85 (13.1)
	With other refugees	138 (21.2)
Languages you speak other than your mother tongue	Turkish	216 (33.2)
	English	222 (34.2)
	Kurdish	212 (32.6)
How long have you been residing in Türkiye?	1-3 years	212 (32.6)
	4-6 years	223 (34.3)
	6-10 years	215 (33.1)
Do you think that the people of Gaziantep ignore and discriminate against you?	Yes	315 (49.7)
	No	318 (50.3)

Table 1. Sociodemographic characteristics of the participants

Variables	n (%)	
Do you find your level of knowledge about the epanemic sufficient?	Yes	199 (30.6)
	No	209 (32.2)
	Partially	242 (37.2)
Where do you get information about the pandemic?	Television	110 (16.9)
	Newspaper, magazine	106 (16.3)
	Social media	107 (16.5)
	Scientific sources	112 (17.2)
	Household, neighbors	111 (17.1)
	Other	104 (16.0)
Do you exercise regularly?	Yes	57 (10.0)
	No	576 (90.0)
Do you have a chronic disease diagnosed by a doctor?	Yes	334 (52.6)
	No	299 (47.4)

The participants' knowledge levels regarding the COVID-19 pandemic are given in Table 2. In general, it was observed that

the majority of participants did not have sufficient knowledge about the COVID-19 pandemic.

Table 2. Participants' knowledge levels about the COVID-19 pandemic

	Right		Wrong		I don't know	
	n	%	n	%	n	%
Symptoms of COVID-19 appear 2-14 days after infection	212	32.6	223	34.3	215	33.1
COVID-19 has a high death rate	212	32.6	223	34.3	215	33.1
COVID-19 is highly contagious	156	24.0	11	1.7	483	74.3
Washing hands with soap and water is enough to protect against COVID-19	212	32.6	223	34.3	215	33.1
COVID-19 was thought to originate from mice	156	24.0	11	1.7	483	74.3
COVID-19 is transmitted through air	212	32.6	223	34.3	215	33.1
COVID-19 is transmitted through food	156	24.0	11	1.7	483	74.3
COVID-19 is transmitted through contact	156	24.0	11	1.7	483	74.3
It is necessary to wash hands with soap and water	212	32.6	223	34.3	215	33.1
It is necessary to keep social distance from people	212	32.6	223	34.3	215	33.1
There is a vaccine for COVID-19 disease	156	24.0	11	1.7	483	74.3
COVID-19 disease has specific treatment	212	32.6	223	34.3	215	33.1
Pets at home can transmit COVID-19	156	24.0	11	1.7	483	74.3
Getting a flu vaccine protects against illness	212	32.6	223	34.3	215	33.1
COVID-19 disease can cause fever	156	24.0	11	1.7	483	74.3
Cough may occur in COVID-19	212	32.6	223	34.3	215	33.1
Vomiting may occur in COVID-19	156	24.0	11	1.7	483	74.3
Using a mask protects from disease	156	24.0	11	1.7	483	74.3
Antibiotics may benefit COVID-19	212	32.6	223	34.3	215	33.1
Only the elderly and those with chronic diseases are affected by COVID-19	212	32.6	223	34.3	215	33.1
Regularly rinsing the mouth and nose with salt water prevents the disease.	156	24.0	11	1.7	483	74.3
Garlic protects from coronavirus	212	32.6	223	34.3	215	33.1
Hair dryers can kill the virus	156	24.0	11	1.7	483	74.3
COVID-19 is transmitted by mosquito bites	212	32.6	223	34.3	215	33.1
COVID-19 is not transmitted in hot weather	156	24.0	11	1.7	483	74.3
Very hot water can kill coronavirus	212	32.6	223	34.3	215	33.1
Coronavirus dies in cold weather	212	32.6	223	34.3	215	33.1

The difficulties experienced by the participants during the COVID-19 pandemic are presented in Table 3. It was observed that 46.5% (n=302) of the participants had difficulties obtaining

clean water, 50.8% (n=330) in supplied cleaning materials, 51.5% (n=335) provided masks, 49.7% (n=323) were able to stay away from crowds, 51.1% (n=332) provided antiseptic solution

or cologne, 47.1% (n=306) provided medicine, 39.1% (n=193) had their children vaccinated, 49.1% (n=319) received health care and 49.4% (n=321) had economic difficulties during the COVID-19 pandemic. The number of participants who needed psychological support during the pandemic was 334 (51.4%).

Table 3. Distribution of the difficulties experienced by the participants during COVID-19

		n (%)
Have you had any problems with water supply during the COVID-19 outbreak?	Yes	294 (46.5)
	No	339 (53.5)
Did you have any difficulties in obtaining cleaning materials during the COVID-19 pandemic?	Yes	322 (50.8)
	No	311 (49.2)
Did you have trouble obtaining a mask during the COVID-19 pandemic?	Yes	327 (51.5)
	No	306 (48.5)
Have you had difficulty staying away from crowds during the COVID-19 outbreak?	Yes	315 (49.7)
	No	318 (50.3)
Have you experienced financial difficulties during the COVID-19 outbreak?	Yes	313 (49.4)
	No	320 (50.6)
Have you experienced unemployment problems during the COVID-19 outbreak?	Yes	312 (49.2)
	No	321 (50.8)
Have you had difficulty obtaining antiseptic solution or cologne?	Yes	324 (51.1)
	No	309 (48.9)
Have you had difficulty obtaining health care?	Yes	311 (49.1)
	No	322 (50.9)
Have you had difficulty obtaining medication?	Yes	298 (47.1)
	No	335 (52.9)
If you have a child, have you had any problems getting their vaccinations?	Yes	185 (39.1)
	No	291 (60.9)
Has there been a change in your ability to go to work during the pandemic?	Decreased	112 (17.2)
	No change	148 (22.8)
	It increased	72 (11.1)
	I wasn't working anyway	318 (48.9)
How many people in your household, including yourself, have been diagnosed with COVID-19?	1-5	122 (24.4)
	6-10	118 (23.6)
	11-15	124 (24.8)
	16-19	136 (27.2)
Have any of your relatives, other than those living in your household, been diagnosed with COVID-19?	Yes. (Mother, Father)	229 (35.2)
	Yes. (Uncle, aunt, etc)	214 (32.9)
	No	207 (31.8)
Did you need psychological support during the pandemic?	Yes	326 (51.4)
	No	307 (48.6)
Have you experienced financial difficulties during the COVID-19 pandemic?	Yes	366 (53.4)
	No	294 (46.6)
Have you been unemployed during the COVID-19 outbreak?	Yes	325 (51.2)
	No	308 (48.8)

The relationship between the difficulties experienced by the participants during the Covid 19 pandemic and demographic data is given in Table 4. It was observed that gender, educational level, and profession of the participants were not related to the problems they experienced. However, it was determined that those who could speak Turkish had more difficulties in obtaining masks (p=0.016) and medication (p=0.014) than those who could not speak Turkish (Table 5). The ages of the participants who had difficulties in obtaining masks during the COVID-19 pandemic were found to be statistically and significantly lower than those who did not have problems (p=0.031).

Table 4. Distribution of the difficulties experienced by the participants during the COVID-19 pandemic according to demographic data

	Gender		Educational status				Profession			
	Female (n=305)	Male (n=328)	P	Primary school (n=242)	Middle school (n=191)	University (n=217)	P	Tradesman	Instructor	Freelance
Inability to reach basic needs (water & cleaning & mask)	Yes	41 (13.1)	52 (15.4)	43 (17.8)	27 (14.1)	23 (10.6)	^a 0.087	23 (13.1)	27 (16.6)	20 (13.1)
	No	272 (86.9)	285 (84.6)	199 (82.2)	164 (85.9)	194 (89.4)		152 (86.9)	136 (83.4)	133 (86.9)
Have you experienced financial difficulties during the COVID-19 outbreak?	Yes	154 (49.2)	167 (49.6)	122 (50.4)	89 (46.6)	110 (50.7)	^a 0.659	89 (50.9)	86 (52.8)	70 (45.8)
	No	159 (50.8)	170 (50.4)	120 (49.6)	102 (53.4)	107 (49.3)		86 (49.1)	77 (47.2)	83 (54.2)
Have you experienced unemployment problems during the COVID-19 outbreak?	Yes	151 (48.2)	169 (50.1)	126 (52.1)	85 (44.5)	109 (50.2)	^a 0.282	94 (53.7)	72 (44.2)	73 (47.7)
	No	162 (51.8)	168 (49.9)	116 (47.9)	106 (55.5)	108 (49.8)		81 (46.3)	91 (55.8)	80 (52.3)
Have you had difficulty obtaining health care?	Yes	153 (48.9)	166 (49.3)	119 (49.2)	95 (49.7)	105 (48.4)	^a 0.963	90 (51.4)	78 (47.9)	79 (51.6)
	No	160 (51.1)	171 (50.7)	123 (50.8)	96 (50.3)	112 (51.6)		85 (48.6)	85 (52.1)	74 (48.4)
Did you have any problems receiving your salary during the pandemic?	Yes	143 (45.7)	176 (52.2)	122 (50.4)	102 (53.4)	95 (43.8)	^a 0.132	86 (49.1)	73 (44.8)	73 (47.7)
	No	170 (54.3)	161 (47.8)	120 (49.6)	89 (46.6)	122 (56.2)		89 (50.9)	90 (55.2)	80 (52.3)
Did you need psychological support during the pandemic?	Yes	160 (51.1)	174 (51.6)	111 (45.9)	107 (56.0)	116 (53.5)	^a 0.084	85 (48.6)	94 (57.7)	73 (47.7)
	No	153 (48.9)	163 (48.4)	131 (54.1)	84 (44.0)	101 (46.5)		90 (51.4)	69 (42.3)	80 (52.3)
Have you experienced financial difficulties during the COVID-19 pandemic?	Yes	165 (52.7)	182 (54.0)	122 (50.4)	107 (56.0)	118 (54.4)	^a 0.481	97 (55.4)	86 (52.8)	83 (54.2)
	No	148 (47.3)	155 (46.0)	120 (49.6)	84 (44.0)	99 (45.6)		78 (44.6)	77 (47.2)	70 (45.8)

a: Fisher Freeman Halton Test, b: Pearson Chi-Square Test

Table 5. The relationship between the difficulties experienced during the COVID-19 pandemic and sociodemographic data

	Did you have any difficulty obtaining a mask?		Did you need psychological support?		Did you have any difficulty obtaining medication?		Did you have any difficulty with water supply?	
	Yes (n=327)	No (n=306)	Yes (n=294)	No (n=339)	Yes (n=298)	No (n=335)	Yes (n=294)	No (n=339)
Gender	Female	160 (47.8)	153 (48.6)	160 (47.9)	153 (48.4)	141 (46.1)	172 (50.0)	151 (50.0)
	Male	175 (52.2)	162 (51.4)	174 (52.1)	163 (51.6)	165 (53.9)	172 (50.0)	151 (50.0)
Speaking Turkish	Yes	147 (43.9)	168 (53.3)	172 (51.5)	143 (45.3)	164 (53.6)	151 (43.9)	152 (50.3)
	No	188 (56.1)	147 (46.7)	162 (48.5)	173 (54.7)	142 (46.4)	193 (56.1)	150 (49.7)
Presence of chronic disease	Yes	59 (17.6)	62 (19.7)	64 (19.2)	57 (18.0)	56 (18.3)	65 (18.9)	62 (20.5)
	No	276 (82.4)	253 (80.3)	270 (80.8)	259 (82.0)	250 (81.7)	279 (81.1)	240 (79.5)

b: Pearson Chi-Square Test, c: Student-t Test

The scores the participants received from the PSS survey questions are given in Table 6. In terms of the subsections of the PSS, no significant difference was observed between the scores of the participants who stated that they experienced stress and the scores of the participants who stated that they did not experience stress. It was observed that the survey scores of the participants who had lived in Türkiye for 6-10 years were lower than the survey scores of those who had lived in Türkiye for 1-3 years and 4-6 years ($p=0.001$ for both). At the same time, it was observed

that the survey scores received by those who lived in Türkiye for 1-3 years were higher than the survey scores received by those who lived in Türkiye for 4-6 years ($p=0.001$). No differences were observed in terms of survey scores on issues such as languages other than the mother tongue, presence of chronic disease, inability to reach basic needs during the COVID-19 pandemic, economic difficulties, unemployment, level of knowledge about the pandemic and need for psychological support (Table 7).

Table 6. Distribution of participants according to the perceived stress scale (PSS) they experienced during the COVID-19 pandemic

		PSS		p
		IQR	Median (Min-Max)	
Stress in obtaining sterilization materials (Have you had difficulty obtaining antiseptic solution or cologne?)	Yes (n=324)	26.24±19.24	29.6 (0-63)	f0.552
	No (n=309)	25.46±18.34	22.2 (0-63)	
Stress in obtaining masks (Did you have trouble obtaining a mask during the COVID-19 pandemic?)	Yes (n=327)	26.38±18.78	22.2 (0-63)	f0.509
	No (n=306)	25.30±18.83	22.2 (0-63)	
Economic stress (Have you experienced financial difficulties during the COVID-19 outbreak?)	Yes (n=313)	26.79±18.82	29.6 (0-63)	f0.198
	No (n=320)	24.95±18.75	22.2 (0-63)	
Unemployment stress (Have you experienced unemployment problems during the COVID-19 pandemic?)	Yes (n=312)	26.6±19.61	22.2 (0-63)	0.420
	No (n=321)	25.14±17.97	22.2 (0-63)	
Stress in receiving healthcare (Have you had difficulty obtaining health care during the COVID-19 pandemic?)	Yes (n=311)	26.07±19.16	22.2 (0-63)	f0.855
	No (n=322)	25.66±18.46	22.2 (0-63)	
Stress of having COVID-19 (Have you been diagnosed with COVID-19 during the COVID-19 outbreak?)	Yes (n=255)	26.49±17.59	29.6 (0-63)	f0.245
	No (n=378)	25.43±19.58	22.2 (0-63)	
Stress experienced in case of psychological need (Did you need psychological support during the COVID-19 pandemic?)	Yes (n=326)	25.34±18.61	22.2 (0-63)	f0.439
	No (n=307)	26.41±19	29.6 (0-63)	
Stress experienced when being away from crowds (Have you had difficulty staying away from crowds during the COVID-19 pandemic?)	Yes (n=315)	26.67±19.22	29.6 (0-63)	f0.394
	No (n=318)	25.05±18.36	22.2 (0-63)	
Stress in obtaining medication (Did you have difficulty obtaining medicine during the COVID-19 pandemic?)	Yes (n=298)	26.07±18.48	29.6 (0-63)	f0.969
	No (n=335)	25.67±19.09	22.2 (0-63)	
Stress in vaccinating your children (Have you had trouble getting your child vaccinated for COVID-19?)	Yes (n=326)	26.58±19.91	29.6 (0-63)	f0.258
	No (n=307)	25.33±17.38	22.2 (0-63)	

f: Mann Whitney-U Test, ** $p<0.01$

Table 7. The relationship between some sociodemographic data of the participants and the perceived stress scale (PSS)

		PSS		p
		IQR	Median (Min-Max)	
Languages you speak other than your mother tongue	Turkish	25.82±19.78	29.6 (0-63)	e0.542
	English	26.44±18.85	29.6 (0-63)	
	Kurdish	25.28±17.74	22.2 (0-63)	
How long have you been residing in Türkiye?	1-3 years	41.09±12.86	33.3 (33.3-63)	e0.001**
	4-6 years	29.20±12.48	22.2 (22.2-51.9)	
	6-10 years	7.37±12.72	0 (0-29.6)	

eKruiskal Wallis Test & Dunn Bonferonni Test, fMann Whitney-U Test, ** $p<0.01$

Table 7. The relationship between some sociodemographic data of the participants and the perceived stress scale (PSS)

		PSS		P
		IQR	Median (Min-Max)	
Did any of your relatives die during the civil conflict or while migrating from Syria?	Yes	26.18±18.60	22.2 (0-63)	*0.545
	No	25.32±19.14	22.2 (0-63)	
Do you have a chronic disease diagnosed by a doctor?	Yes	25.90±18.90	22.2 (0-63)	*0.933
	No	25.81±18.70	22.2 (0-63)	
Inability to reach basic needs (water & cleaning & mask)	Yes	24.85±21.25	22.2 (0-63)	*0.568
	No	26.03±18.37	22.2 (0-63)	
Have you experienced financial difficulties during the COVID-19 outbreak?	Yes	26.79±18.82	29.6 (0-63)	*0.198
	No	24.95±18.75	22.2 (0-63)	
Have you experienced unemployment problems during the COVID-19 outbreak?	Yes	26.60±19.61	22.2 (0-63)	*0.420
	No	25.14±17.97	22.2 (0-63)	
Have you had difficulty obtaining health care?	Yes	26.07±19.16	22.2 (0-63)	*0.855
	No	25.66±18.46	22.2 (0-63)	
Did you have any problems receiving your salary during the pandemic?	Yes	25.94±18.20	22.2 (0-63)	*0.914
	No	25.78±19.37	29.6 (0-63)	
How many people in your household, including yourself, have been diagnosed with COVID-19?	1-5	26.62±18.54	29.6 (0-63)	*0.830
	6-10	25.74±18.12	22.2 (0-63)	
	11-15	25.54±18.47	22.2 (0-63)	
	16-19	25.90±18.53	29.6 (0-63)	
Do you find your level of knowledge about the pandemic sufficient?	Yes	24.77±20.27	22.2 (0-63)	*0.439
	No	27.22±17.37	29.6 (0-63)	
	Partially	25.57±18.72	22.2 (0-63)	
Did you need psychological support during the pandemic?	Yes	25.34±18.61	22.2 (0-63)	*0.439
	No	26.41±19.00	29.6 (0-63)	
I think that measures have been taken for Syrians in a timely and adequate manner.	Yes	25.20±18.91	22.2 (0-63)	*0.294
	No	26.46±18.69	29.6 (0-63)	
Have you experienced financial difficulties during the COVID-19 pandemic?	Yes	25.48±18.56	22.2 (0-63)	*0.647
	No	26.29±19.08	22.2 (0-63)	

eKruskal Wallis Test & Dunn Bonferonni Test, fMann Whitney-U Test, **p<0.01

Discussion

In this survey, the difficulties experienced by Syrian refugees applying to MHCs in Gaziantep during the COVID-19 pandemic, their knowledge levels and perceived stress levels were investigated. It was determined that the majority of the participants did not have sufficient knowledge about the COVID-19 pandemic. It was also observed that approximately half of the participants had difficulties obtaining clean water, cleaning materials, masks, medicines and healthcare services. Participants' scores on the PSS were generally above 25 points, and participants' perceived stress levels were at the upper limit of moderate stress. Interestingly, it was determined that those who could speak Turkish had more difficulties in obtaining masks and medicine than those who could not speak Turkish. Additionally, it was revealed that PSS scores decreased as the duration of residence in Türkiye increased.

The measures taken during the COVID-19 pandemic, which caused the death of more than six million people worldwide, affected the mental and physical health of people globally [15]. The global economic recession resulting from the measures taken throughout the pandemic also had many devastating consequences [16]. Poorer socioeconomic conditions may negatively impact access to resources during the pandemic, increasing vulnerability to infection and disease [17]. Nevertheless, the pandemic has had a greater impact on refugees living in vulnerable conditions, underserved and low-resourced [18]. Resource constraints may be more evident in disadvantaged groups such as refugees, so it may be difficult for them to recover after the pandemic. Therefore, it is vital to identify deficiencies as soon as possible and intervene early.

Studies have shown that refugees cannot always access the most up-to-date and accurate information about the pandemic [19,20].

In their study on Afghan refugees in Iran, Yoosefi Lebni et al. [21] determined that the lack of information about the pandemic caused resistance to preventive and remedial measures. Budak and Bostan [22] documented that one third of Syrian refugees do not have information about protection from the pandemic. In a study conducted with refugees regarding the COVID-19 pandemic in Malaysia, it was determined that refugees had sufficient information about the pandemic and 70% of the participants cared about the vaccine. In addition, 60% of the participants reported that their wages had decreased, 70% did not have a regular job, 21.2% reported that their employers did not provide them with masks and hygiene support. In addition, they had difficulty covering their living expenses and obtaining hygiene equipment due to irregular income. In the same study, it was observed that 42.5% of the participants stated that they did not want to go to the hospital due to language barriers, financial difficulties, immigrant status and discrimination in society [23]. In the survey study investigating the effects of COVID-19 on refugees in Türkiye, it was reported that most of the participants were unemployed, had difficulty paying their bills, and had difficulty obtaining food and hygiene supplies [13]. Another study revealed that since most Syrian refugees were working unregistered, they were more affected by the measures taken during the pandemic and lost their jobs. It has been reported that the vulnerability of refugees, who already have to live in crowded environments, has increased due to financial problems [24]. In a study of the COVID-19 period with a total of 864 refugees aged 60 years and over, Anwar and colleagues [25] determined that 89% of the participants were unemployed, 67% of them live on financial support alone, 57% live with more than four people, 50% of them have chronic diseases and 66% did not engage in regular physical activity. Researchers also found that 81% of participants reported encountering some difficulty accessing food and 73% experiencing some difficulty accessing routine medical care during the COVID-19 pandemic.

In this survey study we conducted with Syrian refugees in Gaziantep province, it was determined that 69.4% of the participants did not have sufficient information about the pandemic, 53.4% received economic support, 59.1% live with more than four people, 90% of them do not exercise regularly and 52.6% had a chronic disease and almost all of them actually had a low income level (<5000 Turkish Liras). Half of the Syrian refugees (50.3%) stated that they were ignored and discriminated against by the people of Gaziantep. In fact, the results from our study confirm the results of previous studies and reflect the common problems of all refugees. In addition, during the COVID-19 pandemic, almost half of Syrian refugees stated that they had difficulties obtaining water, cleaning materials, masks and hygiene equipment. In addition, almost half of the refugees had difficulty in obtaining medicine and health care during the pandemic and needed psychological support. These results, consistent with previous studies, are common problems experienced by refugees during the pandemic period. As a matter of fact, studies have shown that refugees have difficulties

affording and accessing healthcare due to reasons such as discrimination, lack of legal status, language barrier and lack of translators [26]. For this reason, it is of great importance to take the necessary precautions so that irregular migrant workers and refugees can fully benefit from health services [23]. Budak and Bostan [22] determined in their studies that female gender and educational status affect the issue of protection and fight against the pandemic. They revealed that as the educational level of refugees increases, they become more aware of the pandemic, but this causes laxity in sensitivity and fight against the pandemic. In this study, no relationship was observed between the difficulties experienced by the refugees and their gender, educational status, profession and the presence of chronic diseases. However, it is really interesting that those who speak Turkish have more difficulties in obtaining masks and medicine. We think that this situation is due to the fact that those who do not speak Turkish did not attempt to demand masks and medicine.

International migrants and refugees have high stressors linked to displacement from family and homes as well as migratory complications. Moreover, these stressful situations increased even more due to difficulties obtaining basic services such as shelter, food and health services in the countries they migrate to [27]. In addition, refugees experience serious economic difficulties in the country they migrate to. In studies conducted in Canada [28], Australia [29] and Türkiye [30], it has been reported that the economic difficulties faced by refugees are associated with stress and psychological distress. These difficulties experienced by refugees have become even more severe due to pandemic restrictions and loss of resources resulting from the pandemic. Mental health problems in refugees during the pandemic have been reported to range from 20% to 80% globally [31]. In a study conducted with refugees in Uganda, it was determined that COVID-19 was also associated with fear, panic and feelings of helplessness [32]. Kızılhan and Noll-Hussong [33] documented that the COVID-19 pandemic increased the prevalence of anxiety and depressive disorders among Yazidi refugees in Iraq. Similar studies conducted in Türkiye have shown that the COVID-19 pandemic increased anxiety and depressive symptoms in Syrian refugees [34,35]. Kurt et al. [13] reported that unemployment and low education level are risk factors for mental health problems. In our study, the stress levels of Syrian refugees were evaluated with PSS. It was determined that the participants' PSS scores were quite high, and these results revealed that the perceived stress was actually high among all participants. According to the PSS score results, it was determined that as the duration of residence in Türkiye increased, the stress among Syrian refugees decreased and as the duration of residence increased, Syrian refugees become more integrated into Türkiye. However, unlike previous studies, no effect of being unemployed and experiencing economic difficulties during the pandemic was observed on the PSS score.

To our knowledge, this study is the first to investigate the difficulties and perceived stress levels of Syrian refugees living

in Gaziantep during the COVID-19 pandemic. The results of the study will contribute to the international literature on the difficulties and stress experienced by refugees. However, our study has some limitations. Firstly, the study is a cross-sectional study and no temporal relationship was established. Secondly, since only a certain group of refugees arriving at MHCs in Gaziantep were evaluated, it may affect generalizations. Third, the difficulties and stress related to the COVID-19 pandemic revealed in the study are based on self-reported data.

Conclusion

Our findings reveal that Syrian refugees are experiencing difficulties in many areas during the COVID-19 pandemic. It was observed that the difficulties experienced by Syrian refugees were actually independent of many demographic factors and affected all participants. Moreover, it was determined that the perceived stress among Syrian refugees was quite high.

Conflict of Interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

The authors declare that they have received no financial support for the study.

Ethical Approval

Ethical approval for the study was received from İnönü University Health Sciences Non-invasive Research Ethics Committee (numbered 2022/2680 and dated 22.02.2022).

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