Stress levels of healthcare workers in the COVID -19 pandemic in relation to gender roles: Is the problem limited to the work?

Covid-19 pandemisinde sağlık çalışanlarının stres düzeyi ve cinsiyet rolleri ile ilişkisi: Sorun sadece işle mi sınırlı?

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SUMMARY

Objective: In addition to many medical consequences, COVID-19 pandemic has also caused some social changes especially for healthcare workers working in the front lines of the pandemic. However, this has not affected everyone equally and gender roles became a determinant especially in domestic life. **Method:** In this cross-sectional study with a sample of 670 healthcare workers in Turkey; a sociodemographic data form, Perceived Stress Scale (PSS), and Gender Roles Attitude Scale (GRAS) were applied to examine stress levels and their relationship with gender roles. **Results:** Mean PSS scores were significantly higher in women (27.03) healthcare workers than men (23.14) Women who did all or most of the housework on their own were almost three times the men (67.2% vs 22.9%) and this increased stress levels of women. In the GRAS, female participants had higher scores (173.2) than male participants (161.8); which means they were more egalitarian, and academic degree or job did not affect GRAS. **Discussion:** Besides many challenges related with working in pandemic period; women healthcare workers face additional distress because of the gender roles. Analyzing the effects of the pandemic without gender dimensions may be insufficient to fully understand the public health aspect of the pandemic.

Key Words: COVID-19, gender role, healthcare workers, stress

ÖZET

Amaç: Covid-19 Pandemisi, özellikle ön safhada görev alan sağlık çalışanları üzerinde birçok tıbbi etkinin yanında, bazı sosyal değişimlere de neden olmuştur. Ancak bu durum herkesi eşit olarak etkilememekte, toplumsal cinsiyet rolleri özellikle ev yaşamında etkili olmaktadır. **Yöntem:** Türkiye'den 670 sağlık çalışanı ile yapılan bu kesitsel çalışmada, sosyodemografik veri formu, Algılanan Stres Ölçeği (ASÖ) ve Toplumsal Cinsiyet Rolleri Tutum Ölçeği (TCRTÖ) uygulanmıştır. **Bulgular:**Ortalama ASÖ skorları kadın sağlık çalışanlarında (27,03) erkeklere (23,14) oranla anlamlı olarak yüksek bulundu. Tüm ev işini tek başına yaptığını söyleyen kadınların oranı erkeklerin üç katı idi (67.2%/ 22.9%) ve bu durum kadınların stres düzeyini yükseltiyordu. TCRTÖ'de kadınlar (173,2), daha eşitlikçi tutumu gösterecek şekilde erkeklerden (161,8) daha yüksek puan aldılar. İş kolu ya da akademik düzeyin cinsiyet rolleri üzerinde etkili olmadığı bulundu. **Sonuç:** Pandemi koşullarında çalışmanın getirdiği birçok zorluğun yanı sıra, kadın sağlık çalışanları cinsiyet rolleri nedeniyle daha fazla stres düzeyine sahiptir. Pandeminin getirdiği halk sağlığı sorunlarını tam olarak anlayabilmek için cinsiyet rollerinin de hesaba katılması gerekmektedir.

Anahtar Sözcükler: COVID-19, cinsiyet rolleri, sağlık çalışanları, stres

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INTRODUCTION

Coronavirus disease appeared in Wuhan, the center of the Hubei province of China, at the end of 2019 and it was declared as a pandemic by affecting all communities. Healthcare workers are one of the most vulnerable groups of the pandemic in the community. The proportion of healthcare workers among COVID-19 cases was reported as 14%, and in some countries, this can be up to 35% (1). As in previous outbreaks, healthcare workers face problems such as excessive workload, high expectations, time constraints, and ethical dilemmas in the COVID -19 pandemic. Insufficient personal protective equipment, fear of transmitting the infection to family members, difficulty in accessing viral tests, uncertainty, having difficulties with child care in the times of school and nursing home shutdowns, not meeting own needs and family needs, feeling inadequate about providing proper medical care due to the rotation in the hospital, lack of up-to-date information and communication are some of the stressors among healthcare professionals (2).

70% of the people working in the health sector in the world are women (3). A large number of women working in health care also took part in the front-line duties in the COVID -19 pandemic (4). A study from Finland conducted with in-depth interviews with social workers and healthcare workers showed that women encounter more contradictions in the face of expectations. This causes overlooked social distress shaped heavily by gender roles in the healthcare workers (5). With the addition of the conditions brought by the pandemic to this social distress that already exists in the work environment; stress levels can be anticipated to increase.

While the COVID -19 pandemic has affected all areas of social life, it has also increased the need for work at home. Factors such as increased workload in the field of health, longer time spent at home due to restrictions, hygiene and nutrition, closure of daycare centers and schools, curfews over 65 years of age, and similar regulations, have brought paid and unpaid care work to a central point. In this sense, it can be predicted that the increasing burden of care labor in the pandemic will be distributed according to gender roles and gender discrimination in the health sector will also be reflected in this process. It has been known that crises have gender dimensions and can deepen social inequalities (6).

In the light of the above, it can be thought that the inequalities experienced by healthcare professionals in terms of gender roles both in work life and domestic life have deepened, but the data and the solutions for them have not been sufficiently introduced. There have been plenty of studies examining the mental health of healthcare workers related to the working conditions and they show that healthcare workers are at high risk of stress, burnout and post-traumatic stress disorders (7). Besides all that is known so far, the mental health of healthcare workers has not been emphasized considering gendered dimensions of domestic life. It is important to identify sensitive groups and apply the necessary interventions to overcome the pandemic with minimum damage, which has been a challenging experience for everyone. Such an approach also ensures that resources are used appropriately. In this study, we aimed to investigate the domestic and work-related stress factors of healthcare professionals and the effect of gender roles on these factors during the pandemic. We hypothesized that; in our country where traditional gender roles are dominant, female healthcare workers would have higher levels of stress especially related to domestic life.

METHOD

Participants

In this cross-sectional study, we planned to examine the stress factors and gender roles of healthcare workers. We used an online survey form to reach a large number of participants covering a wide range of varying working conditions in different parts of the country. The link of the survey was sent via mail addresses and social media networks of different specialties and professional groups. Participants who gave informed consent were invited to fill in the questionnaire. The Snowball sampling method was used. 670 healthcare workers completed the questionnaire between May 11, 2020, and May 25, 2020. Ethical approval of this study was granted by

the Ethical Committee of Gazi University with the number 347. This study is in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the World Medical Association (WMA) Declaration of Helsinki – Ethical Principles For Medical Research Involving Human Subjects revised in 2003.

Instruments

The sociodemographic data form developed by the researchers consists of questions such as age, marital status, job, working duration, number of children, etc. There were also questions about working conditions like "Have you worked in COVID -19 clinics?", "Have you been COVID -19 (+)" and also questions about house conditions examining the care of children, older family members or sharing of housework. At the end of the sociodemographic data, a paragraph was left for the participants to freely write their thoughts about the pandemic related stress factors. In this study, the Perceived Stress Scale was used to evaluate stress levels and the Gender Roles Attitude Scale was used to determine participants' attitudes to gender roles.

The Perceived Stress Scale (PSS) was developed by Cohen et al in 1983 (8). Consisting of 14 items in total, PSS was designed to measure how stressful some situations in a person's life are perceived. The participants evaluate each item on a 5-point Likert scale ranging from "Never (0)" to "Very often (4)". 7 of the items containing positive statements are scored in reverse order. Higher scores indicate the excessive perception of stress. The validity and reliability studies of the Turkish version of the PSS were performed by Eskin et al.(9). Cronbach's alpha value of the scale was 0.84.

The Gender Roles Attitude Scale (GRAS) was developed by Zeyneloğlu and Terzioğlu in 2011 and the validity and reliability studies were performed (10). The scale is a 5-point Likert-type scale. The highest possible score from the scale was 190 and the lowest score was 38. The higher scores showed more egalitarian attitudes towards gender roles and the lower scores showed more traditional attitudes. The scale contains 38 items and 5 subdimensions (egalitarian gender roles, female gender roles, marriage gender roles, traditional gender roles, and male gender roles). The Cronbach Alpha Reliability Coefficient of the scale was found as 0.92 for 38 items. In this study, the only total score of the scale was used.

Statistical Analysis

Data were analyzed using SPSS version 25 (SPSS Inc., Chicago, IL). Descriptive values are stated as number (N), percentage (%), mean, standard deviation (Sd). For analyzing categorical variables, Pearson Chi-Square was applied. The normality of the data was tested with Kolmogorov-Smirnov and Shapiro-Wilk Tests. The Independent t-test was used to compare categorical variables, and the One-way ANOVA was used to compare parametric variables. Pearson`s correlation test was used for continuous variables. Bonferroni test was used for post-hoc analysis. All analyses were two-tailed with an alpha set at 0.05.

RESULTS

670 healthcare workers participated in this study. The characteristics of the participants are presented in Table 1. The mean age was 42.16 ±10.87. The mean total working duration was 17.77±11.18 years. There were more female (74%) participants than males (26%). 74.8% of the female and 82.8% of male health care workers were doctors. There was no male nurse in the study whereas 12.3% of female participants were nurses. Pharmacists and technicians were the third and fourth groups that participated most but the participation of the other healthcare workers (laboratory worker, midwife, physiotherapist, etc.) was low.

33.1% of females and 37.9% of male participants stated that they have worked in COVID -19 clinics. There were 21 female (4.2%) and 3 male (1.7%) healthcare workers reporting to be COVID -19 (+). The rates of staying outside the home to be isolated from family members were 15.1% in females and 24.1% in male participants. ($p<0.05$).

Working hours (65.9% in female, 70.1% in male) of

Table 1. Characteristics of Participants

	Female		Male	
	N	%**	N	%**
Participants	496	74.0	174	26.0
Gender orientation*				
Heterosexual	464	93.5	168	96.5
Homosexual	6	1.2	4	2.2
Bisexual	26	5.3	2	1.3
Marital status				
Married	334	67.3	133	76.4
Single	109	22.0	31	17.8
Divorced	48	9.7	9	5.2
Widow	5	1.0	1	0.6
Job				
Doctor	371	74.8	144	82.8
Nurse	61	12.3	-	-
Technician	15	3.0	9	5.2
Pharmacist	18	3.6	2	1.1
Other	31	5.5	19	10.9
Academic degree (if any)				
GP	71	19.2	42	29.8
Fellow	62	16.8	21	14.9
Specialist	159	43.1	52	36.9
Assistant professor	40	10.9	9	6.4
Professor	37	10.0	17	12.1
Change in working place				
No	378	76.2	131	75.3
Yes	118	23.8	43	24.7
Working with COVID-19 patients				
No	332	66.9	108	62.1
Yes	164	33.1	66	37.9
Being COVID-19 (+)				
No	475	95.8	171	98.3
Yes	21	4.2	3	1.7
COVID-19 (+) family member				
No	483	97.4	170	97.7
Yes	13	2.6	4	2.3
Staying outside the home*				
No	421	84.9	132	75.9
Yes	75	15.1	42	24.1
Working hours				
Not changed	108	21.8	35	20.1
Decreased	327	65.9	122	70.1
Increased	61	12.3	17	9.8
Leave work				
No	467	94.2	166	95.4
Yes	13	2.6	6	3.4
Had to close own private office	16	3.2	2	1.1
Hours at home				
Not changed	38	7.7	10	5.7
Decreased	44	8.9	13	7.5
Increase	414	83.5	151	86.8
More hours at home makes me...*				
Happy	199	40.1	88	50.6
Not happy	89	17.9	38	21.8
Uncertain	138	27.8	29	16.7
Change in house-worker*				
Not changed	259	52.2	107	61.5
I did not want her to come	208	41.9	59	33.9
She left work	29	5.8	8	4.6
House-work sharing*				
All myself	158	31.9	38	21.8
Mostly myself	175	35.3	2	1.1
Equally	124	25.0	126	72.4
House worker	39	7.9	8	4.6
Childcare problem*				
No problem	387	78.1	152	87.3
Sitter left	16	3.2	5	2.9
Schools closed	93	18.8	17	9.8
Problem with older family member*				
No	511	81.9	158	90.8
Yes	85	17.1	16	9.2
Family communication				
Not changed	304	61.3	118	67.8
Better	119	24.0	39	22.4
Controversy increased	73	14.7	17	9.8
Public attitudes toward healthcare workers				
Not changed	167	33.7	58	33.3
Positive	103	20.8	46	26.4
Negative	66	13.3	22	12.6
Mostly positive	152	30.6	45	25.9
Mostly negative	8	1.6	3	1.7
Needing psychiatric support*				
No	344	69.4	148	85.1
Yes	152	30.6	26	14.9
Getting psychiatric support				
No	463	93.3	167	96.0
Yes	33	6.7	7	4.0

*p<0,05 **column percentage

the majority of the participants have decreased due to flexible or shift working and as a result, hours spent at home have increased (83.5% in female, 86.8% in male), there was not a statistically significant difference between female and male participants. More hours spent at home made 40.1% of female and 50.6% of male participants happy and the remaining were not happy or uncertain about this ($p<0.05$). Due to the pandemic conditions, 47.7% of female and 38.5% of male participants stated that their maid is no longer working. The

Table 2. Variables Related with Perceived Stress Scale (PSS)

	Female			Male		
	N	Mean	p	N	Mean	p
Academic degree						
GP	71	26.88		42	22.32	
Fellow[a]	62	28.11		21	22.51	**0.017 (a>b)**
Specialist	159	27.13	0.316	52	23.17	
Assistant professor	40	26.14		9	18.64	
Professor[b]	37	26.89		17	17.50	
Being COVID-19 (+)						
No	475	26.81	**0.010**	171	23.12	0.808
Yes	21	32.04		3	24.33	
COVID-19 (+) family member						
No	483	26.98	0.498	170	23.18	0.232
Yes	13	29.07		4	21.50	
Staying outside the home						
No	421	26.73	**0.047**	132	23.18	0.927
Yes	75	28.74		42	23.04	
Working hours						
Decreased	327	26.61	**0.007**	122	22.09	**0.036**
Increased	61	29.49		17	25.94	
Hours at home						
Decreased	44	29.86	**0.010**	13	22.92	0.914
Increased	414	26.75		151	22.64	
House- work sharing						
Mostly myself	175	27.83	**0.016**	2	33.83	**0.000**
Equally	124	25.73		126	21.73	
House worker	39	24.53		8	23.53	
Needing psychiatric support						
No	344	24.56	**<0.001**	148	21.87	**<0.001**
Yes	152	32.64		26	30.40	
Getting psychiatric support						
No	463	26.65	**<0.001**	167	22.81	**0.010**
Yes	33	32.42		7	31.14	

proportion of women who said that they share the housework equally with their partner was 25.0% whereas this was 72.4% in men ($p<0.05$). Women who did all or most of the housework on their own were almost three times the men (67.2% vs. 22.9%).

In our study, 17.5% of female and 9.1% of male participants reported having problems with the care of older family members and this difference between genders was statistically significant ($p<0.05$). The proportion of female healthcare workers (21%) who had problems with childcare

Table 3. Variables Related with Gender Roles Attitude Scale (GRAS)

	Female			Male		
	N	Mean	p	N	Mean	p
GRAS Total Score	496	173.23	**<0.001**	174	161.85	
Marital status						
Married[a]	334	171.84		133	158.84	
Single[b]	109	177.54	**0.002 (a<b)**	31	173.54	**0.012**
Divorced	48	175.40		9	168.40	
Widow	5	172.33		1	183.33	
Academic degree						
GP	71	173.57		42	168.57	
Fellow	62	177.00		21	159.00	
Specialist	159	172.14	0.101	52	162.14	0.486
Assistant professor	40	176.37		9	165.37	
Professor	37	174.81		17	169.81	
House work sharing						
All myself	158	173.62		38	170.62	
Mostly myself[a]	175	170.43	**0.016 (a<b)**	2	138.43	**0.044**
Equally[b]	124	176.05		126	159.05	
House worker	39	174.76		8	157.76	

due to the closure of schools and kindergartens was statistically significantly more than the male ones (12.7%) ($p<0.05$).

The proportion of those who think they need psychiatric support was 30.6% in women and 14.9% in men ($p<0.05$); however only 6.7% of men and 4.0% of women stated that they got psychiatric support.

Mean PSS scores were significantly higher in women (27.03) healthcare workers than men (23.14) $t(668)= 5.895$ $F= 0.826$ $p<0.001$. According to the marital status, there was a statistically significant difference between groups as determined by one-way ANOVA $F(3,492)=3.553$ $p= 0.014$. Post hoc tests showed a statistically significant difference derived from single participants (28.51) that they had higher scores than married (25.58) and divorced (23.75) ones ($p<0.001$). Nurses (27.8) had higher PSS scores than doctors (25.61) $t(574)= -2.017$ $F= 1.693$ $p =0.030$..

Subsequent variables were analyzed separately for

male and female participants to determine whether there are differences by gender (Table 2). Results showed that academic degrees did not affect PSS in women (p=0.316) but in men, there was a statistically significant difference between groups as determined by one-way ANOVA F (5,135) =2.870 p= 0.017. Fellows had higher scores (22.51) than professors (17.50) (p= 0.018).

Being COVID -19 (+) significantly increased the level of stress in women t (494) = -3.248 F=0.145 p= 0.010 but there was not a significant difference in men (p = 0.808). Having a COVID -19 (+) family member did not affect the level of stress in both genders (p values were 0.307 and 0.679, respectively). Staying outside the home to isolate oneself had a significant increasing effect on stress in women t (494) = -2.211 F=1.600 p= 0.047, but not in men (p= 0,927). Similarly, change in the working department had a significantly increasing effect on stress in women t (494) = -2.464 F= 0.391, p= 0.012 but not in men (p= 0,425). Working in COVID -19 departments had increased stress levels of both women t (494) = -3.234 F=0.306, p<0.001 and men t (494) = -2.087 F=0.032, p=0,036. Increased working hours significantly raised stress levels of women t (386) = -2.771 F= 0.047, p= 0.007 and men t (386) = -1.940 F= 0.258, p= 0.036.

Stress levels were not affected by the hours spent at home in men (p= 0.914) but a decrease in hours at home increased the level of stress in women t (456) = -2.704 F= 0.3032, p= 0.002.

There was a statistically significant difference in terms of sharing housework and PSS scores in women but post-hoc tests did not show statistical significance. It was not calculated in men because one cell counted less than five.

Women who stated that they faced problems with childcare (n=109) in the pandemic had higher scores in PSS (30.32) compared to those who do not have such a problem (n= 387) (26.39) (p< 0.001) but such difference was not seen in men. Similarly, care of the older family member had only an increasing effect on stress levels of women (p= 0.002) but there was not a statistical significance on men (p= 0.113).

Both women and men reporting to needing psychiatric support had higher scores in PSS t (494) = -13.236 F= 3.016, p= 0<001 and t (172) = -5.406 F= 0.782, p= 0<001respectively.

Correlation analysis showed a statistically significant negative relationship between PSS and age of oneself (r=-.288, p<0.001), the age of the children (if more than one, the age of the smallest) (r=-.209, p=0.001) and the total working years (r=-.288, p<0.001), in women and a statistically significant negative relationship between PSS and age of oneself (r=-.294, p=0.001), the number of children (r=-.156, p=0.043) in men.

In the GRAS, female participants had higher scores (173.2) than male participants (161.8) t(668)=7.308 F= 71.959 p<0.001 which means they have more egalitarian attitudes. There was not a statistically significant difference between doctors and nurses (p=0.392). Subsequent variables were analyzed separately for male and female participants to determine whether there are differences by gender (Table 3). In women, single participants (177.5) were found to be more egalitarian than married ones (171.8) F (3,492) =3.553 p= =0.002; in men, a statistically significant relationship was found in terms of marital status but post-hoc tests did not show statistical significance since at least one group had fewer than two cases. In both genders, the academic degree was not found to affect GRAS. Sharing of the housework was found to be related with GRAS in both genders. Female participants who stated doing housework equally with their partner (176.0) had higher scores on GRAS than the ones who stated doing mostly herself (170.4) F (3,492) =3.468 p=0.016. In men, a statistically significant relationship was also found (p=0.044) but post-hoc tests did not show statistical significance.

A correlation analysis was also performed to investigate the correlation of PSS and total and subscale scores of GRAS in men and women separately, but no significant correlation was found between the two scales.

Mostly mentioned stress factors in the section that participants can write their free expressions are as follows:

Fear of infecting other people around them, hearing news about healthcare workers who were diagnosed with COVID-19 (+) and died, financial problems, difficulties with disruption of daily routine, decreased professional motivation, difficulties with social isolation, difficulties with the education of children, prolonged quarantine and fear of failing to return to the old life, decreased personal time, increasing time to be allocated to personal hygiene.

DISCUSSION

In this study with a sample of 670 healthcare workers, stress factors related to both home and work life that may affect stress levels of healthcare workers were examined. Participation rates were higher in women (74%) than men (26%) which may be due to the more willingness of women to such studies as well as the large proportion of female gender in healthcare sector.

With the rapid progress of the pandemic in Turkey, some adaptations to the healthcare system were made and most of the inpatient clinics were transformed to be used for COVID -19 patients. Elective surgeries and outpatient appointments were canceled and most of the healthcare workers started to work with COVID -19 patients in shifts regardless of their specialty. As a result, maybe for the first time, working hours of healthcare workers in Turkey decreased because, before the pandemic, health care workers were working so hard that the physician application rate per person was 8.2 which was higher than The Organisation for Economic Co-operation and Development (OECD) average reported as 6.7(11). Therefore, the time spent at home was increased which was also stated by the participants in our study. This situation which can be considered as positive at first, made only 40.1% of female and 50.6% of male participants happy because the stress factors were not limited to work conditions. The COVID-19 pandemic and the measures taken to prevent the spread of the pandemic have created important changes in many areas of routine daily life. House workers could not continue to work on their wishes or employers' wishes due to quarantine conditions and the risk of contamination. Therefore, working people had to do many household chores that had previously been done on a paid basis. Besides, the closure of the schools and the curfew for people over 65 created a burden of care for children and the elderly (12). However, this did not affect men and women equally. In our study, the proportion of women who say that "I share household chores equally with my partner" was 25.0% whereas this was 72.4% in men, and women who did all or most of the housework on their own were almost three times of the men (67.2% vs 22.9%). According to the International Labour Organization (ILO) data, women perform 76.2% of unpaid care work and spend 3.2 times more time than men even before the pandemic (13). According to data in our country, working women spend 3.31 hours whereas working men spend 46 minutes on housework and family care (14). The fact that housework is not shared equally between men and women seems to be valid even for women working in the healthcare sector that requires intensive labor and time.

In the literature, it is stated that the unequal distribution of household chores plays a role in the prevalence of depression and distress in women compared to men (15). Results of our study are consistent with this, that women who stated that they had a problem with childcare or care of an older family member have higher stress levels compared to those who do not have such a problem. But the same result was not found in men. Similarly, reduced time spent at home due to working schedules increased the stress levels of only women, not men. As women's time at home decreases, they may be worried that they will not be able to spare time for housework and childcare. The immunity of the stress levels of men may be related to the fact that they do not feel such an obligation with the housework.

Based on all these; it can be concluded that in addition to the numerous challenges of being a healthcare professional, women also face many stress factors outside the work, simply because of their gender or in other words, the roles attributed to their gender. The female gender is a well-known risk fac-

tor for anxiety and depression in the general population (16) as well as in healthcare workers (17). There are also studies conducted in the COVID -19 pandemic that report higher anxiety and stress levels in female healthcare workers (18,19). In a study conducted in China, women healthcare workers were found to have more post-traumatic stress disorder (PTSD) sub-symptoms. According to the opinion stated in this study that this situation may also be explained by fluctuations in ovarian hormones (20); means ignoring the gender aspects of the pandemic and yet mental health in general. A preliminary result of our study shows that the stress experienced by women healthcare workers at a higher level than their male counterparts is not only for biological reasons but also for the factors faced in home life according to the gender roles.

This situation, shaped by gender roles, may also differ between different cultures. A recent study from Italy, a country with conservative gender roles, shows most of the additional workload that comes with the pandemic falls on women with childcare is more equally shared between partners than household chores. Furthermore, working women with children aged 0-5 were reported as having more difficulty with balancing work and family and this is similar to our results showing a negative correlation between the age of children and the stress levels of women (21). The similarity of these results with our study is remarkable but not surprising when considering the similarities between the two countries in terms of family and social organization which put the women in the center of the housework. Also, in both of the two countries, the vast majority of childcare was provided by grandparents which were interrupted by the social distancing and lockdown measures with the pandemic (22). Despite the reports of a shift towards a more equal distribution of housework from the other countries such as the United Kingdom (UK) (23); still, it would not be wrong to say that women are more affected.

We also examined the gender roles attitudes of the participants and their relationship with other factors. In the GRAS, female participants had more egalitarian attitudes than males. It is consistent with the literature that men have more traditional roles in many countries in the world (24). There was no difference between doctors and nurses.

In women, single participants were found to be more egalitarian than married ones. In both genders, the academic degree was not found to affect GRAS. In a study conducted with medical students in our country with the same scale; Altınöz et al. (25) found no significant difference between the first and sixth grades and concluded that medical education does not make a transformative contribution to the attitudes of students towards gender roles. Along with the results of our study, it can be said that academic education also does not make any difference in gender roles. In Turkey, 39% of general practitioners, 51% of fellows, and 42% of specialists are women (26) Despite being the highest education segment of the country and the approximate equivalence of female to male ratio; such a determining effect of the gender roles in healthcare workers shows that education or career alone is not effective on gender mainstreaming.

Crisis periods make some changes in social life especially when it takes a long time. This pandemic, besides many medical and social outcomes, has also caused the implicit gender roles to be exposed. Before the pandemic, women healthcare workers were organizing the home-related work, perhaps on a paid basis, but now they had to do it on their own at the same time working in front lines of the health sector that struggles with the pandemic. The gap between genders based on housework seems to be deepening by the pandemic but it is not known what social transformations will result if the pandemic progresses even longer, especially in the light of the opinions establishing a similarity between pandemic and World War-II that creates a large and persistent effect on female employment (27).

This study has some limitations. The cross-sectional design of the study limits the causality and lacks longitudinal follow-up. The participation of the male gender and the other healthcare workers except doctors and nurses was very low and this reduced the representation of these groups. Also, to maximize the sample, we preferred to use online surveys with voluntary participants, and this may also not represent the entire population well. Despite the limitations, this large sample-sized

study conducted with healthcare workers with different work conditions across the country provides information about the stress factors of healthcare workers not only related to work-life but also with home and its relationship with gender roles.

CONCLUSION

Pandemics have psychological, social, and economic dimensions as well as medical outcomes. Trying to analyze these dimensions with gender blindness will be insufficient to fully understand the current pandemic as well as to prepare for the potential next. Considering the size of women working in the health sector, while struggling with the pandemic on the front line, examining the direct and indirect effects of the pandemic with a gender lens is crucial when addressing public health problems.

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