İzmir Kâtip Çelebi Üniversitesi Sağlık Bilimleri Fakültesi Dergisi 2025; 10(1): 75-80
DOI: 10.61399/ikcusbfd.1494571

İKÇÜSBFD

RESEARCH / ARAŞTIRMA

Effects of Job Satisfaction and Work Experience on Critical Thinking and Mindfulness of Physiotherapists: A Cross-Sectional Study

İş Tatmini ve İş Deneyiminin Fizyoterapistlerin Eleştirel Düşünme ve Farkındalıkları Üzerindeki Etkileri: Kesitsel Araştırma

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Geliş tarihi/Received: 02.06.2024
Kabul tarihi/Accepted: 01.10.2024

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Abstract

Objective: The aim was to investigate the effects of job satisfaction and work experience on physiotherapists' critical thinking and mindfulness.

Material and Method: One hundred thirty physiotherapists (age: 29.00 (5.00) years) were included. Participants' job satisfaction with the Job Satisfaction Scale, professional experience with self-reports, critical thinking with the Marmara Critical Thinking Disposition Scale, and mindfulness with the Five-Facet Mindfulness Questionnaire (Short Form) were questioned via an online platform. Data analysis was performed using Spearman correlation coefficients.

Results: The median active working duration of the participants was 5.00 (1.00-29.00) years. Correlations were found between job satisfaction and reaching judgment (p=0.02, rho=0.20), open-mindedness subdimensions (p=0.05, rho=0.17), and the total score of critical thinking dimension (p=0.04, rho=0.17), and non-reactivity (p=0.03, rho=0.18) and observing subdimensions (p=0.03, rho=0.19) of mindfulness dimension. Work experience dimension correlated with acting with awareness (p=0.01, rho=0.21) and observing (p=0.04, rho=-0.18) subdimensions of mindfulness.

Conclusion: A weak positive relationship was found between job satisfaction, work experience parameters, critical thinking, and mindfulness levels. Examining this relationship regarding the accuracy and quality of the service provided may be essential.

Keywords: Decision-making, healthcare, awareness, experience, job satisfaction.

Öz

Amaç: Bu çalışmanın amacı fizyoterapistlerin iş tatmini ve iş deneyimlerinin eleştirel düşünme ve farkındalıkları üzerindeki etkilerini araştırmaktır.

Gereç ve Yöntem: Yüz otuz fizyoterapist (yaş: 29,00 (5,00) yıl) çalışmaya dahil edildi. Katılımcıların iş doyumu İş Doyumu Ölçeği ile, mesleki deneyim öz bildirimlerle, eleştirel düşünme Marmara Eleştirel Düşünme Eğilimi Ölçeği ile ve bilinçli farkındalık Beş Faktörlü Bilgece Farkındalık Anketi (Kısa Form) ile çevrimiçi platform üzerinden sorgulandı. Veri analizi Spearman korelasyon katsayıları kullanılarak yapıldı.

Bulgular: Katılımcıların ortanca aktif çalışma süresi 5,00 (1,00-29,00) yıldı. İş tatmini ile yargıya varma (p=0,02, rho=0,20), açık fikirlilik alt boyutları (p=0,05, rho=0,17) ve eleştirel düşünme boyutu toplam puanı (p=0,04, rho=0,17) ve bilgece farkındalık boyutunun tepkisizlik (p=0,03, rho=0,18) ve gözlemleme alt boyutları (p=0,03, rho=0,19) arasında korelasyon bulunmuştur. İş deneyimi boyutu, bilinçli farkındalığın farkındalıkla hareket etme (p=0,01, rho=0.21) ve gözlemleme (p=0,04, rho=-0,18) alt boyutları ile ilişkili bulunmuştur.

Sonuç: İş tatmini, iş deneyimi parametreleri, eleştirel düşünme ve bilgece farkındalık düzeyleri arasında pozitif yönde zayıf bir ilişki bulunmuştur. Sunulan hizmetin doğruluğu ve kalitesi açısından bu ilişkinin incelenmesi önemli olabilir.

Anahtar Kelime: Karar verme, sağlık hizmeti, farkındalık, deneyim, iş tatmini.

1. Introduction

Physiotherapists are autonomous healthcare providers who assess patients and healthy individuals, identify physiotherapy needs, and develop and implement training and exercise programs. Due to the responsibilities and nature of their profession, they may experience mental and physical tensions that can lead to high levels of stress and burnout (1). Furthermore, caring for patients with severe medical conditions who may have heightened anxiety, maintaining close empathetic contact, and working long hours can further exacerbate the situation (2,3). It has been highlighted that elevated levels of burnout and stress can potentially result in risky decision-making (4,5). Decision-making for physiotherapists is of utmost importance for the personal requirements in social life and the profession's needs. Good and practical decision-making or problem-solving skills may increase with experience, mentorship, and trial-and-error, further affecting job satisfaction and successful clinical practices (6–8).

Many variables are closely related to decision-making. Critical thinking and mindfulness are two variables(9–11). Firstly, critical thinking refers to effectively solving a problem, reasoning, and analyzing information before coming to conclusions (12). Studies in nursing practice have shown that nurses with poor critical thinking and decision-making skills persist in the heuristic approach of treatment options, resulting in delays in treatment (13–15). Secondly, mindfulness is based on the basic activities of consciousness, namely attention and awareness (16). According to Brown and Ryan (17), mindfulness is a sensitive interest and awareness of current events and experiences. Mindfulness has two main dimensions. The first of these dimensions is the conscious management of attention. In this case, attention is entirely present, and mental events in the present moment can be observed moment by moment. Another dimension is the adoption of attitudes such as openness, compassion, curiosity, and non-judgment toward one's own experiences (18). A positive relationship between ethical decision-making, insightful problem-solving and creative thinking, and mindfulness has been shown (19,20). People with high mindfulness have more positive and less negative reactions to work. This makes people feel more positive about the job situation and increases job satisfaction (21).

Job satisfaction is a positive attitude toward work based on employment status. Individuals with high job satisfaction tend to exhibit lower care, motivation, and work performance levels than those with low job satisfaction (22). To the best of our knowledge, the impact of job satisfaction on levels of critical thinking and mindfulness within the physiotherapy profession has not been well-documented. A recent study on the general population found a positive relationship between awareness and job satisfaction (21). In another study, nurses' mindfulness levels were reported to be medium-high and were found to influence job satisfaction (23). Furthermore, a study involving nurses revealed a positive relationship between job satisfaction and critical thinking (24). While studies on various populations suggest a link between mindfulness and job satisfaction, no literature currently examines this specific relationship among physiotherapists.

Therefore, this study aimed to determine the level of critical thinking and mindfulness of physiotherapists and correlations with job satisfaction and work experience. The hypotheses of the study were as follows. 1) There were relationships between job satisfaction and critical thinking and mindfulness; 2) There were relationships between work experience and critical thinking and the mindfulness of physiotherapists.

2. Materials and Methods

This research was a cross-sectional study conducted with physiotherapists between April- July 2022. The data was collected via e-mail and was sent to a Google Forms link. Before commencing the survey, an explanatory text was included in the questionnaires to inform the participants about the study. Informed consent was obtained from each participant, ensuring they had a clear understanding of the study's purpose and their voluntary participation.

2.1.Participants

One hundred and thirty physiotherapists (median age 29.00 (5.00) years and median active working time (5.00 (5.00) years) who were actively working and were earning, willing to participate, and met the inclusion criteria were included in the study. Physiotherapists who were not actively working were excluded from the study.

Based on Chen et al. (25) study, the minimum required sample size for a correlation analysis was calculated as 112 participants for a probability level of 0.05, an anticipated effect size of 0.319, and a statistical power level of 90% using G*Power Software (Version 3.1.9.2, Düsseldorf University, Düsseldorf, Germany) (26). Considering the situation of not responding to the e-mail, 150 physiotherapists were sent e-mails. One hundred and forty physiotherapists (%93,3) responded to the e-mail. Thirteen physiotherapists were excluded because they were not actively working. The study was completed with 127 physiotherapists.

2.2.Assessments

The participants' age, active working years, work situation, graduation situation, type of institution, and working fields were questioned. Then, job satisfaction, critical thinking, and mindfulness parameters were evaluated using the following questionnaires.

2.3.Job Satisfaction

The job satisfaction scale evaluated individuals' job satisfaction levels. The validity and reliability of the questionnaire were made (27). The general reliability coefficient of the scale was 0.84 (27). The items to determine job satisfaction were created using a 5-point Likert-type scale, and the answers were scored. All items were summed, and the arithmetic averages were taken. (I strongly disagree: 1, I strongly agree:5) Increasing scores indicate high job satisfaction. (28).

2.4.Critical Thinking

Individuals' critical thinking levels were examined with the Critical Thinking Dispositions Scale (29). This scale consisted of 6 subdimensions and 28 items. The sub-dimensions were

reasoning, reaching judgment, looking for evidence, searching for truth, open-mindedness, and systematicity. Items on the scale were scored, with one being the lowest and five being the highest. The higher score indicated a greater willingness to think critically. The respective score defined whether or not the participant exhibited the characteristics determined by the sub-dimensions (29). The general reliability coefficient of the Marmara Critical Thinking Dispositions Scale was 0.91. The sub-dimension coefficients were reasoning=0.85, reaching judgment=0.75, evidence-seeking=0.78, truth-seeking=0.74, open-mindedness=0.72, systematicity=0.64 (29).

2.5.Mindfulness

The Five Facet Mindfulness Questionnaire (FFMQ) evaluated individuals' mindfulness levels. This scale was developed by Baer et al (30) and improved by Tran et al. (31). The validity and reliability of the questionnaire were made (32). The general reliability coefficient of the FFMQ was 0.71. The sub-dimension coefficients were observe=0.69, act with awareness=0.85, describe=0.69, non-judgement=0.85, non-reactivity=0.71 (32). The items to determine mindfulness were created using a 5-point Likert type scale (I strongly disagree: 1, I strongly agree:5) and consisted of 5 subdimensions. The sub-subdimensions were observed, act with awareness, describe, non-judgment, and non-reactivity. The higher score showed greater mindfulness.

2.6.Statistical Analysis

The statistical analysis was conducted using the IBM SPSS software (Version 25.0, IBM Corp., Armonk, NY). Nonparametric analyses were used because the data were not normally distributed, as determined by the Shapiro-Wilk test and histograms. Percentage (%) and median (interquartile range) values were given in descriptive statistics. The correlation was done using the Spearman correlation analysis. Correlation strengths were determined according to the study by Feise et al.(33) (1.0-0.81: Excellent; 0.80-0.61: Very Good; 0.60-0.41: Good;0.40-0.21:Fair; 0.20-0: Poor). Statistical significance was defined at $p< 0.05$.

2.7.Ethical Aspect of the Research

The study was approved by the Izmir Katip Celebi University Social Research Ethics Committee (Date: 29.03.2022, Number: 2022/7-11), and this study was conducted following the principles of the Declaration of Helsinki.

3. Results

One hundred and thirty physiotherapists who answered and met inclusion criteria were included. The median age of the participants was 29 years (IQR=5), and the median years of individuals' active working duration were five years (IQR=5). According to the results, 70 of the participants (55.10%) had a bachelor's degree, 34 of them (26.80%) had been working at university, and 63 of them (49.60%) had been working in the field of general physiotherapy. The education information, working field, and institution of the individuals included in this study are given in Table 1.

The median scores of job satisfaction, critical thinking total score, and mindfulness were 3.60 (1.00-5.00), 116.00 (32.00-140.00), and 69.00 (40.00-94.00), respectively. Table 2 presents job satisfaction, critical thinking, and mindfulness.

The job satisfaction of the participants was positively correlated with reach judgment (rho= 0.20, p=0.02), open-

Table 1. Demographic, Education, and Employment Information of Participants

Parameters	**Median**	**Minimum-Maximum**	**Percentiles**
n=127			
Age (Year)	29.00	23.00-52.00	27.00-31.00
Active Work Years (Years)	5.00	1.00-29.00	3.00-8.00
n=127	Number		Percent
Education			
Bachelor	70		55.10
Master	36		28.30
PhD	21		16.50
Workplace			
Academy	34		26.80
Public Hospital	33		26.00
Medical Center	26		20.50
Special Education and Rehabilitation Center	19		15.00
Healthy Life Center	9		7.10
Other	6		4.80
Special Working Area			
General Physiotherapy	63		49.60
Pediatric Physiotherapy	30		23.60
Orthopedic Physiotherapy	16		12.60
Cardiopulmonary Physiotherapy	8		6.30
Neurological Physiotherapy	5		3.90
Sports Physiotherapy	3		2.40
Pelvic Floor Physiotherapy	2		1.60

n: number of samples

Table 2. Job Satisfaction, Critical Thinking, and Mindfulness Information of Participants

n=130	**Median**	**Minimum-Maximum**	**Percentiles**
Job Satisfaction	3.60	1-5	3.20-3.80
Critical Thinking			
Reasoning	25.00	7.00-30.00	24.00-28.00
Reaching Judgement	24.00	8.00-30.00	23.00-26.00
Searching for Evidence	16.00	4.00-20.00	15.00-18.00
Searching for the Truth	16.00	4.00-20.00	15.00-17.00
Open-Mindedness	16.00	5.00-20.00	16.00-18.00
Systematicity	16.00	4.00-20.00	16.00-19.00
Total Score	116.00	32.00-140.00	109.00-123.00
Mindfulness			
Act With Awareness	14.00	4.00-20.00	11.00-16.00
Non-Judging	12.00	4.00-20.00	10.00-15.00
Non-Reactivity	15.00	4.00-20.00	12.00-16.00
Observing	15.00	4.00-20.00	13.00-17.00
Describing	14.00	9.00-20.00	12.00,16.00
Total Score	69.00	40.00-94.00	69.00-75.00

n: number of samples

Table 3. Relationship Between Job Satisfaction and Work Experience, Critical Thinking, and Mindfulness

Parameters	Sub-dimensions (*n*=127)	Job Satisfaction		Work Experience Years	
		rho	*p*	*rho*	*p*
Critical Thinking	Reasoning	0.14	0.11	-0.02	0.81
	Reaching Judgment	0.20	**0.02***	-0.08	0.37
	Searching for Evidence	0.11	0.18	-0.02	0.76
	Searching for the Truth	0.06	0.47	<0.01	0.99
	Open Mindedness	0.17	**0.05***	-0.06	0.45
	Systematicity	0.16	0.06	-0.86	0.33
	Total Score	0.17	**0.04***	-0.06	0.47
Mindfulness	Acting with Awareness	-0.10	0.25	0.21	**0.01***
	Non-Judging	-0.09	0.29	0.10	0.24
	Non-Reactivity	0.18	**0.03***	-0.05	0.56
	Observing	0.19	**0.03***	-0.18	**0.04***
	Describing	-0.07	0.40	-0.01	0.85
	Total Score	-0.01	0.99	0.13	0.14

n: number of samples, *rho*:Spearman correlation coefficient, p<0.05 those denoted by *

mindedness subdimensions (rho=0.17, p=0.05), and total score of critical thinking and positively weakly correlated with non-reactivity (rho=0.18, p=0.03), observing (rho=0.19, p=0.03) subdimension of mindfulness. Active working years were positively weakly correlated with acting with awareness (rho=0.21, p=0.01) and negatively weakly correlated with observing (rho=-0.18, p=0.04). However, no correlation was found between active working years and critical thinking. Correlations are presented in Table 3.

4. Discussion

The present study examined the relationship between physiotherapists' job satisfaction and work experience, critical thinking, and mindfulness. It was observed that there is a significant poor relationship between job satisfaction, the total score of critical thinking and subdimensions (reach judgment and open-mindedness), and the observed non-reactivity subdimensions of mindfulness. Moreover, as the experience increased, the subdimensions of mindfulness (acting with awareness and observing) improved. However, no correlation was observed for critical thinking parameters.

Many internal and external factors influence job satisfaction (34–36). Laztke et al. (37) showed that job satisfaction among physiotherapists was high in Austria. A study with physiotherapists in Brazil found that job satisfaction was moderate (36). We observed that the job satisfaction of physiotherapists in Turkey was moderate to good. Most of the physiotherapists who participated in our study were working in academia, and a previous study reported that physiotherapists working as academicians had high job satisfaction(38). Job satisfaction is influenced by many factors, and further studies are needed to understand the reasons for moderate and high levels of job satisfaction.

Job satisfaction and critical thinking ability may be related (24,39). In our study, critical thinking in physiotherapists was high, but there was a poor relationship with job satisfaction, and no relationship was found with work experience. Zurmehly et al. (24) reported a relationship between nurses' job satisfaction and their level of critical thinking. Zuriguel-Perez et al. (39) emphasized that nurses' level of critical thinking was moderate and related to work experience. Huhn et al. (40)found that professional experience was related to critical thinking in physiotherapists. We hypothesize that the lack of consistency between our study's findings and the existing literature may be attributed to the participants' limited professional experience.

In our study, the level of mindfulness was found to be high among physiotherapists, and some sub-dimensions were related to job satisfaction and experience. Lin et al. (41) reported that nurses' level of mindfulness was moderate-high and strongly correlated with job satisfaction. Song et al. (42)reported that awareness might increase job satisfaction. The evidence supported that approaches used to improve mindfulness increased job satisfaction (43,44). Very few studies examined the level of professional experience and mindfulness in the field(41,42). Vitale reported no relationship between nurses' professional experience and their level of mindfulness (45). In addition, it has been reported that physiotherapists' mindfulness-based practices increase individuals' well-being and welfare (46). Although the results of this study are limited, they are compatible with the literature.

This study has some strengths and weaknesses. The study of the level of critical thinking and mindfulness of physiotherapists and the investigation of the relationship between these variables and job satisfaction and work experience may be important for professional development. Therefore, focusing on this issue can be considered the study's strength. However, the weaknesses of the study were that we could not investigate subgroups related to education, workplace, or special working areas due to the large work areas and the small range of active working durations. Studies with more factors and sample groups working in different settings are needed to further investigate the factors that affect mindfulness and critical thinking. In addition, the fact that the measurements were based on self-report may have affected the results.

5. Conclusion and Recommendations

In conclusion, there were positive poor relationships between job satisfaction and sub-dimensions of critical thinking (reaching judgment and open-mindedness) and the sub-dimensions of mindfulness (non-reactivity and observing). Moreover, the increase in work experience might cause an increase in acting with awareness and observing as the sub-dimensions of mindfulness in physiotherapists.

6. Contribution to the Field

Physical therapists are professionals who provide treatment and exercise plans for healthy patients. By its very nature, the profession can cause stress, which can negatively affect job satisfaction, level of mindfulness, and critical thinking and impede clinical decision-making. Therefore, necessary measures should be taken to study physical therapists' job satisfaction, critical thinking, and mindfulness levels and protect these parameters in this direction. According to the results of our study, it is important to take measures to keep job satisfaction at a high level and maintain people's level of critical thinking and mindfulness.

Acknowledgments

The corresponding author is a YÖK 100/2000 scholar.

Conflict of Interest

This article did not receive any financial fund. There is no conflict of interest regarding any person and/or institution.

Authorship Contribution

Concept: KP, DÖK; **Design:** KP, DÖK; **Supervision:** SGU, DÖK; **Funding:** -; **Materials:** -; **Data Collection/ Processing:** KP, SH; **Analysis/Interpretation:** KP, SH; **Literature Review:** KP, DÖK; **Manuscript Writing:** KP, SH; **Critical Review:** SGU, DÖK.

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