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Awareness of Physiotherapy and Rehabilitation Students on Descriptive Figures Related to Health

Fizyoterapi ve Rehabilitasyon Bölümü Öğrencilerinin Sağlıkla İlgili Tanımlayıcı Figürler Konusundaki Farkındalığı

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Abstract

Objective: Our aim was to evaluate the awareness of students of the Physiotherapy and rehabilitation department about descriptive figures.

Methods: A total of 483 physiotherapy and rehabilitation students (74.9% female, 25.1% male) participated in the study. In addition to demographic information, the status of having completed a school in the field of health and working as a professional in the field of health was questioned using the data registration form. In addition, an evaluation form developed by the authors was used to evaluate the level of knowledge about descriptive figures.

Results: Only 82 of the students (17.0%) stated that they had knowledge about descriptive figures. Students who state that they have information about descriptive figures mostly reach the information through internet search engines (40.24%). When students were asked about descriptive figures, 239 (49.5%), 254 (52.6), 257 (53.2%) and 241 (49.9%) students correctly answered droplet isolation, respiratory isolation, contact isolation and falling risk, respectively.

Conclusion: This study evaluates the level of knowledge of physiotherapist candidates about descriptive figures. The result of the study reveals the necessity for our students to be educated about descriptive figures.

Keywords: Physiotherapy, protection, health

Öz

Amaç: Amacımız, fizyoterapi ve rehabilitasyon bölümü öğrencilerinin tanımlayıcı figürler konusundaki farkındalığının değerlendirilmesidir.

Yöntem: Çalışmaya 483 fizyoterapi ve rehabilitasyon bölümü öğrencisi (%74,9'u kadın, %25,1'i erkek) katıldı. Veri kayıt formu ile demografik bilgilerin yanında daha önce sağlık alanında bir okul bitirmiş olma ve sağlık alanında bir meslekte çalışma durumları sorgulandı. Ayrıca tanımlayıcı figürler hakkında bilgi düzeyini değerlendirmek için yazarlar tarafından geliştirilen bir değerlendirme formu kullanıldı.

Bulgular: Öğrencilerin sadece 82'si (%17,0) tanımlayıcı figürler hakkında bilgi sahibi olduklarını belirtmişlerdir. Tanımlayıcı figürler hakkında bilgi sahibi olduğunu belirten öğrenciler en çok internetteki arama motorları (%40,24) aracılığıyla bilgiye ulaşmaktadır. Öğrencilere tanımlayıcı figürler sorulduğunda ise damlacık izolasyonunu 239'u (%49,5), solunum izolasyonunu 254'ü (52,6), temas izolasyonunu 257'si (%53,2) ve düşme riskini 241'i (%49,9) doğru cevaplamıştır.

Sonuç: Bu çalışma fizyoterapist adaylarının tanımlayıcı figürler hakkında bilgi düzeyini değerlendiren bir çalışmadır. Çalışmanın sonucu öğrencilerimizin tanımlayıcı figürler hakkında eğitim almaları gerekliliğini ortaya koymaktadır.

Anahtar Kelimeler: Fizyoterapi, koruma, sağlık



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Introduction

Some descriptive figures have been determined to provide a common language and standard among healthcare professionals. These figures are intended to provide isolation measures for infections seen in the hospital and to help with patient falls. These descriptive figures are: four leaf clover (fall risk), yellow leaf (respiratory isolation), blue flower (droplet isolation), and red star (contact isolation). It is recommended by the Ministry of Health to use these figures to warn healthcare workers in all areas where the patient is present⁽¹⁾.

While training that includes all kinds of information about the hospital or clinic is given to the healthcare workers and guidelines are published about this subject according to quality standards; undergraduate students come up short in this regard⁽²⁾. The Ministry of Health has also started to occur in the curriculum of the undergraduate education of the "Quality Course in Health Services" with the recommendation of the higher education council in order to eliminate this deficiency or to increase awareness⁽²⁾. In the literature, there are studies questioning the knowledge of healthcare professionals and undergraduate health students about infection and isolation⁽³⁻⁵⁾. However, no study has been found that evaluates the awareness of physiotherapy and rehabilitation students about the descriptive figures about the patients who need isolation methods and fall risk. Therefore, the aim of this study was to evaluate the awareness of the students of the department of physiotherapy and rehabilitation about descriptive figures.

Materials and Methods

Among the undergraduate students of the Physiotherapy and Rehabilitation Department of the Faculty of Health Sciences of Manisa Celal Bayar University, those who were continuing their education (class 1, 2, 3, 4) in the 2020-2021 academic year and volunteered to join the study were included in the study. Twelve students who did not volunteer to participate in the study were excluded from the study. The data registration form created for the students was applied online. This form was created with Microsoft Forms, and the link was shared with students via social media groups. Our study started after the approval of the Manisa Celal Bayar University Ethics Committee (decision no: 20.478.486/1102, date: 29.12.2021).

Data Registration Form: It consists of three main sections. The first section consists of questions about age, height,

body weight, gender, grade, type of education, completion of a school in the field of health, employment status in the field of health, and the role if working (employees who have received an education in the field of health before), the presence of a health worker in the family, if there is a health worker, his/her duty. In the second section, the presence of information about the descriptive figures, how the level of knowledge was evaluated (0-10; 0=very poor, 5=fair, 10=very good), source of information, status of having received education before, and if so, where and when the education was received, and need of education about this subject (0-10; 0=no, 5=undecided, 10=definitely yes) were questioned. Finally, in the third section, the names of the descriptive figures and the situations in which they are used were evaluated. Statistical analysis of the obtained data was performed using SPSS 21.0.

Statistical Analysis

Statistical analyses were performed using IBM® SPSS® 22 (SPSS Inc., Chicago, IL, USA) software. Frequency and percentage values were given for categorical variables.

Results

A total of 483 (97.6%; class 1 n=132, class 2 n=131, class 3 n=114 and class 4 n=106) of 495 department students participated in our research. Twelve (2.4%) students who answered the online form chooses the "I do not agree to participate in the research" option. No missing data were found in the filled forms, and all forms were considered valid. The average response time for the form was 4 min and 55 seconds. The mean age of the students was 21.1±1.82 and 362 (74.9%) were female and 121 (25.1%) were male. Fifty (10.4%) students have completed a school in the field of health before, and 10 (2.1%) students are working as a professional in the field of health (nurse, FTR technician, X-ray technician, anesthesia technician, EMG technician) (Table 1).

Only 82 of the students (17.0%) stated that they had an average level of knowledge of 6.24±2.0 information about descriptive figures. While students stated that they have information about descriptive figures, they reach this information mostly through search engines on the internet (40.24%), school courses/trainings (15.85%), and social media (13.42%). Thirteen (15.85%) of the students stated that they had previously received education about descriptive figures through orientation training, seminar-conference, service internal course and school (Table 2).

When the students were questioned in terms of the purpose of using descriptive figures, 239 (49.5%), 254 (52.6), 257 (53.2%) and 241 (49.9%) students correctly answered the droplet isolation, respiratory isolation, contact isolation and falling risk, respectively (Table 3).

Discussion

A total of 483 physiotherapy and rehabilitation department undergraduate students participated in our study. These figures are yellow leaf for respiratory isolation, blue flower for droplet isolation, and red star for contact isolation. A green clover figure is used to identify patients with a risk of falling⁽¹⁾.

In the literature, only one study questioned the correct use of descriptive figures by health workers⁽⁵⁾. Nurses and health workers participated in the study at Selçuk University. In conclusion, 92.8-94.8% of the participants accurately knew that blue flowers should be suitable for droplet insulation. On the other hand, 97.6-99.52% of the

participants correctly knew that the red star should be suitable for contact isolation⁽⁵⁾. In our study, this rate was 49.5% for blue flowers and 53.2% for red stars. When the

Table 1. Demographic data		
	Frequency	Percentage (%)
Grade		
1	132	27.3
2	131	27.1
3	114	23.6
4	106	21.9
Gender		
Female	362	74.9
Male	121	25.1
Age		
Mean ± standard deviation	21.1±1.82	
	Frequency	Percentage (%)
Have you finished school in the field of health before?	50/433	10.4/89.6
Yes/no		
Do you work as a professional in the field of health?	10/473	2.1/97.9
Yes/no		
If you are a health worker, is your duty?		
Nurse	3	-
FTR technician	4	-
X-ray technician	1	-
Anesthesia technician	1	-
EMG technician	1	-
FTR: Final technical report, EMG: Electromyography		

Table 2. The level of information about descriptive figures

	Frequency	Percentage (%)
Do you have any information about descriptive figures?	82/401	17.0/83.0
Yes/no		
If you are knowledgeable, how many points will you give to your level of information about descriptive figures? (0=very bad, 5=moderate, 10=very good)		
Mean ± standard deviation	6.24±1.98	
	Frequency	Percentage (%)
If you are knowledgeable, which is your most frequently used information source?		
Search engines on the internet	33	40.24
TV	6	7.30
Social media	11	13.42
School lessons/trainings	13	15.85
During the internship	9	10.98
From other health personnel	8	9.76
From my colleagues	2	2.44
Have you received any training on descriptive figures before?	13/69	15.85/84.15
Yes/no		
Where did you get training on descriptive figures?		
With orientation training	7	53.80
Seminar-conference	2	15.40
Service internal course	2	15.40
School	2	15.40

Table 3. Defining descriptive figures

	Frequency	Percentage (%)
Droplet isolation (blue flower)		
Correct	244	50.5
False	239	49.5
Respiration isolation (yellow leaf)		
Correct	229	47.4
False	254	52.6
Contact isolation (red star)		
Correct	226	46.8
False	257	53.2
Risk of falling (green clover)		
Correct	242	50.1
False	241	49.9

correct answers of physiotherapy students and other health professionals are compared, notably the correct responses to the descriptive figures in our study are quite low. These correct answer percentages are only for blue flowers and red stars. No research on the other two descriptive figures (four-leaf clover and yellow leaf) could be found in the literature.

It is important that physiotherapists comply with hygiene rules to prevent infection due to both the tools they use during manual therapy and electrotherapy applications and their approaches that require close contact with the patient⁽⁴⁾. Our study reveals that physiotherapy students have inadequate information about descriptive figures used to recognize isolated patients due to infection and patients at risk of falling.

In order to prevent infection, the need to monitor the knowledge level of health professionals and to organize trainings at regular intervals has been emphasized in the literature⁽⁶⁻⁸⁾. For this reason, it is seen that physiotherapists, like other health personnel, should be informed in terms of infection and protection methods. In a study on the knowledge of physiotherapists about infection, it was stated that half of the physiotherapists received infection training and the knowledge of physiotherapists who received training was good⁽⁴⁾. Because of their studies, they stated that there was a significant difference in using hygiene products between the physiotherapists who received and those who did not receive infection training⁽⁴⁾.

Study Limitations

Our study is the first to evaluate the level of knowledge of physiotherapy students on descriptive figures. However, this study was conducted only with the students of our department. For this reason, it is seen that there is a need for comprehensive additional studies, including physiotherapy students studying at different universities.

Conclusion

In line with these results, it is thought that physiotherapy students should be informed about descriptive figures and that information about these figures should be added to their training programs.

Ethics

Ethics Committee Approval: Our study started after the approval of the Manisa Celal Bayar University Ethics Committee (decision no: 20.478.486/1102, date: 29.12.2021).

Informed Consent: Informed consent was obtained.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: Ö.Ö., H.K.K., Concept: Ö.Ö., H.K.K., Design: Ö.Ö., Data Collection or Processing: Ö.Ö., H.K.K., Analysis or Interpretation: Ö.Ö., H.K.K., Literature Search: Ö.Ö., H.K.K., Writing: Ö.Ö., H.K.K.

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References

1. T.C. Sağlık Bakanlığı. Sağlıkta Kalite Standartları Hastane. Available from: <https://shgmkalitedb.saglik.gov.tr/Eklenti/41258/0/skshastane-seti-s-61--09082021pdf.pdf>
2. Sağlık Hizmetleri Genel Müdürlüğü. Sağlıkta Kalite, Akreditasyon ve Çalışan Hakları Dairesi Başkanlığı. Available from: <https://kalite.saglik.gov.tr/TR-56787/basin-duyurusu-kalite-dersinin-yok-mufredatina-eklenmesi.html/>
3. Karabay O, Yarımbaş A, Akcakaya U, Öğütü A. Tıp fakültesi son sınıf öğrencilerinde izolasyon önlemleri konusunda bilgi ve tutumlarının değerlendirilmesi. *Online Türk Sağlık Bilimleri Dergisi* 2018;3:50-5.
4. Serel S, Öksüz Ç, Yılmaz Ö, Karaduman A. Fizyoterapistlerde Enfeksiyon Bilgisi ve Bu Bilgiyi Kullanma Düzeyleri. *Fizyoterapi Rehabilitasyon* 2015;26:14-9.
5. Abukan P, Tuncer E, Ural O, Çağlayan V. Selçuk Üniversitesi Tıp Fakültesi Hastanesinde Çalışan Araştırma Görevlisi, Hemşire ve Temizlik Personellerinin Hastane Enfeksiyonları Konusundaki Bilgi Düzeylerinin Ölçülmesi. *Genel Tıp Dergisi* 2016;26:14.
6. Doğu Ö, Karabay O. Hemşirelik ve ebellek intörn öğrencilerine enfeksiyon kontrol eğitim programı. *Online Türk Sağlık Bilimleri Dergisi* 2016;2:1-10.
7. Durduran Y, Kandemir B, Yıldırım EN, Pakna Ö, Demir LS. Üniversite hastanesinde hasta bakıcı ve temizlik personellerine yönelik hastane enfeksiyonu, el hijyeni ve tıbbi atık eğitimlerinin değerlendirilmesi. *Ortadoğu Tıp Dergisi* 2020;12:89-95.
8. Temel UB, Temel EN. Bir Diş Hekimliği Fakültesinde Stajyer Öğrenciler, Uzmanlık Öğrencileri ve Öğretim Üyelerinin COVID-19 Pandemisine Yönelik Enfeksiyon Kontrol Önlemleri Hakkındaki Bilgi Düzeylerinin Değerlendirilmesi: Analitik Araştırma. *Süleyman Demirel Üniversitesi Sağlık Bilimleri Dergisi* 2022;13:119-30.