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ORIGINAL ARTICLE
ORİJİNAL ARAŞTIRMA

Investigation of COVID-19 Fear and Hygiene Levels of Patients Referred to Neurosurgery Policlinic: A Cross-Sectional Study

Beyin Cerrahi Polikliniğine Başvuran Hastalarda COVID-19 Korku ve Hijyen Düzeylerinin İncelenmesi: Kesitsel Bir Çalışma

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ABSTRACT

Aim: To investigate the relation of fear of COVID-19 and COVID-19 preventive hygiene behaviours in patients referred to neurosurgery policlinic.

Material and Method: COVID-19 fear and hygiene scales were used as data collection tools and distributed to patients in face-to-face appointment waiting rooms. Descriptive statistical methods, significance tests and correlation analyses were carried out to analyze the data. The data analysis was performed in a 95% confidence interval.

Results: Of 304 participants, 14.1 % have had a COVID-19 history. There is a significant relationship between COVID-19 hygiene and fear levels. No significant difference is found between COVID-19 hygiene and fear levels of participants depending on history of COVID-19 in their close ones. Regarding their own COVID-19 history status, while COVID-19 fear levels do not change significantly, total hygiene scores and all subdimension scores are found to be significantly different.

Conclusion: In our sample prevalence of COVID-19 is higher than normal population, which is a high-risk group for COVID-19. Fear of COVID-19 has a role in preventive hygiene behaviours. These findings can be used to develop training and prevention programmes to help people cope with for fear of COVID-19 and perform preventive behaviours.

Keywords: COVID-19, fear, hygiene, neurosurgery

ÖZ

Amaç: Beyin cerrahisi polikliniğine sevk edilen hastalarda COVID-19 korkusu ile COVID-19 önleyici hijyen davranışları arasındaki ilişkiyi araştırmak.

Gereç ve Yöntem: Veri toplama aracı olarak COVID-19 korku ve hijyen ölçekleri kullanıldı ve yüz yüze randevulu bekleme salonlarında hastalara dağıtıldı. Verileri analiz etmek için tanımlayıcı istatistiksel yöntemler, anlamlılık testleri ve korelasyon analizleri yapıldı. Veri analizi %95 güven aralığında uygulandı.

Bulgular: 304 katılımcıların %14,1'inin COVID-19 geçmişi vardı. COVID-19 hijyen ve korku düzeyleri arasında önemli bir ilişki vardır. Yakınlarında COVID-19 geçmişine bağlı olarak katılımcıların COVID-19 hijyen ve korku düzeyleri arasında anlamlı bir fark bulunmamıştır. Kendi COVID-19 öykü durumlarına bakıldığında ise COVID-19 korku düzeyleri anlamlı bir değişiklik göstermezken, toplam hijyen puanları ile tüm alt boyut puanları anlamlı olarak farklı bulunmuştur.

Sonuç: COVID-19 için yüksek risk grubu olan örneklemimizde COVID-19 prevalansı normal popülasyondan daha yüksektir. COVID-19 korkusunun önleyici hijyen davranışlarında rolü vardır. Bu bulgular, insanların COVID-19 korkusuyla başa çıkmalarına ve önleyici davranışlar sergilemelerine yardımcı olacak eğitim ve önleme programları geliştirmek için kullanılabilir.

Anahtar Kelimeler: COVID-19, korku, hijyen, nöroşirürji

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INTRODUCTION

It is stated that 126 Mn people have been infected and 2,76 Mn deaths have occurred to date due to pandemic caused by new coronavirus called Sars-Cov-2 (1). In Turkey it has caused 3,1 Mn infections and 30.923 deaths since 10th March 2020, when the first case was detected (2).

In pandemic periods, people generally face difficulties such as fear, phobia and panic. It is shown that previous pandemics (H1N1, SARS, MERS etc.) increased fear and anxiety disorders in people significantly (3,4). COVID-19 pandemic period, which has current global effects and causes psychological problems as well as physical health issues, has resulted in fear and anxiety widely (5). Fear, a psychological aspect of COVID-19, is described as an undesirable emotional state triggered by perceiving a threatening stimulus (6). Unnatural conditions like epidemics can cause fear in many people. COVID-19 fear can even result in suicides although it is understood that they are not testing positive for COVID-19 at autopsy (7,8). Fear is a complex structure examined in a comprehensive way and several scales have been developed to assess peoples' fear towards different things including COVID-19. There are studies performed in specific patient groups such as cancer patients and showing high fear of COVID-19 (9) as well as studies showing fear of COVID-19 at medium level in normal population (10). In another study carried out in outpatient clinics, anxiety and fear of COVID-19 is detected in 181 patients out of 200 (11).

Since COVID-19 hygiene measures are among the most significant measures for prevention from COVID-19 (12) and it includes prevention measures specific to the disease, there are studies investigating hygiene situations peculiar to COVID-19 (13).

As neurosurgery patients within our sample are high risk patients, potential additional risks due to COVID-19 are crucial for this group of patients and preventable by hygiene measures. Studies show that elderly neurosurgery patients having poor mobility skills and multiple comorbidities are sensitive to COVID-19 and have poor prognosis (14). Consequently, in this patient group, it is extremely important to prevent infection and apply optimum hygiene measures, to have research on hygiene practices. Besides, importance of studies on current situation and needs of this patient group specific to COVID-19 is underlined in previous research (15,16).

Negative emotions including fear and anxiety can motivate several behaviours decreasing high risk attitudes. Concerning COVID-19, it is stated that feeling at risk for infection is related to more social distancing and hand washing behaviour (17). It is seen that people having high level of COVID-19 fear also have more hygiene behaviours. It is understood that there is a strong relationship between fear or risk perception of COVID-19 and preventive hygiene behaviours (18,19). There are studies showing mediating role of COVID-19 in preventive behaviours (20,21). Although fear of COVID-19 is found to be related to poorer mental health, it is related to more preventive hygiene behaviours. Fear, within the scope of COVID-19, seems to elaborate preventive healthy behaviour. One of the possible explanations for this is that hand washing behaviour and social distancing are among a few things that people can do since the beginning of the pandemic. According to Rogers (1983) protection motivation theory, if a person's behaviour is functional against a threat, level of fear should predict level of behaviour (22). Though there are studies supporting this theory showing parallelism of the relationship between fear of COVID-19 and hygiene behaviours in normal population (11), it is seen that relevant literature is lacking for patients referred to neurosurgery policlinics, which forms a specific group of patients having high risk of exposure.

In this study, it is aimed to investigate the relation of fear of COVID-19 and COVID-19 preventive hygiene behaviours (hand washing, social distancing etc.) in patients referred to neurosurgery policlinic.

MATERIAL AND METHOD

Population and Sampling

Ethical Committee approval is taken from Bursa City Hospital Clinical Studies Ethical Committee (Decision Number: 2021-4/8, Date: 03.03.2021). The study is carried out from 10th March to 10th April 2021 in Dursa Cİty Hospital Neurosurgery Policlinics. Data collection tools have been applied to people over 18 and giving informed consent. The aim of the study is told to participants and their written consent is taken. Sample size is calculated by epi info programme in order to represent study population. Within scope of sample size which is calculated as 278 people as minimum for 95% confidence interval, 304 participants are involved in the study. Socio-demographic qualities of participants are given below (**Table 1**).

Data Collection Tools

Personal information form: Socio-demographic information and health status is investigated in the form prepared by researchers.

Fear of COVID-19 Scale: It is a Likert type scale including 7 questions. Its validity and reliability is studied (Cronbach's alfa is α = .847) (23).

COVID-19 Hygiene Scale: It is a Likert type scale which includes 27 questions and 6 subdimensions ("hygiene behaviours changing with pandemic", "home hygiene", "social distancing and wearing mask", "shopping hygiene", "hand hygiene", "hygiene when coming home from outside"). Turkish validity and reliability id performed by Çiçek, Şahin and Erkal (2020) (Cronbach's α =.908) (24).

Table 1.		
Socio-demographic characteristics	**N**	**%**
Gender		
Male	159	52.3
Female	145	47.7
Age		
18-24	32	10.5
25-34	80	26.3
35-44	95	31.3
45-54	64	21.1
55-64	28	9.2
65-72	5	1.6
Marital Status		
Married	211	69.4
Single	74	24.3
Divorced	10	3.3
Widow	9	3.0
Education level		
Illiterate	3	1.0
Literate	8	2.6
Primary School	69	22.7
Secondary School	35	11.5
High School	95	31.3
University	94	30.9
Job status*		
Housewife	71	23.4
Worker	20	6.6
Self-employment	15	4.9
Retired	15	4.9
Student	10	3.3

*Job status is asked as an open-ended question and most frequent ones are included.

Statistical Analysis

For the evaluation of research findings, statistical methods (frequency, percentage, mean, standard deviation) are used. Analyses are performed with SPSS 22.0 (IBM, USA). Spearman's rank correlation coefficients are calculated to determine the relationship between continuous variables (total COVID-19 hygiene scores and subdimension scores and fear of COVID-19 scores). Mann-Whitney U test is used in order to compare data for people having COVID-19 history and the ones not having. Same comparison is performed depending on history of COVID-19 in close ones.

RESULTS

COVID-19 history of participants themselves and their close ones are presented in **Table 2**. As mean score participants have got from fear of COVID-19 scale is 20.68±7.629, COVID-19 hygiene scale mean score is 110.28±19.294. Mean and standard deviation values for independent and dependent variables and correlation coefficients showing relation between variables are given in **Table 3**.

Table 2. COVID-19 history of participants and their closed ones		
COVID-19 history		
Yes	43	14.1
No	261	85.9
COVID-19 history in close ones		
Yes	132	43.4
No	172	56.6

When correlation coefficients are evaluated, correlations which is .30 and over are considered that there is a relationship (25). As it is seen in **Table 3**, there is a significant relationship between COVID-19 hygiene and fear levels of participants at 0.01 significance level. Similarly, correlation between COVID-19 fear and changing hygiene behaviour subdimension is found to be significant as 0.359 at 0.01 significance level.

Table 3. Spearman's rank correlation coefficients for independent and dependent variables			
	Mean	**sd**	**SPEARMAN**
COVID-19 Fear	20.68	7.629	
			.370
COVID-19 Hygiene	110.28	v19.294	

No significant difference is found between COVID-19 hygiene and fear levels of participants depending on history of COVID-19 in their close ones. Regarding their own COVID-19 history status, while COVID-19 fear levels do not change significantly, total hygiene scores and all subdimension scores are found to be significantly different (**Table 4**).

DISCUSSION

In our sample prevalence of COVID-19 is higher than normal population. While rate of people having COVID-19 history is 2.46 % (2) in normal population, it is found to be %14.1 in our sample. This situation supports studies showing sensitivity of people within our sample to infections (26,27).

When mean scores for people with and without COVID-19 history were compared, it is seen that mean preventive hygiene scores of people without COVID-19 history are significantly higher. This supports the importance of hygiene in prevention of COVID-19. An

Table 4. Findings regarding COVID-19 fear and hygiene mean scores depending on COVID-19 history status.							
	Total Fear	**Total Hygiene**	**Changing Hygiene**	**Social Distancing Wearing Mask**	**Shopping Hygiene**	**Hand Hygiene**	**Home Hygiene**
Mann-Whitney U	5413.500	4297	4053	4775	4353.500	4950	4754.500
Sig.	.711	.014	.003	.100	.018	.205	.106

alternative explanation that people can care less for hygiene since they have COVID-19 history is evaluated as invalid. Since fear levels have been found to be similar between people with COVID-19 history and people without COVID-19 history. Therefore, it does not seem meaningful that people have lower level of hygiene behaviours due to lower level of fear.

It is seen that fear of COVID-19 mean score is high in our sample. As the highest score which can be taken from the scale is 35, sample mean is 20.68. This situation is evaluated to be related to nonconfidence feelings regarding not being able to carry out hygiene preventions such as hand washing properly possibly due to mobility restrictions caused by their illnesses (16).

In a recent study it is seen that there is a positive relationship between COVID-19 fear and COVID-19 preventive behaviours (28). Our results are parallel to these findings. It is seen that individuals have more preventive behaviours when they perceive the threat as more severe. Perceived threat in COVID-19 can be a motivating factor for behaviours facilitating preventive behaviours for COVID-19. Research results support findings of other studies showing the relationship between fear of COVID-19 and preventive hygiene behaviours (18,21).

Fear of COVID-19 have been seen in doctors as well as normal population. In spite of the fact that rate of hospital applicants due to reasons not related to COVID-19 have decreased, no important decrease has occurred in applications for neurosurgery policlinic. Number of patients waiting for operation even has builded up since elective operations are postponed. Doctors were hesitant to face patients in policlinic (29). It is evaluated that it would be hard to determine whether training or prevention programmes are necessary or not and if necessary, to define target groups for trainings without investigating relationship of fear of COVID-19 with several psychological factors and in different groups (30). During the last year of pandemic, none of the 8 neurosurgeons working in the policlinic that our sample was chosen from have had a COVID-19 history. Our study shows that fear of COVID-19 increased hygiene behaviours in people, as a result, neurosurgery patients referred to hospital for reasons apart from COVID-19 and doctors examining them have obeyed measures properly.

CONCLUSION

These findings can be used to develop training and prevention programmes to help people cope with for fear of COVID-19 and perform preventive behaviours. Research findings show that fear of COVID-19 has a role in preventive behaviours. Fear can be helpful for initiation of preventive behaviours. Clinicians, communication experts in health sector and researchers can use them to help obeying COVID-19 safety protocols for target group and to improve COVID-19 conditions.

ETHICAL DECLARATIONS

Ethics Committee Approval: Ethical Committee approval is taken from Bursa City Hospital Clinical Studies Ethical Committee (Decision Number: 2021-4/8, Date: 03.03.2021).

Informed Consent: All patients signed the free and informed consent form.

Referee Evaluation Process: Externally peer-reviewed.

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