

EXPOSURE TO VIOLENCE, PSYCHOLOGICAL RESILIENCE AND BURNOUT IN FILIATION WORKERS IN THE COVID-19 PANDEMIC

COVID-19 PANDEMİSİNDE FİLYASYON ÇALIŞANLARINDA ŞİDDETE UĞRAMA, PSİKOLOJİK DAYANIKLILIK VE TÜKENMİŞLİK

Mustafa BEYOĞLU ¹, Ayşegül ERDOĞAN ², Erhan KAYA ²¹Onikişubat İlçe Sağlık Müdürlüğü, Kahramanmaraş, Türkiye²Sütçü İmam Üniversitesi Tıp Fakültesi Kahramanmaraş, Türkiye**ABSTRACT****Objectives:** The aim of the study is to evaluate the filiation workers, who play a very important role in the epidemic, in terms of exposure to violence, burnout and psychological resilience.**Material And Methods:** In the cross-sectional study, 131 filiation workers who were active during the epidemic in Kahramanmaraş province were interviewed with face-to-face between 2021-2022. Sociodemographic information, violence exposure status were asked, and Maslach Burnout Inventory (MBI) and psychological resilience scale for adults (RSA) were administered to the participants.**Results:** The average age of the participants in our study is 34.23±7.66. In addition, 79.4% are women, 73.3% are married and 57.3% have children. 19.8% of the filiation workers are physicians, 22.1% are dentists, 58.1% are other health personnel. In our study, 72.5% of the healthcare workers were exposed to verbal violence, 68.7% to psychological violence, 3.1% to physical violence, and 0.8% to sexual violence during their filiation work. Health workers aged 30 and under were statistically significantly more exposed to verbal and psychological violence. In addition, statistically significant differences were found in experiencing psychological violence according to the job title ($p<0.05$). In our study, a positive significant relationship was found between the personal accomplishment score, which is a subgroup of the burnout scale, and the psychological resilience scale (RSA) score for adults. Depersonalization score has a significant negative relationship with RSA.**Conclusion:** Filiation workers, who are the most important people in the field in epidemic control, are vulnerable. In order to prevent the spread of the disease and to make effective filiation, the working order of healthcare workers should be arranged in a way that does not cause burnout. Also, the filiation workers must be accompanied by the security forces**Keywords:** Coronavirus, Healthcare Workers, Violence, Burnout.**ÖZET****Amaç:** Çalışmanın amacı, salgında çok önemli rol üstlenen sahada aktif şekilde görev alan filyasyon çalışanlarını uğramış oldukları şiddet, tükenmişlikleri ve psikolojik dayanıklılıkları açısından değerlendirmektir.**Materyal ve Metot:** Kesitsel tipteki çalışmada Kahramanmaraş ilinde salgın sürecinde aktif görev yapan 131 filyasyon çalışanına 2021-2022 yılları arasında yüz yüze görüşme ile anket yapılmıştır. Sosyodemografik bilgiler, şiddete uğrama durumları sorulmuş, Maslach tükenmişlik ölçeği (MTÖ) ve yetişkinler için psikolojik dayanıklılık ölçeği (PDAY) katılımcılara uygulanmıştır.**Bulgular:** Çalışmamızda katılımcıların yaş ortalaması 34.23±7,66'dir. Ayrıca %79.4 kadın, %73.3'ü evli, %57.3'ü çocuk sahibidir. Filyasyon çalışanlarının %19.8'i tabip, %22.1'i diğ tabibi, %58.1'i diğ sağık personelleridir. Sağık çalışanlarının filyasyonda görev aldıkları andan itibaren %72.5'i sözel şiddete, %68.7'si psikolojik şiddete, %3.1'i fiziksel şiddete, %0.8'i ise cinsel şiddete uğramışlardır. 30 yaş ve altındaki çalışanların istatistiksel olarak anlamlı derecede daha fazla sözel ve psikolojik şiddete uğradıkları görülmüştür. Ayrıca unvana göre psikolojik şiddete uğramada istatistiksel anlamlı farklar bulunmuştur ($p<0.05$). Çalışmamızda tükenmişlik ölçeği alt grubu olan kişisel başarı skorunun yetişkinler için psikolojik dayanıklılık ölçeği (PDAY) skoru ile pozitif, duyarsızlaşma skorunun ise PDAY ile negatif yönde anlamlı ilişkisi bulunmuştur.**Sonuç:** Salgın kontrolünde sahadaki en önemli zinciri filyasyon çalışanları savunmasız durumdadır. Hastalığın yayılmasını engellemek ve etkin filyasyon yapmak için sağık çalışanlarının çalışma düzeni ve iş yoğunluğunu tükenmişliğe neden olmayacak şekilde düzenlenmesi ayrıca filyasyon ekiplerine güvenlik güçlerinin de eşlik etmesi sağlanmalıdır.**Anahtar Kelimeler:** Coronavirüs, Sağık Çalışanları, Şiddet, Tükenmişlik.**Sorumlu Yazar / Corresponding Author:** Mustafa BEYOĞLU, Uzman Doktor, Onikişubat İlçe Sağık Müdürlüğü, Kahramanmaraş, Türkiye. E-mail: mstfbeyoglu@gmail.com**Bu makaleye atf yapmak için / Cite this article:** Beyoğlu M., Erdoğan A., Kaya E. (2022). Exposure to Violence, Psychological Resilience and Burnout in Filiation Workers in the Covid-19 Pandemic. *Gevher Nesibe Journal of Medical & Health Sciences*, 7(21), 160-167. <http://doi.org/10.5281/zenodo.7392821>

INTRODUCTION

The SARS CoV-2 virus, which causes Coronavirus disease-2019 (COVID-19), was first identified in December 2019 in Wuhan, China (WHO, 2019a). The World Health Organization (WHO) declared a pandemic on March 11, 2020 for this disease, which has the ability to pass from person to person and spreads in a short time (WHO, 2019b).

In this pandemic caused by COVID-19 disease, active surveillance system and systematic filiation are required to control the epidemic (Pala, 2020). Filiation literally means to find the source in infectious diseases. However, filiation includes the work of detecting the first case in infectious disease epidemics, as well as the people who came into contact with this case or other cases (Öztek, Z. 1998; Sağlık Bakanlığı [SB], 2020). Filiation, which is the classic epidemic control strategy to fight infectious diseases, is a field work that breaks the chain of infection starting from the source (Şimşek et al., 2020). Filiation teams were formed in Turkey for the COVID-19 outbreak. Isolation and contact tracing of definite cases, and sampling at home in line with the guide published by the Ministry of Health, were carried out by the filiation teams with intensive work in the field (Erdem et al., 2021). In the COVID-19 epidemic, fatigue, burnout, boredom and hopelessness have gradually started to appear in healthcare workers after the intense work tempo. In a survey study, 77.6% of healthcare professionals stated that their workload increased during the pandemic, 82% felt tired, and 61.5% were hopeless (Saatçi, 2020). Apart from the increasing workload, violence against healthcare professionals by patients, their relatives and other individuals carries a very important risk feature (Cevizci and Müezzini, 2019). While healthcare professionals respond to the needs of patients, they may be vulnerable to some risks. During the COVID-19 outbreak, this pressure on healthcare workers may increase even more.

The aim of the study is to evaluate the filiation workers who took an active role in the field, which played a very important role in the epidemic, in terms of the violence they suffered, their burnout, their psychological resilience and relationships. We aimed to reveal possible causes, to take precautions at the maximum level and to evaluate them in terms of minimizing the effects.

MATERIAL AND METHODS

In the cross-sectional study, a face-to-face interview was conducted with 131 filiation workers who worked actively in the epidemic process in Kahramanmaraş between 01.01.2021-30.09.2022. Sociodemographic information, exposure to violence, Maslach burnout scale (MBI), and adult resilience scale (PDAY) were administered to the participants after their consent was obtained..

Data collection tools

Questionnaire form: The sociodemographic information of Filyasyon employees and their exposure to violence are included in the questionnaire.

Maslach Burnout Scale (MBI): It was developed by Maslach and Jackson in 1981 (Maslach and Jackson, 1981). The Turkish reliability and validity studies of the scale were performed by Ergin in 1992 (Ergin, 2021). The MBI, which is used to measure the level of burnout, is a 5-point Likert-type scale (0: Never, 1: Rarely, 2: Sometimes, 3: Often, 4: Always) (79). It consists of three dimensions: "Emotional Exhaustion" (EE), "Depersonalization" (DP) and "Personal Accomplishment" (PA) and a total of 22 items. Individuals experiencing burnout are expected to have high EE and DP scores, and low PA scores.

The Resilience Scale for Adults (RSA): It was first developed in 5 dimensions by Friborg et al (Friborg et al., 2003; Friborg et al., 2005). Later, it was found that it better explained the resilience model with its 6-dimensional structure: self-perception, future perception, structural style, social competence, family cohesion and social resources. The scale was adapted into Turkish by Basım and Çetin (Basım and Çetin, 2011). Since it was preferred in our study to increase psychological resilience as the scores increased, the answer boxes were processed as 1-2-3-4-5 from left to right. 1,3,4,8,11-16,23-25,27,31,33 questions were reverse coded for the 33 questions and 5-point scale.

Analysis

The data were analyzed in the SPSS 22 package program. The conformity of the variables to the normal distribution was evaluated with the Shapiro-Wilk test. Mann Whitney U test, Kruskal Wallis test and Spearman's correlation analysis were used for the analysis of continuous variables that did not show

normal distribution. Descriptive statistics are expressed as mean, standard deviation, number and percentage. Pearson chi-square test was used for the differences between categorical variables, and $p < 0.05$ was considered significant in statistical analysis.

Permission from the local ethics committee (decision no:14 date:08/07/20) was obtained for the study and it was carried out in accordance with the Helsinki declaration. Inclusion criteria for the study; being over the age of 18, working in filiation, working in Kahramanmaraş. Exclusion criteria from the study; Being under the age of 18, not working in filiation, working outside Kahramanmaraş

RESULTS

The average age of the participants in our study was 34.23 ± 7.66 . In addition, 104 (79.4%) women, 96 (73.3%) are married, 75 (57.3%) have children. Considering their titles, 26 (19.8%) physicians, 29 (22.1%) dentists, and 76 (58.1%) other health personnel are medical personnel. 104 (79.8%) of the participants work in shifts. Considering the cases of violence, 95 (72.5%) of the employees stated that they were subjected to verbal violence, 90 (68.7%) to psychological violence, 4 (3.1%) to physical violence, and 1 (0.8%) to sexual violence (Table 1).

Table 1. Sociodemographic characteristics and exposure to violence of filiation workers

Category variables		n	%
Age	≤30	57	43,5
	>30	74	56,5
Gender	Male	27	20,6
	Female	104	79,4
Marital status	Married	96	73,3
	Single	35	26,7
Title	Physicians	26	19,8
	Dentists	29	22,1
	Other health personnel	76	58,1
Having children	Yes	75	57,3
	No	56	42,7
Working order	Worktime	27	20,6
	Shift	104	79,4
Verbal violence	Yes	95	72,5
	No	36	27,5
Psychological violence	Yes	90	68,7
	No	41	31,3
Physical violence	Yes	95	3,1
	No	36	96,9
Sexual violence	Yes	1	0,8
	No	130	99,2
Total		131	100,0

When the cases of exposure to verbal and psychological violence of filiation workers during the pandemic process were compared according to their age, gender and title, it was seen that the workers aged 30 and under were statistically significantly more exposed to verbal and psychological violence. In addition, statistically significant differences were found in terms of exposure to psychological violence by title ($p < 0.05$, Table 2).

Table 2. The relationship between verbal and psychological violence and some variables

Category variables	Verbal violence				Psychological violence				Total	
	Yes	No	Yes	No	Yes	No	Yes	No	n	%b
Age										
≤30	47	82,5	10	17,5	45	78,9	12	21,1	57	43,5
>30	48	64,9	26	35,1	45	60,8	29	39,2	74	56,5
	$p=0,025$		$\chi^2=5,000$		$p=0,026$		$\chi^2=4,926$			

Gender										
Male	20	74,1	7	25,9	20	74,1	7	25,9	27	20,6
Female	75	72,1	29	27,9	70	67,3	34	32,7	104	79,4
		$p=0,839$		$\chi^2=0,041$		$p=0,499$		$\chi^2=0,456$		
Title										
Physicians	17	65,4	9	34,6	22	84,6	4	15,4	26	19,8
Dentists	24	82,8	5	17,2	22	75,9	7	24,1	29	22,1
Other health personnel	54	71,1	22	28,9	46	60,5	30	39,5	76	58,1
		$p=0,321$		$\chi^2=2,272$		$p=0,047$		$\chi^2=6,116$		

aRow percentage, bColumn percentage

In our study, Mann Whitney U test was applied between bivariate categorical groups. EE scores; It was found to be significantly higher in those who did not have children and who were subjected to verbal and psychological violence. PA scores; It was found to be significantly higher in those over the age of 30, men, those who had children, and those who did not experience psychological violence. DP scores; It was found to be significantly higher in those aged 30 years and younger, men, singles, those who did not have children, and those who were subjected to verbal and psychological violence. RSA scores; It was found to be statistically significantly higher in those who have children ($p<0.05$). When the differences between the averages of the scores obtained from the scale according to the title were examined with the Kruskal Wallis test, significant differences were found in all scores according to the title. In the Mann Whitney U advanced analysis performed as a Post-Hoc test to determine the variable that makes the difference; there was no difference between the averages of physicians and dentists. It was observed that the burnout scores of the other health personnel group against both physicians and dentists were lower in EE and DP and higher in PA. In addition, other health personnel have statistically higher RSA scores than dentists ($p<0.05$, Table 3).

Table 3. Relationship between burnout and resilience scale scores and some variables

	n	Emotional Exhaustion	Personal Accomplishment	Depersonalization	Psychological resilience
Age					
≤30	57	22,26±8,07	18,39±3,44	7,95±3,54	120,88±18,46
>30	74	21,16±6,29	20,58±4,45	5,59±3,36	125,30±17,64
Mann-Whitney U		U=1822	U=1432	U=1262	U=1782
		$p=0,183$	$p=0,002$	$p<0,001$	$p=0,129$
Gender					
Male	27	20,15±6,11	21,59±4,53	7,89±3,02	121,15±18,82
Female	104	22,03±7,33	19,11±3,94	6,29±3,70	123,95±17,91
Mann-Whitney U		U=1122	U=976	U=1041	U=1272
		$p=0,109$	$p=0,014$	$p=0,038$	$p=0,452$
Marital status					
Married	96	21,07±6,60	20,05±4,38	6,22±3,78	124,72±17,17
Single	35	23,20±8,27	18,46±3,33	7,71±2,88	119,69±20,12
Mann-Whitney U		U=1328	U=1345	U=1205	U=1374
		$p=0,067$	$p=0,081$	$p=0,013$	$p=0,111$
Title					
Physicians	26	25,38±7,39	18,15±3,31	7,69±3,32	121,73±15,36
Dentists	29	22,83±7,34	17,96±2,85	8,41±3,68	115,96±18,94
Other health personnel	76	19,91±6,40	20,76±4,51	5,57±3,35	126,76±17,87
Kruskal Wallis Test		$\chi^2=12,72$	$\chi^2=14,09$	$\chi^2=17,01$	$\chi^2=8,07$
		$p=0,02$	$p=0,001$	$p<0,001$	$p=0,018$
Having children					
Yes	75	20,75±6,26	20,77±4,35	5,56±3,48	126,71±17,45
No	56	22,84±8,02	18,09±3,39	8,03±3,32	118,91±18,06
Mann-Whitney U		U=1647	U=1364	U=1218	U=1553
		$p=0,035$	$p=0,001$	$p<0,001$	$p=0,011$

Working order					
Worktime	27	19,41±8,38	19,78±5,19	5,67±3,94	128,52±17,96
Shift	104	22,22±6,67	19,58±3,89	6,87±3,51	122,04±17,94
Mann-Whitney U		U=1139	U=1285	U=1197	U=1117
		<i>p</i> =0,132	<i>p</i> =0,498	<i>p</i> =0,237	<i>p</i> =0,103
Verbal violence					
Yes	95	22,56±6,63	19,27±4,23	7,15±3,49	123,78±18,00
No	36	19,20±7,84	20,55±3,91	5,22±3,63	122,30±18,47
Mann-Whitney U		U=1221	U=1378	U=1220	U=1633
		<i>p</i> = 0,012	<i>p</i> =0,088	<i>p</i> = 0,011	<i>p</i> =0,693
Psychological violence					
Yes	90	24,08±5,83	19,01±4,14	7,75±3,26	123,18±17,72
No	41	16,30±6,80	20,98±3,95	4,12±3,11	123,80±19,01
Mann-Whitney U		U=738	U=1244	U=771	U=1823
		<i>p</i> < 0,001	<i>p</i> = 0,003	<i>p</i> < 0,001	<i>p</i> =0,915
Total	131	21,64±7,11	19,63±4,17	6,62±3,62	123,37±18,06

The results of correlation analysis between age and scale scores in our study are shown in Table 4. PA score has a positive relationship with RSA, and DP score has a negative relationship with RSA (*p*<0.05).

Table 4. Correlation analysis results of age and scale scores

	*	Age	EE	PA	DP	RSA
Age	Rho	1	-0,136	0,344	-0,313	0,098
	<i>p</i>		0,122	0,000	0,000	0,267
EE	Rho	-0,136	1	-0,466	0,522	-0,154
	<i>p</i>	0,122		0,000	0,000	0,079
PA	Rho	0,344	-0,466	1	-0,486	0,376
	<i>p</i>	0,000	0,000		0,000	0,000
DP	Rho	-0,313	0,522	-0,486	1	-0,326
	<i>p</i>	0,000	0,000	0,000		0,000
RSA	Rho	0,098	-0,154	0,376	-0,326	1
	<i>p</i>	0,267	0,079	0,000	0,000	

*Spearman's rho correlation analysis

DISCUSSION

In our study, the average age of the filiation workers was 34.23. In addition, a significant majority of the employees are women (79.4%), married (73.3%) and have children (57.3%). Considering their titles, 19.8% of the filling workers are physicians, 22.1% are dentists, 58.1% are other health personnel. In the example of a district health directorate in the fight against pandemics in Turkey, it was observed that the number of dentists was the highest among those working. Dentists have become a very important human resource in filiation with their advantage in taking throat and nose swab due to their high hand practice (Erdem et al., 2021). In our study, a significant part of the filiation workers are married, women, and have children. This situation should be observed in terms of working order and other duties for the filiation workers who are heavily involved in field work. Working hours may turn into a shift system for healthcare professionals who have a change in their workload and an increased workload (Yüncü and Yılan, 2020). In our study, a very important part (79.8%) of the filiation workers were working in shifts.

Healthcare professionals and security forces are on the front lines in the fight against the COVID-19 pandemic (Ruiz and Gibson, 2020). It is very difficult for these healthcare professionals, who are at the forefront of the epidemic, to continue to provide healthcare by protecting both themselves and their service areas (Özer and Özcan, 2020). Healthcare workers who try to prevent the spread of the disease by isolation, quarantine practices and filiation in the society are at great risk both physically and psychologically (Emiral et al., 2020). As an important finding in our study, the violence against employees was questioned. In our study, 72.5% of the healthcare professionals stated that they were subjected to verbal violence, 68.7% to psychological violence, 3.1% to physical violence, and 0.8% to

sexual violence from the moment they took part in the filiation. In the joint report of international health organizations in 2002, it was determined that 3-17% physical, 27-67% verbal, 10-23% psychological and 0.7-8% sexual violence were applied to healthcare workers in different countries. (Chen et al., 2008). In our study, filiation workers stated that they were exposed to violence at very high rates during the epidemic. The patient, patient relatives or other people they may encounter while on duty pose a great threat to the filiation workers. This situation makes it difficult to limit the epidemic due to its effective filiation. Filiation teams can face dangers at any time of the day. It should be ensured that the security forces accompany the filiation teams at all times. In our study, the cases of verbal and psychological violence of the filiation workers during the pandemic were compared according to their age, gender and title. Employees aged 30 and under stated that they were exposed to more verbal and psychological violence. This may be due to the society's tendency to put pressure on employees who appear younger. There are some studies in the literature showing that violence is applied more to low-age healthcare workers. (Demiroğlu et al., 2015). When looking at the title, physicians and dentists were more exposed to psychological violence. This may be due to the fact that physicians and dentists are threatened by the people they encounter, as they take more responsibility during contact identification.

Severe working conditions in the COVID-19 pandemic for healthcare workers created a traumatic experience that led to mental problems. In our study, burnout and psychological resilience states and their relations were investigated for psychological evaluations that may be related to the intense working tempo of healthcare workers. Severe working conditions can cause burnout in healthcare workers (Doğan and Keskin, 2021). Burnout, which was first put forward by Fredeunberg in 1974, was defined as "the state of emotional exhaustion, which means that people are unable to fulfill their job requirements as a result of their overwork" (Fredeunberg, 1974). Burnout negatively affects productivity and efficiency in working life (Dick and Wagner, 2001). In our study, MBI was analyzed in subgroups. Accordingly, EE scores; in non-children, PA scores; DP scores for men over 30 years old, having children; It was found to be significantly higher in 30 years of age and younger, males, singles, and those who did not have children. Some studies in which burnout scores were compared according to sociodemographic characteristics were examined. Among them, Kaya et al. found that female healthcare workers had higher emotional burnout scores than males (Kaya et al., 2007). The age of the employees decreases the personal achievement score, and there is no relationship between the profession or marital status of the employees and the burnout scale scores in this study. In the study of Sünter et al., the burnout scale personal achievement score was found higher in male physicians than in females, and age, marital status and burnout did not differ significantly (Sünter et al., 2006). In Dikmetaş et al.'s study, male healthcare workers had high emotional exhaustion and depersonalization scores, and low personal achievement scores (Dikmetaş et al., 2011). The burnout of filiation workers in the epidemic reduces their productivity. Low-efficiency filiation studies may cause a vicious circle by complicating the limitation of the disease and increasing the workload of the filiation teams in the future. In our study, psychological resilience assessment was also performed together with burnout situations. Because psychologically resilient individuals can better control themselves in extraordinarily difficult situations such as epidemics (Baykal, 2020). In our study, although the RSA score was small in value compared to other categories in single healthcare workers, shift workers and dentists, it did not show statistical significance. In contrast, RSA scores are statistically significantly higher in those who have children. In the literature, in the studies where comparisons of psychological resilience are made according to some personal characteristics; In a study conducted with nursing students, psychological resilience levels of female students were significantly higher than males, and there was no significant difference between age and psychological resilience (Güngörmüş et al., 2015). In a study conducted in a private health institution, single participants had higher scores in some subgroups of resilience. In this study, as in our study, no relationship was found between gender and resilience (Şenol and Üzümlü, 2019).

The relationships between violence, burnout and psychological resilience that we investigated in our study were also investigated. According to this; EE and DP scores were found to be high in those who were subjected to verbal and psychological violence, and PA scores were found to be low in those who were subjected to psychological violence. RSA scores, on the other hand, were not found to be associated with verbal and psychological violence. When the relationship between burnout and resilience is analyzed, PA score has a positive correlation with RSA, and DP score has a negative correlation with RSA. In some national and international studies investigating similar relationships in the literature, it has been shown that psychological resilience affects employees' burnout in a negative

way (Arrongante and Aparicio Zaldivar, 2017; Bitmiş et al., 2013; Yang et al., 2018). In a study conducted on healthcare workers with different titles such as physicians and nurses in a public hospital, the level of emotional exhaustion and depersonalization was found to be higher in the burnout scale subgroup of employees who were exposed to or witnessed violence in the workplace (Dursun, 2012). The results of the literature and the results of our study show similarities in terms of the relationship between exposure to violence and scale scores.

Our study has some limitations. First, our study was conducted in a single province. Second, filiation workers are constantly changing, studies conducted in different healthcare workers may show different results. Third, the number of daily cases varies during the period of the study, which may affect the workload and thus the survey results.

CONCLUSION

Filiation workers have been exposed to violence at a high rate. The unusually increased workload due to the epidemic affects the mental state of the employees. Filiation workers, who constitute the most important chain in the field in epidemic control, are vulnerable in surveillance studies and contact identification of cases. In order to prevent the spread of the disease and to carry out effective filiation, it should be ensured that the working order and workload of healthcare workers are arranged in a way that does not cause burnout, and that the security forces accompany the filiation teams.

Conflict of Interest

The authors declared no conflict of interest.

Author Contributions:

Plan, design: MB, AA, EK; **Material, methods and data collection:** MB,AA ; **Data analysis and comments:** MB, EK; **Writing and corrections:** MB, AA, EK.

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