Koronavirüs Pandemisi Sırasında Görev Yapan Fizyoterapistlerin Pandemiye İlişkin Bilgi, Farkındalık ve Tutumlarının Değerlendirilmesi

Evaluation Of Physiotherapists During The Coronavirus Pandemic In The Fields Of Knowledge, Awareness and Attitude Regarding Pandemic

Rafet Umut ERDOĞAN[1] , Saadet Ufuk YURDALAN[1]

ÖZ

Amaç: Çalışmamızda, COVID-19 pandemisi sırasında COVID-19 tanılı hastalar ile çalışan, kardiyopulmoner fizyoterapi ve rehabilitasyon alan fizyoterapistlerinin (KPRÇF) pandemiye ilişkin bilgi, tutum ve farkındalıklarındaki değişimi belirlemek ve KPRÇF ve diğer alanlarda çalışan fizyoterapistlerin (DAÇF) tükenmişlik düzeyini araştırmak amaçlandı.

Gereç ve Yöntem: Çalışmamızda, COVID-19 pandemisi sırasında COVID-19 tanılı hastalar ile çalışan, kardiyopulmoner fizyoterapi ve rehabilitasyon alan fizyoterapistlerinin (KPRÇF) pandemiye ilişkin bilgi, tutum ve farkındalıklarındaki değişimi belirlemek ve KPRÇF ve diğer alanlarda çalışan fizyoterapistlerin (DAÇF) tükenmişlik düzeyini araştırmak amaçlandı.

Bulgular: Çalışmaya, KPRÇF (n:33, yaş ortalaması:33,09±7,07 yıl, mesleki deneyim:10,24±7,69 yıl) ve DAÇF (n:33, yaş ortalaması:26,39±2,20 yıl, mesleki deneyim:3,58±2,07 yıl) grubundan toplam 66 gönüllü fizyoterapist katıldı. KPRÇF'nin COVID-19 pandemiye ilişkin bilgi ve farkındalıklarının arttığı ancak pandemiye ilişkin tutumlarının olumsuz yönde değiştiği belirlendi. Bu alanda çalışan fizyoterapistlerin tükenmişlik açısından (TÖ-KF'ye göre) tehlike sinyalleri verdiği, DAÇF'nin ise genç yaşlarda ve mesleki deneyimlerinin diğer çalışma alanındakilere göre azlığına bağlı tükenmişlik içerisinde oldukları saptandı. İki grup arasında tükenmişlik düzeyleri açısından DAÇF aleyhinde istatistiksel olarak anlamlı fark bulundu (p:0.014).

Sonuç: COVID-19 pandemisinin KPRÇF'in bilgi, farkındalık ve tutumlarında değişikliğe yol açtığı sonucuna ulaşıldı. Pandemiye ilişkin bilgi düzeyinin, çalışılan mesleki alanın, yaşın ve mesleki tecrübe yılının fizyoterapistlerdeki tükenmişlik düzeyini etkilediği belirlendi.

Anahtar kelimeler: COVID-19, Fizyoterapistlerde tutum ve farkındalık, Tükenmişlik Ölçeği-Kısa Formu, Tükenmişlik sendromu.

ABSTRACT

Aim: It was aimed to determine the change in the knowledge, attitudes, and awareness of physiotherapists working in the field of cardiopulmonary physiotherapy and rehabilitation (PWCPR), and to investigate the burnout level of PWCPR and physiotherapists working in the other fields (PWOF).

Methods: The demographic and occupational information of the participants were recorded. The Knowledge, Awareness and Attitude Questionnaire, which was designed specifically for research, was administered only to PWCPR group, and The Turkish Adaptation of The Burnout Measure-Short Version (TA-BMS) was administered to all participants online via Google Forms. Data analysis was performed using SPSS 11.5 program. Significance level was measured to $p < 0.05$.

Results: A total of 66 volunteer physiotherapist from the PWCPR (n:33, mean age:33.09±7.07 years, professional experience:10.24±7.69 years) and PWOF (n:33, mean age:26.39±2.20 years, professional experience:3.58±2.07 years) groups were included in the study. It was determined that participants' from PWCPR group knowledge and awareness regarding COVID-19 pandemic increased, but their attitudes

Geliş Tarihi/Recieved: 26.12.22 **Kabul Tarihi/Accepted:** 23.10.23 **Çevrimiçi Yayın Tarihi/Avaliable Online Date:**29.02.24
DOI: 10.57224/jhpr.1224530.

[1] Marmara University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Division of Cardiopulmonary Physiotherapy-Rehabilitation.
Sorumlu yazar/Correspondence: Rafet Umut Erdoğan

Cite this article as: Erdogan RU., Yurdalan SU. Evaluation Of Physiotherapists During The Coronavirus Pandemic In The Fields Of Knowledge, Awareness and Attitude Regarding Pandemic. J Health Pro Res 2024;6(1): 1-10.

changed negatively. It was appointed that PWCPR gave danger signals in terms of burnout (according to TA-BMS), and PWOF was in burnout due to lack of professional experience and being young age compared to PWCPR. A statistically significant difference was found between two groups in terms of burnout levels (p:0.014).

Conclusion: It was concluded that COVID-19 pandemic caused changes in terms of knowledge, awareness and attitudes of PWCPR. It was determined that level of knowledge about the pandemic, occupational field, age, and years of professional experience affected the burnout level of physiotherapists.

Keywords: COVID-19, Awareness and attitude of physiotherapists, Burnout syndrome, Burnout Scale-Short Form.

INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is the biggest health disaster that humanity has experienced in the last century, causing millions of people to become infected or die from being infected all over the world, and to affect almost all societies in the economic and psychosocial terms due to isolation and quarantine rules. COVID-19 is caused Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Common symptoms include dyspnea, cough, fever, breathing difficulties, weakness, myalgia, gastrointestinal disorders, and loss of taste/smell. COVID-19 may course asymptomatically or with mild symptoms, it can cause various diseases and death in individuals with chronic diseases considered as a high-risk group (1,2).

The effectiveness of chest physiotherapy, which has been proven to be effective in topics such as improving the respiratory and physical functions of patients hospitalized in the intensive care unit (ICU). Many physiotherapy techniques can be safely used to improve treatment outcomes and reduce atelectasis in COVID-19 (3). The World Confederation for Physical Therapy (WCPT) explicitly recommends that physiotherapists working in this field increase their knowledge level within the scope of combating pandemics in the guide published by the WCPT (4). In the literature, there is no study evaluating the development of knowledge level and attitudes of physiotherapists working in the field of cardiopulmonary rehabilitation (PWCPR) during the pandemic process and also there is no study determining the awareness level of physiotherapist working in other fields (PWOF). The research subject has been determined and constructed in line with this requirement.

METHODS

This research was conducted via online survey (Google Forms) between February – March 2021. Ethics committee approval was obtained from Marmara University Institute of Health Sciences Ethics Committee, dated 2020.12.14 within the Protocol Number 108. Our study was also obtained ethical approval from the Republic of Turkey Ministry of Health, General Directorate of Health Services.

The research is cross-sectional and descriptive. In the research, it is aimed only to reveal the situation in the period when it was done. All physiotherapists working in cardiopulmonary physiotherapy and rehabilitation (CPR) field and PWOF in Turkey was scheduled to be designated as research universe. Nevertheless, physiotherapists using online platforms and working in the field of CPR formed the research universe in terms of the effective execution of the study (due to COVID-19 restrictions). All physiotherapists (full enumeration) in the field of CPR who agreed to participate, and PWOF who populated as much as the number of physiotherapists working in the field of CPR to detect the change of interest and knowledge on subject during the pandemic period were constituted the sample of the study.

Inclusion criteria of the study

- Physiotherapists working in state hospitals / university hospitals / private hospitals / clinics and universities in Turkey between the ages of 22-65,
- Physiotherapists working in ICU, respiratory rehabilitation unit and other working areas (neurology, orthopedics, pediatrics, geriatric physiotherapy, and rehabilitation) during the COVID-19 pandemic and agree to participate in the research were included.

Exclusion criteria of the study

- Physiotherapists who did not participate in the treatment process in the ICU, respiratory rehabilitation unit or other specialty areas during

the COVID-19 pandemic or refused to participate in the study,
- Participants who left 3 or more items unanswered in the questionnaire were excluded from the research.

Data collection tools

"The Knowledge, Awareness and Attitude Questionnaire", which is prepared by the researchers and the "The Turkish Adaptation of The Burnout Measure-Short Version (TA-BMS)" were applied to the participants through Google Forms. Participants read and approved the informed consent form before completing the questionnaires.
"The Knowledge, Awareness and Attitude Questionnaire" prepared consists of PWCPR and PWOF after the demographic information section. The sections of PWCPR and PWOF have been created for the participation of physiotherapists working in the specified field, and include questions that measure the changes in knowledge and attitude during the COVID-19 period and are answered in the form of Yes/No. The section of PWCPR is divided into two sub-headings: "Knowledge and awareness" and "Attitude". Participants answered the questions in these subtitles measuring the changes affecting the concept in the related topic. All questions in the questionnaire were created to serve the purpose of the study, considering the examples in the literature.
"TA-BMS", which is used to determine the level of burnout in many different occupational groups, is based on the principle of giving 10 items a score between 1 (never) and 7 (always) on a seven-point Likert-type scale in line with the current views of the participants (5). In the score calculation of the scale, the scores given to 10 items are added together and divided into 10. While analyzing the scores of the participants, the scoring system is evaluated in 5 different groups according to the grade of the score and the level of burnout is interpreted accordingly.

Statistical Analysis

The data obtained from the study were evaluated with the SPSS 11.5 statistical program (IBM SPSS Statistics version 11.5, IBM Corp. Armonk, New York, USA) at a 95% confidence interval, and the significance level was $p < 0.05$.

The suitability of the variables to normal distribution was questioned using the Kolmogorov Smirnov test and normal distribution graphics. Analyzes in accordance with parametric test conditions were used to examine the variables. The central and prevalence criteria (descriptive statistics) of the frequency tables of the independent variables and dependent variables in the questionnaire form used in the study were presented, and the significance levels were calculated with the chi-square test by cross-tabulating the queries related to COVID-19 according to the independent variables. Statistical significance level was taken as $p < 0.05$.
In addition, the scores obtained from the burnout scale used in the study were categorized within the assessment method of the scale. Cross tables were created, and comparisons were made using the chi-square test in terms of independent variables and questions about COVID-19.

RESULTS

A total of 66 physiotherapists working in cardiopulmonary physiotherapy and rehabilitation field (n:33, mean age:33.09±7.07 years, professional experience:10.24±7.69 years, experience at the current institution:6.63±7.07 years, experience in the field of CPR:4.90±6.99 years) and other fields of physiotherapy and rehabilitation (n:33, mean age:26.39±2.20 years, professional experience:3.58±2.07 years, experience at the current institution:2.58±1.67 years, no experience in the field of CPR) were participated in our study.
The number of female participants was higher in both groups (PWCPR: 21, PWOF: 22) (Table 1). It was determined that two out of every three participants (66.70%) in the group of PWCPR received postgraduate education, this rate was 45.50% in the PWOF group (Table 1). Most of the participants in both groups were clinicians (93.30% each) (Table 1). Participants who completed the survey were worked in many different working environments such as state hospitals, state universities, private universities, private hospitals, and clinics (Table 1). Occupational satisfaction and satisfaction from working environment were slightly higher in PWCPR group (Table 1).

Table 1: Demographic, Educational and Working Information of the Participants

		PWCPR		PWOF	
		n	**%**	**n**	**%**
Gender	Male	12	36.4	11	33.3
	Female	21	63.6	22	66.7
Academic Degree	Undergraduate	11	33.3	18	54.5
	MSc (c)	5	15.2	10	30.3
	MSc	9	27.3	4	12.1
	PhD (c)	6	18.2	1	3
	PhD	2	6.1	0	0
Position	Clinician	31	93.3	31	93.3
	Academician	2	6.1	2	6.1
Institution Type	State University	6	18.2	0	0
	State Hospital	2	6.1	9	27.3
	Private Foundation University	0	0	2	6.1
	Private Hospital/Clinic	6	18.2	21	63.6
	Education and Research Hospital Affiliated to the Ministry of Health	13	39.4	1	3
	Education and Research Hospital Affiliated to the University	6	18.2	0	0
Institutional Satisfaction	Very Bad	0	0	1	3
	Bad	2	6.1	5	15.2
	Average	13	39.4	15	45.5
	Good	16	48.5	12	36.4
	Very Good	2	6.1	0	0
Professional Satisfaction	Very Bad	0	0	3	9.1
	Bad	2	6.1	7	21.2
	Average	13	39.4	10	30.3
	Good	14	42.4	11	33.3
	Very Good	4	12.1	2	6.1
Total		**33**	**100**	**33**	**100**

Most of the participants from PWCPR group have a multidisciplinary team experience (84.80%) (Table 2) and currently working as a member of a team (81.80%) (Table 2). Almost all participants (23 of 27) who are working as a part of the multidisciplinary team, making decisions about patients' health conditions (Table 2). Over 60% of participants reported that their awareness about "multidisciplinary team" concept has been increased (Table 2). Some protocols have been changed since COVID-19 pandemic started in ICU or respiratory rehabilitation unit (57.6%), and the protocols which have been using during hospitalization changed most (42.40%) (Table 2). 45% of participants from PWCPR group reported that theoretical update was given by their institution, and 51% have learned latest theoretical knowledge about COVID-19 by their individual efforts (Table 3). Participants have chosen both national and international resources while they are learning more about COVID-19 mostly (Table 3). Most of the participants (24 of 33) watched seminars about COVID-19 and they have preferred national associations and local experts as organizers usually (70.80% each) (Table 3). According to participants, they have had preferred Turkish and International literature more than mediatic resources to gain some information about COVID-19 (Table 3). Only 8 participants (24.20%) have contacted their colleagues from another country to exchange their clinical information about COVID-19 (Table 3).

Table 2: Multidisciplinary Team Experience in PWCPR

		n total	Yes		No	
			n	%	n	%
Do you have any experience about working in a multidisciplinary team?		33	28	84.8	5	15.2
Are you currently working in a multidisciplinary team?		33	27	81.8	6	18.2
If you are currently working in a multidisciplinary team, do you have a decision-making role?		27	23	85.2	4	14.8
Has your awareness about multidisciplinary team and its working style increased during the COVID-19 pandemic?		33	20	60.6	13	39.4
Have the protocols you use in the ICU or respiratory rehabilitation unit changed since the beginning of the COVID-19 pandemic?		33	19	57.6	14	42.4
Which protocols have changed in ICU or respiratory rehabilitation unit? (you can mark multiple responses)	Before the hospitalization	33	5	15.2		
	During the hospitalization	33	14	42.4		
	After the hospitalization	33	8	24.2		
	Nothing has changed	33	14	42.4		

Table 3: Knowledge Resources and Changes in Attitudes in PWCPR

		n total	Yes		No	
			n	%	n	%
Have you been provided with theoretical information updates on the COVID-19 pandemic since the COVID-19 pandemic started?		33	15	45.5	18	54.5
Individually. have you been trained to update your theoretical knowledge since the COVID-19 pandemic began?		33	17	51.5	16	48.5
Individually. if you have been trained to update your theoretical knowledge since the COVID-19 pandemic started. which database (s) have you used?	National	17	4	23.5		
	International	17	2	11.8		
	Both	17	11	64.7		
Have you watched webinars about COVID-19?		33	24	72.7	9	27.3
Which person / institutions were the organizers of the webinars you watched? (you can mark multiple responses)	National associations in the field of chest diseases	24	17	70.8		
	International associations in the field of chest diseases	24	5	20.8		
	Local experts working in the field of chest diseases	24	17	70.8		
	Foreigner experts working in the field of chest diseases	24	7	29.2		

Table 3 (cont.): Knowledge Resources and Changes in Attitudes in PWCPR

From which sources did you access the literature on the COVID-19 pandemic? (you can mark multiple responses)	Turkish literature	33	20	60.6		
	International literature					
	Mediatic resources	33	20	60.6		
	Hearsay	33	11	33.3		
	From colleague					
	From medical visit	33	3	9.1		
		33	15	45.5		
		33	16	48.5		
Have you contacted your colleagues in different countries where you work in the same area of expertise for professional opinion / information sharing since the COVID-19 pandemic started?		33	8	24.2	25	75.8
Since the COVID-19 pandemic started. have you been consulted when faced with a patient or personal issue related to the pandemic?		33	20	60.6	13	39.4
If you have received counseling since the COVID-19 pandemic started when you faced a patient or personal problem related to the pandemic. what are its sources? (you can mark multiple responses)	From a member of the multidisciplinary team	20	10	50		
	From another specialist at the same institution	20	11	55		
	Another specialist at different institution (same country)	20	8	40		
	Another specialist at different institution (different country)	20				
During the pandemic period. did your anxiety level increase about having or accessing the necessary information about the pandemic?		33	21	63.6	12	36.4
Has your work routine changed (flexible working hours. rotation etc.) since the COVID-19 pandemic began?		33	28	84.8	5	15.2
Have your weekly working hours increased since the COVID-19 pandemic started?		33	7	21.2	26	78.8
Have you ever been on call since the COVID-19 pandemic started?		33	10	30.3	23	69.7
During the pandemic process. did your mobile phone usage increase? (for communication purposes or due to your duty)		33	23	69.7	10	30.3
Do you think that your immediate circle or society's behavior towards you has changed because you are on the COVID-19 team?		33	28	84.8	5	15.2
Did your satisfaction level increase with the way your immediate environment or society treated you between the start of the pandemic and today?		33	14	42.4	19	57.6
Considering the feedback you receive from the society and your working conditions. are your current conditions sustainable?		33	20	60.6	13	39.4

Most participants from PWCPR group (63.60%) have been stated that they felt more anxious since COVID-19 pandemic started (Table 3). In PWCPR group, 84.80% of participants' work routine changed since pandemic began, 30% of the participants were on duty at least once, but only 21% reported increasing work hours (Table 3). Almost 70% of the participants from PWCPR

group conveyed about their increased smartphone usage (Table 3). 28 of 33 participants from PWCPR group (84.80%) thought that people's behavior towards them has changed. According to 57.60% of the participants from PWCPR group this changing affect them negatively, but only 39.40% from that group finds their current situation unsustainable (Table 3).

During the COVID-19 pandemic, 24% of participants of our research group of PWOF have been directed to work at the field of cardiopulmonary rehabilitation (Table 4).

Most of the participants from PWOF group has no increased interest in cardiopulmonary rehabilitation field (63.60%) (Table 4). Also, most of the participants from that group has no intention neither to start a master's program in cardiopulmonary rehabilitation field (93.90%) nor to change their current field with cardiopulmonary rehabilitation field (90.90%) (Table 4). 39% of the participants from PWOF group have watched a webinar in cardiopulmonary rehabilitation field and 66.70% watched webinars related into their current fields (Table 4).

When the participants' scores on the Burnout Scale were compared, it was determined that PWOF got higher scores (3.93±1.15) than PWCPR (3.08±1.54) (Table 5). These data are interpreted as that there are danger signals for the burnout of PWCPR and that there is a state of burnout for PWOF. When the scores obtained from TA-BMS were compared according to the groups, a statistically significant difference was found (p=0.014).

Table 4: Interest from PWOF to CPR

	n total	**Yes**		**No**	
		n	**%**	**n**	**%**
Have you been directed to CPR field during the COVID-19 pandemic? (At the request of the hospital management. due to need. with your personal request. etc.)	33	8	24.2	25	75.8
Have your interest in CPR field increased since the COVID-19 pandemic started?	33	12	36.4	21	63.6
Have you been interested in starting a master's program in CPR field since the COVID-19 pandemic started?	33	2	6.1	31	93.9
Have you made any intention to change your field with CPR since the COVID-19 pandemic started?	33	3	9.1	30	90.9
Since the COVID-19 pandemic started. have you watched a webinar in the field of CPR?	33	13	39.4	20	60.6
Since the COVID-19 pandemic started. have you watched webinars related to your field?	33	22	66.7	11	33.3

Table 5. Comparison between two groups in The Turkish Adaptation of The Burnout Measure-Short Version

Value	**t**	**df**	**p**
TA-BMS	-2.534	64	0.014

TA-BMS: The Turkish Adaptation of The Burnout Measure-Short Version**.** p<0.05 Independent Samples T Test

DISCUSSION

In our study. it was aimed to determine the change in the knowledge. attitudes. and awareness of PWCPR. and to investigate the burnout level of PWCPR and PWOF. It was determined that participants' from PWCPR group knowledge and awareness regarding COVID-19 pandemic increased. but their attitudes changed negatively. It was appointed that PWCPR gave danger signals in terms of burnout (according to TA-BMS). and PWOF was in burnout due to lack of professional experience and being young age compared to PWCPR. A statistically significant difference was found between two groups in terms of burnout levels (p:0.014).

When the literature is reviewed for the studies conducted. in the studies attended by healthcare professionals and medical and health sciences faculty students who will graduate from various occupational groups during the periods when COVID-19 disease was declared as a pandemic. participants had a little information about the risk factors. etiology and transmission method of the disease. It was stated that having less information about transmission and symptom onset is associated with a positive perception. while factors such as age and area of expertise are associated with less knowledge and a negative perception about COVID-19 (6.7). In line with the findings obtained in our study. it is thought that the lower level of institutional and professional satisfaction of the PWOF group compared to the PWCPR group is associated with lower average age. less professional experience. and more irregular working conditions.

Literature on health professionals' knowledge. attitude. and sources of information regarding the COVID-19 pandemic was examined. and it was determined that various communication tools and scientific institutions were used as sources of information. In studies conducted with health professionals in different countries. social media is at the forefront of the tools used as a source of information. while workplace. colleagues. television. and other sources are among the other tools used as information sources (8.9). When the data obtained in our study were examined. it was seen that physiotherapists obtained theoretical and practical information about the COVID-19 pandemic from various sources and used similar tools to the literature in terms of information sources. and their knowledge level about the pandemic has increased. The high rate of physiotherapists benefiting from national and international scientific studies shows that the management of COVID-19 is supported by the literature.

During the COVID-19 pandemic. it was seen in the questionnaires investigating the mental involvement of healthcare professionals and the meta-analyzes examining these studies. that healthcare workers experienced high psychological stress during the pandemic process. Their work routines and behaviors have changed. their workload has increased. their sleep routines have changed. they have experienced financial difficulties. have worried about their environment and their families. and have had difficulty while doing their jobs due to all these increasing burdens (10.11). The obtained data from our study are compatible with the literature in this regard. Within the scope of our study. it was determined that the behavior and work routines of PWCPR have changed. In addition. their anxiety levels increased. and they felt that they could not get enough support from the society. However. it is predicted that most physiotherapists working in the field of cardiopulmonary physiotherapy and rehabilitation who participated in the study think that their status is sustainable. because their professional satisfaction levels are high. their field-related knowledge of the COVID-19 pandemic is higher than that of PWOF. and their working conditions are at a certain standard.

In the COVID-19 pandemic. physiotherapists working as part of a multidisciplinary team in the treatment of infected patients have gained great importance. In a study conducted in Brazil (12). it was stated that the number of PWCPR in the country is above the world average. and their authority and responsibilities are higher than their colleagues in the world. Globally increasing attention to respiratory system diseases and CPR due to the COVID-19 pandemic is one of the topics investigated in our study. When the data in our research results are examined. it has been

determined that physiotherapists working outside the CPR area in Turkey have not increased their interest in the CPR field since the COVID-19 pandemic started.

There are many studies in the literature about the mental effects of COVID-19 on healthcare workers (13.14.15) and the occupational burnout levels of physiotherapists (16) during COVID-19 pandemic. In our study. a statistically significant difference was found between the participants in the PWOF group and the participants in the PWCPR group in terms of burnout level (p=0.014). It was determined that the burnout levels of the participants in the PWOF group were higher than the burnout levels of the participants in the PWCPR group. In addition. according to the scores obtained from TA-BMS. it was determined that the participants in the PWCPR group were experiencing danger signals in terms of burnout. and the participants in the PWOF group were already experiencing burnout. Our research results are in line with the literature. Despite the increased level of responsibility and anxiety. the fact that the burnout level of cardiopulmonary physiotherapists is lower than that of physiotherapists working in other fields within the scope of our study is explained by the fact that they have more knowledge and experience on respiratory diseases and COVID-19. Among the reasons why burnout levels differ between groups; It is thought that the differences in the level of knowledge about the pandemic period. the level of change in working routines and the number of trainings received regarding the pandemic.

In conclusion. this study is considerable in terms of determining the change in the knowledge. awareness. and attitudes of PWCPR who are directly fighting the COVID-19 pandemic as a member of the multidisciplinary team. Up-to-date follow-up of the literature on the COVID-19 pandemic and regular updating of theoretical information are of critical importance in the effective fight against the pandemic. In our study. it is seen that PWCPR received less burnout than PWOF in terms of pandemic process. Gaining knowledge and experience about pulmonary diseases and COVID-19 is the key and physiotherapists from all departments should develop more knowledge and awareness about the COVID-19 pandemic in order to protect themselves.

Sources of Support: None

Conflict of Interest: The authors deny any conflicts of interest.

Ethical Approval: Ethics committee approval was obtained from Marmara University Institute of Health Sciences Ethics Committee. dated 2020.12.14 within the Protocol Number 108. Our study was also obtained ethical approval from the Republic of Turkey Ministry of Health. General Directorate of Health Services.

Informed Consent: Participants read and approved the informed consent form before completing the questionnaires.

Author Contributions:

RUE: Experimental design. resources. data collection. data analysis. literature review. writing the article.

SUY: Conceived ideas. experimental design. supervision. resources. critical review.

Acknowledgements: Oral Proceeding Produced from the Thesis.

REFERENCES

1) Esakandari H. Nabi-Afjadi M. Fakkari-Afjadi J. Farahmandian N. Miresmaeili SM. Bahreini E. A comprehensive review of COVID-19 characteristics. Biol Proced Online. 2020;4;22:19.

2) Pascarella G. Strumia A. Piliego C. Bruno F. Del Buono R. Costa F. Scarlata S. Agrò FE. COVID-19 diagnosis and management: a comprehensive review. J Intern Med. 2020;288(2):192-206.

3) Battaglini D. Robba C. Caiffa S. Ball L. Brunetti I. Loconte M. Giacobbe DR. Vena A. Patroniti N. Bassetti M. Torres A. Rocco PR. Pelosi P. Chest physiotherapy: An important adjuvant in critically ill mechanically ventilated patients with COVID-19. Respir Physiol Neurobiol. 2020;282:103529.

4) Thomas P. Baldwin C. Bissett B. Boden I. Gosselink R. Granger CL. Hodgson C. Jones AY.

Kho ME. Moses R. Ntoumenopoulos G. Parry SM. Patman S. van der Lee L. Physiotherapy management for COVID-19 in the acute hospital setting: clinical practice recommendations. J Physiother. 2020 Apr;66(2):73-82.

5) Çapri. B. Tükenmişlik ölçeği-kısa formu ile eş tükenmişlik ölçeği-kısa formu'nun Türkçe uyarlaması ve psikoanalitik-varoluşçu bakış açısından mesleki ve eş tükenmişlik ilişkisi. Kuram ve Uygulamada Egitim Bilim. 2013;3(3).1393-1418.

6) Puspitasari IM. Yusuf L. Sinuraya RK. Abdulah R. Koyama H. Knowledge. Attitude. and Practice During the COVID-19 Pandemic: A Review. J Multidiscip Healthc. 2020 Jul 30;13:727-733.

7) Bhagavathula AS. Aldhaleei WA. Rahmani J. Mahabadi MA. Bandari DK. Knowledge and Perceptions of COVID-19 Among Health Care Workers: Cross-Sectional Study. JMIR Public Health Surveill. 2020 Apr 30;6(2):e19160.

8) Chan AKM. Nickson CP. Rudolph JW. Lee A. Joynt GM. Social media for rapid knowledge dissemination: early experience from the COVID-19 pandemic. Anaesthesia. 2020 Dec;75(12):1579-1582.

9) Maude RR. Jongdeepaisal M. Skuntaniyom S. Muntajit T. Blacksell SD. Khuenpetch W. Pan-Ngum W. Taleangkaphan K. Malathum K. Maude RJ. Improving knowledge. attitudes and practice to prevent COVID-19 transmission in healthcare workers and the public in Thailand. BMC Public Health. 2021 Apr 18;21(1):749.

10) Sethi BA. Sethi A. Ali S. Aamir HS. Impact of Coronavirus disease (COVID-19) pandemic on health professionals. Pak J Med Sci. 2020 May;36(COVID19-S4):S6-S11.

11) da Silva FCT. Barbosa CP. The impact of the COVID-19 pandemic in an intensive care unit (ICU): Psychiatric symptoms in healthcare professionals. Prog Neuropsychopharmacol Biol Psychiatry. 2021 Mar 11;110:110299.

12) Pinto TF. Carvalho CRF. SARS CoV-2 (COVID-19): lessons to be learned by Brazilian Physical Therapists. Braz J Phys Ther. 2020 May-Jun;24(3):185-186.

13) Restauri N. Sheridan AD. Burnout and Posttraumatic Stress Disorder in the Coronavirus Disease 2019 (COVID-19) Pandemic: Intersection. Impact. and Interventions. J Am Coll Radiol. 2020 Jul;17(7):921-926.

14) Barello S. Palamenghi L. Graffigna G. Burnout and somatic symptoms among frontline healthcare professionals at the peak of the Italian COVID-19 pandemic. Psychiatry Res. 2020 Aug;290:113129.

15) Dimitriu MCT. Pantea-Stoian A. Smaranda AC. Nica AA. Carap AC. Constantin VD. Davitoiu AM. Cirstoveanu C. Bacalbasa N. Bratu OG. Jacota-Alexe F. Badiu CD. Smarandache CG. Socea B. Burnout syndrome in Romanian medical residents in time of the COVID-19 pandemic. Med Hypotheses. 2020 Nov;144:109972.

16) Pniak B. Leszczak J. Adamczyk M. Rusek W. Matłosz P. Guzik A. Occupational burnout among active physiotherapists working in clinical hospitals during the COVID-19 pandemic in south-eastern Poland. Work. 2021;68(2):285-295.