



Research Paper: Do Psychological Factors, Pain, and Sleep Quality Correlate With Disability and Occupational Performance in Hand Burns?



Mahnoosh Khanipour¹ , Laleh Lajevardi^{1*} , Ghorban Taghizadeh¹

1. Department of Occupational Therapy, School of Rehabilitation Sciences, Iran University of Medical Science, Tehran, Iran.



*This work has been published under CC BY-NC-SA 4.0 license.

Article info:

Received: 20 Oct 2020

Accepted: 27 Nov 2020

Available Online: 30 Dec 2020

Funding

This study was financially supported by the Iran University of Medical Sciences (IUMS), Tehran. This article is part of the MSc. thesis of the first author at the Department of Occupational Therapy, School of Rehabilitation Sciences, Iran University of Medical Sciences.

Conflict of interest

The authors declare no conflict of interests.

ABSTRACT

Background and Objectives: Burn injuries are one of the most common traumas after traffic accidents, falls, and interpersonal violence. This study was done to investigate the correlation between psychological factors, pain, and sleep quality, and disability and occupational performance in subjects with hand and upper extremity burns.

Methods: A total of 80 patients with hand and upper extremity burn injuries (16 females and 64 males) with a Mean±SD age of 39.9±10.79 years, mean burn depth (Deep Partial Thickness/ Full Thickness) of 3.42±2.66, and Mean±SD burns extent 1.06±0.24 participated in this non-experimental cross-sectional study using a non-probability sampling method. Their psychological disorders were measured using the Beck Anxiety Disorder Scale and the Self-Rating Depression Scale. The pain was assessed using the Visual Analogue Scale, sleep quality was measured by the Pittsburgh Sleep Quality Index (PSQI), disability was assessed using the Shortened Disabilities of the Arm, Shoulder, and Hand (DASH) Questionnaire, level of independence in daily living activity was measured by the Modified Barthel Index, and occupational performance was measured by the Canadian Occupational Performance Measure (COPM).

Results: Psychological factors, pain, and sleep quality were significantly correlated with disability and occupational performance. The regression models explained up to 34.4% of the variance for disability outcome and 12.4% for occupational performance. By assessing the correlation between the psychological disorders, pain, and sleep quality, and disability and occupational performance in these patients, we found that sleep quality was the strongest contributing factor Followed by PSQI.

Conclusion: Sleep quality is one of the important factors affecting the occupational performance of patients with hand and upper extremity burns injury that should be considered by therapists.

Keywords: Burns, Psychological factors, Correlation



Cite this article as Khanipour M, Lajevardi L, Taghizadeh Gh. Do Psychological Factors, Pain, and Sleep Quality Correlate With Disability and Occupational Performance in Hand Burns? Function and Disability Journal. 2020; 3:205-212 <http://dx.doi.org/10.32598/fdj.3.28>

 <http://dx.doi.org/10.32598/fdj.3.28>

* Corresponding Author:

Laleh Lajevardi, PhD.

Address: Department of Occupational Therapy, School of Rehabilitation Sciences, Iran University of Medical Sciences, Tehran, Iran.

Tel: +98 (21) 22228051

E-mail: laleh23275@yahoo.com

↑ *What is “already known” in this topic:*

Since many studies showed that burns can result in changes in psychological well-being and sleep quality, also can lead to pain, it needs to define the correlation between these factors and occupational performance in patients with hand and upper extremity burn.

→ *What this article adds:*

This study shows psychological factors, pain and especially sleep quality were significantly correlated with disability and occupational performance in these patients.

B 1. Introduction

urn injuries are one of the most common traumas after traffic accidents, falls, and interpersonal violence [1]. The prevalence of burns in developing countries, such as Iran is 1.3 per 100,000 people, while the same rate in developed countries is about 0.14 per 100,000 people [2].

The most common limbs affected by burns are the upper limbs and hands [3]. Hypertrophic scarring and motor dysfunction [2], loss of range of motion, joint deformities [4] peripheral neuropathies [5], some psychological disorders, such as depression and anxiety [6], and poor sleep quality [2] are the most common problems with burns. On the other hand, burns in the upper extremities can cause functional limitations, which in turn affects the individual's return to meaningful activities, including self-care, recreation, and work [6].

Mental health is a major concern for patients with burns injuries and in whom Post-Traumatic Stress Disorder (PTSD) is very common in these patients [2]. On the other hand, psychological distress after an injury can be long-lasting and have long-term consequences [7]. Pain is a common uncomfortable symptom in burns injuries [8]. Quality of sleep also plays an important role in the mental health and quality of life of patients suffering from burns injuries [9].

Although the study by Hayley Mata et al. on patients with upper extremities burn injury showed that burns can lead to changes in the ability to perform basic activities of daily living and participate in social activities, like working [6], and ultimately, quality of life [5], no investigation has yet been done on the effect of psychological factors, pain, and sleep quality on disability and occupational performance in these patients. Therefore, this study was done to investigate the correlation between

the mentioned factors and disability and occupational performance in patients with hand and upper extremity burns comprehensively. The results of this study can provide useful knowledge about the side effects of hand and upper extremity burn leading to better occupational therapy interventions for these patients.

2. Materials and Methods

Participants

In this cross-sectional study, a total of 80 patients with hand and upper extremity burn injuries (16 females and 64 males) were included. They were selected by simple non-probability sampling method among patients referring to the Motahari burn hospital in Tehran. The study was conducted during the first 6 months of 2020. The inclusion criteria included the age of 18 to 65 years old, referring to occupational therapy clinics 3 to 5 days after surgery, depth of burn injury (2 and 3 layers) [10], burns area of 3% or 2.5% [11-13], and having no accompanying injuries, such as fractures, tendon injuries, or wound infections, unwanted complications after surgery, such as infection and severe and open swelling. The recurrence of the wound, the lack of cooperation, the unwillingness to continue the study.

This study investigated the correlation between demographic characteristics and complications of burns, and sensory and motor ability, occupational performance, and psychological disorders in patients with hand and upper extremity burns after burn injury. The demographic questionnaire completed by the patients included information, such as age, gender, marital status, dominant hand and injured hand/hands, and the extent and depth of burns. Clinical data were also collected by questionnaires related to hand functional problems, occupational performance, psychological disorders, such as anxiety and depression, level of independence in daily living activity and sleep quality after burn injury. Psychological

disorders were measured by the Beck Anxiety Disorder (BAD) and Self-Rating Depression Scale (SDS), the pain was assessed using the Visual Analogue Scale (VAS), sleep quality was measured by the Pittsburgh Sleep Quality Index (PSQI), disability was assessed using the Shortened Disabilities of the Arm, Shoulder, and Hand Questionnaire (Quick-DASH), level of independence in activity of daily living was measured by the Modified Barthel Index (MBI), and occupational performance was measured by the Canadian Occupational Performance Measure (COPM). All measurements were performed in one session and each session lasted 45 minutes.

Outcome measurement

Canadian Occupational Performance Measure (COPM)

It is a client-centered assessment tool to determine a person's perception of his or her occupational performance and level of satisfaction with self-care, productivity, and leisure. Clients rank each identified problem on a scale of one to ten (one indicates the least important activities of daily livings and ten indicates the most important activities of daily livings) [14]. The authorities select and determine three to five of the most important activities of daily livings [15]. A change of 2 or more points in this tool is considered a significant clinical change [16]. With reliability of 80% for performance and 84% for client satisfaction, it has good reliability in patients with burn injuries [14].

Shortened Disabilities of the Arm, Shoulder, and Hand Questionnaire (Quick-DASH)

This questionnaire consists of eleven items [17]. Each item has five response options ranging from trouble-free or asymptomatic (1) to inability to perform an activity or very severe symptoms (5). The minimum score is zero and the maximum score of 100 indicates severe disability [18]. The reliability of this questionnaire was excellent with the Cronbach's alpha coefficient of 0.9090% and the test-retest reliability of 0.89 [19].

Modified Barthel Index (MBI)

It is the modified version of the original Barthel Index [20]. This questionnaire contains 11 items and depending on the conditions of each person and the nature of the species, it is scored between zero and 15. Scores of 0 to 10 are considered as complete dependence, 20 to 60 are considered as severe dependence, scores of 61 to 90 are considered as moderate dependence, scores of 91 to 99 are regarded as partial dependence, and the score of 100

is considered as complete independence [21]. The internal consistency of this tool (Cronbach's alpha coefficient of 0.96) shows that this tool is reliable [21].

Visual Analogue Scale (VAS)

This scale is used to assess pain. It is on a horizontal or vertical axis with a length of 100 mm (10 cm), with the word "severe pain" at the right end and the word "painless" at the left end [22]. The patient draws a line with a pencil to the point that indicates the level of pain. A score of zero indicates no pain, a score of one to three indicates mild pain, a score of four to seven indicates moderate pain, and a score of eight to ten indicates severe pain [23, 24].

Beck Anxiety Disorder (BAD)

This questionnaire measures the severity of clinical anxiety symptoms in individuals and includes 21 phrases. To respond, the subjects multiply their resentment over the past week in the systole in front of it. The answer scoring method is none (0), mild (1), medium (2), and severe (3). Thus, the range of scores is from zero to 63; zero means no anxiety, and 63 means maximum anxiety. With Cronbach's alpha of 0.90, it was concluded that the Persian version of this questionnaire is reliable [25].

Self-rating Depression Scale (SDS)

This questionnaire consists of 20 questions that measure different aspects of mood (the severity of depression) and are graded 1 to 4. The subject is asked to mark each sentence that is closest to his inner feeling in the last two weeks. The score of less than 50 is normal mood and without psychological pathology, 50 to 59 mild to moderate depression, 60 to 69 moderate to obvious depression, and more than 70, severe depression. The high validity of this test has been reported previously [26].

Pittsburgh Sleep Quality Index (PSQI)

This questionnaire is used to evaluate the quality of sleep and includes 19 items, which are rated on a 4-point Likert scale from 0 to 3. It is scored from 0 to 21; a score of zero indicates good sleep quality and a score of 21 indicating poor sleep quality. With a Cronbach's alpha score of 0.80, it was concluded that this Persian version of this questionnaire is reliable [27].

Statistical analysis

The normality of data was assessed by the Kolmogorov-Smirnov test. The stepwise regression models (R^2) were

Table 1. Qualitative data in participants

Variables	No.	Range
Gender (female/male)	17/63	-
Marital status (single/married/others)	25/53/2	-
Dominant hand (right/left)	73/7	-
Injured hand (right/left/both)	37/16/27	-
Burn cause (hot liquids/gas/electricity/other)	22/46/9/3	-
Burn region (elbow/lower than elbow/wrist/lower than the wrist/hand)	1/11/1/58/9	-
Burn depth (DPT/FT)	54/26	-
Burn extent (2.5/3)	74/6	-

performed to investigate the correlation between predictors and outcomes. In order to determine the relevant factors for each model, firstly, the correlation between predictors and outcomes was evaluated using Pearson and Spearman correlation coefficients for parametric and non-parametric variables, respectively. Only the variables that significantly correlated with disability and occupational performance were included in the respective regression models. The statistical significance was considered at 0.05.

3. Results

In this study, 80 patients with hand and upper extremity burns injury (16 females and 64 males) with a mean age of 39.9 ± 10.79 years, mean burn depth (DPT/FT) of 3.42 ± 2.66 , and the mean burn extent 1.06 ± 0.24 partici-

pated. The demographic and clinical characteristics of the participants are shown in Tables 1 and 2. The results showed that gender, burns cause, burn region and depth, dominant hand, and marital status were not significantly correlated with outcomes. However, age, psychological factors, pain, and sleep quality were significantly correlated with disability and occupational performance (Table 3).

The regression models explained up to 34.4% of the variance of disability outcome and 12.4% of the occupational performance. In all stepwise models for disability, pain which was measured by VAS was the strongest predictor. The second-highest level of the variance for disability was explained by depression assessed by SDS. In all stepwise models for occupational performance,

Table 2. Quantitative data and outcomes in participants

Variables	Mean \pm SD	Range
Age (years)	39.9 \pm 10.79	20-62
VAS-Pain	4.86 \pm 2.86	0-10
BAI	9.39 \pm 7.20	0-34
SDS	56.65 \pm 10.10	29-72
PSQI	8.53 \pm 5.53	1-19
Quick DASH	63.7 \pm 9.66	27-75
COPM	Function	1.16 \pm 1.66
	Satisfaction	0.64 \pm 1.50

VAS: Visual Analog Scale; BAI: Beck Anxiety Inventory; SDS: Self-rating Depression Scale; PSQI: Pittsburgh Sleep Quality Index; Quick DASH: Quick Disabilities of the Arm, Shoulder, and Hand; COPM: Canadian Occupational Performance Measure

Table 3. Correlations between predictors and outcomes (disability and occupational performance)

Predictors	Outcomes		
	Disability	Occupational Performance	
	Quick DASH (Score)	COPM-Performance (Score)	COPM-Satisfaction (Score)
Gender (female/ male)	0.11	0.05	0.10
Age (years)	0.26	-0.05	-0.07
Marital status (single/ married/ others)	0.22	0.04	0.02
Dominant hand (right/ left)	0.01	0.07	0.10
Injured hand (right/ left/both)	0.17	0.19	0.19
Burn cause (Hot liquids/Gas/Electricity/Other)	0.06	0.02	0.13
Burn region (Elbow/Lower than elbow/Wrist/ Lower than the wrist/Hand)	0.06	0.08	0.04
Burn depth (DPT/FT)	0.01	0.09	0.05
Marital status (single/ married/ others)	0.12	0.02	0.04
VAS-Pain	0.64	-0.21	-0.18
BAI	0.22	-0.05	-0.10
SDS	0.37	-0.22	-0.22
PSQI	0.53	-0.33	-0.32

DPT: 2; FT: 3; VAS: Visual Analog Scale; BAI: Beck Anxiety Inventory; SDS: Self-rating Depression Scale; PSQI: Pittsburgh Sleep Quality Index; Quick DASH: Quick Disabilities of the Arm, Shoulder, and Hand; COPM: Canadian Occupational Performance Measure. Significant correlations are shown in the bold and italic format.

sleep quality measured by PSQI was the strongest predictor (Table 4).

4. Discussion

Burn injuries can cause numerous barriers for patients with hand and upper extremity burns. Although patients may experience negative effects in almost all aspects of their daily functions and physical health, it must be considered that psychological well-being is affected. Because of the high prevalence of psychological disorders, pain, and sleep quality in these patients and their probable effects on disability and occupational performance, the researchers decided to examine the correlation between these factors and disability and occupational performance of patients with hand and upper extremity burns. By a comprehensive investigation of the effects of different types of psychological disorders, pain, and sleep quality on disability and occupational performance in patients with hand and upper extremity burns, we found that sleep quality was the strongest contributing factor followed by pain. To the best of the authors'

knowledge, this is the first study surveying the underlying correlation between psychological disorders, pain, and sleep quality, and disability as well as occupational performance in such a large sample of patients with hand and upper extremity burns.

The results of this study showed that sleep quality (as measured by PSQI) was the strongest predictor for both disability and occupational performance in patients with hand and upper extremity burns. This result indicates the need to consider sleep quality in rehabilitation for improving ability and occupational performance in these patients. Sleep quality was correlated positively with disability and occupational performance. One possible explanation is that sleep and rest are also considered as the aspects of occupations and affect the capacity to perform activities as well as occupational performance.

Pain (as measured by VAS) was the second most significant predictor. It means that those who had greater pain had less ability to perform their occupations. This finding suggests that in addition to sleep quality, pain should be

Table 4. A summary of stepwise multiple regression analyses for disability and occupational performance

Disability Outcome	Models/Predictors	R ² (%)	R ² Change (%)	P
Disability outcome				
Quick DASH	Model 1: VAS-Pain	34.4	34.4	0.0001
	Model 2: VAS-Pain + SDS	41.4	0.07	0.003
Activity performance outcome		Occupational performance outcomes		
COPM-Performance (score)	Model 1: PSQI	12.4	12.4	0.001
COPM-Satisfaction (Score)	Model 1: PSQI	8.4	8.4	0.009

VAS: Visual Analog Scale; SDS: Self-rating Depression Scale; PSQI: Pittsburgh Sleep Quality Index; Quick DASH: Quick Disabilities of the Arm, Shoulder, and Hand; COPM: Canadian Occupational Performance Measure. Significant correlations are shown in the bold and italic format.

considered as a therapeutic target for improving ability and occupational performance in patients with hand and upper extremity burns. One possible explanation for this result is that pain prevents patients from doing their activities and occupations; thus, patients cannot do their assigned tasks.

On the other hand, we found that depression (as measured by SDS) was the second predictor for disability, after pain. Depression in patients with hand and upper extremity burns was correlated positively with disability in doing activities that interfere with their assigned tasks. From our point of view, specialists should consider this factor as one of the predictors to improve these patient's abilities.

5. Conclusion

The results of this study showed that sleep quality was the strongest predictor for both disability and occupational performance in patients with hand and upper extremity burns, followed by pain. However, because of the main contribution of sleep quality in the variance of disability and occupational performance in patients with hand and upper extremity burns, it would be necessary to consider the interventions on the improvement of sleep quality in patients with hand and upper extremity burns by rehabilitation specialists.

Ethical Considerations

Compliance with ethical guidelines

The study was approved by the Ethics Committee of Iran University of Medical Sciences (IR.IUMS. REC.1397.293). All patients agreed to participate and signed a consent form.

Funding

This study was financially supported by the Iran University of Medical Sciences (IUMS), Tehran, Iran. This article is part of the MSc. thesis of the first author in the Department of Occupational Therapy, School of Rehabilitation Sciences, Iran University of Medical Sciences.

Authors' contributions

Conceptualization, supervision: Laleh Lajevardi; Methodology: Ghorban Taghizadeh; Investigation: Mahnoosh Khanipour; Writing – original draft; writing – review & editing: All authors; Funding acquisition, resources: Laleh Lajevardi.

Conflict of interest

The authors declare no conflict of interests.

Acknowledgments

The authors would like to thank all people who participated in this study.

References

- [1] Saberi M, Fatemi MJ, Soroush MR, Masoumi M, Niazi M. [Burn epidemiology in Iran: A meta-analysis study (Persian)]. *Iran J Surg*. 2016; 24(1):47-61. <http://www.ijs.ir/components4.php?rQV=8BE-MApDdyFGdz9lZ8B0NzAkOkIEduVmchB3XmxHQwYDNAPdZJlWZ0l2XmxHQyATNAPDZJ52bpR3Yh9lZ>
- [2] Tang D, Li-Tsang CWP, Au RKC, Li KCH, Yi XF, Liao IR, et al. Functional outcomes of burn patients with or without rehabilitation in mainland China. *Hong Kong J Occup Ther*. 2015; 26(1):15-23. [DOI:10.1016/j.hkjot.2015.08.003]

- [3] Aghakhani K, Abdolkarimi L, Memarian A, Hosseini R, Mehrpishah S, Abdolkarimi F, et al. [Epidmiology of occupational injuries and its effect on patients refferd to Motahari Hospital in Tehran during 2010 to 2012 (Persian)]. *Razi J Med Sci.* 2015; 21(128):66-71. <http://rjms.iums.ac.ir/article-1-3563-en.html>
- [4] Cowan AC, Stegink-Jansen CW. Rehabilitation of hand burn injuries: Current updates. *Injury.* 2013; 44(3):391-6. [DOI:10.1016/j.injury.2013.01.015] [PMID]
- [5] Williams T, Berenz T. Postburn upper extremity occupational therapy. *Hand Clin.* 2017; 33(2):293-304. [DOI:10.1016/j.hcl.2016.12.015] [PMID]
- [6] Mata H, Humphry R, Sehorn S, Dodd HS, Thornton SJ, Prochazka M, et al. Meaningfull occupations impacted by burn injuries. *Am J Occup Ther.* 2017; 71:7111520302. [DOI:10.5014/ajot.2017.71S1-PO5144]
- [7] Dalal PK, Saha R, Agarwal M. Psychiatric aspects of burn. *Indian J Plast Surg.* 2010; 43(Suppl):S136-42. [DOI:10.1055/s-0039-1699471] [PMID] [PMCID]
- [8] Meyers-Paal R, Blakeney P, Robert R, Murphy L, Chinkes D, Meyer W, et al. Physical and psychologic rehabilitation outcomes for pediatric patients who suffer 80% or more TBSA, 70% or more third degree burns. *J Burn Care Rehabil.* 2000; 21(1 Pt 1):43-9. [DOI:10.1097/00004630-200021010-00009] [PMID]
- [9] Masoodi Z, Ahmad I, Khurram F, Hag A. Changes in sleep architecture after burn injury: 'Waking up' to this unaddressed aspect of postburn rehabilitation in the developing world. *Can J Plast Surg.* 2013; 21(4): 234-8. [DOI:10.1177/229255031302100404]
- [10] Pendelton MK, Schultz-Krohn W. Pedretti's occupational therapy practice skills for physical dysfunction. Amsterdam: Elsevier; 2018. https://www.google.co.uk/books/edition/Pedretti_s_Occupational_Therapy/oRPAjwECAAJ?hl=en
- [11] Mlcak RP, Buffalo MC. Pre-hospital management, transportation, and emergency care. In: Herndon DA, editor. *Total burn care.* Philadelphia: Saunders Elsevier; 2007. p.81-92. <https://www.sciencedirect.com/science/article/pii/B9781416032748500106>
- [12] Fisher SV, Helm PA. *Comprehensive rehabilitation of burns.* Pennsylvania: Williams & Wilkins; 1984. https://www.google.co.uk/books/edition/Comprehensive_Rehabilitation_of_Burns/SFVSAAMAAMAJ?hl=en&gbpv=0&bsq=Comprehensive%20rehabilitation%20of%20burns&kptab=getbook
- [13] Reginald R, Staley M. Burn wound healing. In: Staley M, Reginald R, editors. *Burn care and rehabilitation: Principles and practice.* Philadelphia: Davis; 1994. pp.70-92. https://www.google.co.uk/books/edition/Burn_Care_and_Rehabilitation/rWBsAAAAMAAMAJ?hl=en
- [14] Atashi N, Aboutalebi S, Heidari M, Hosseini S A. Reliability of the Persian version of canadian occupational performance measure for Iranian elderly population. *Iran Rehabil J.* 2010. 8(2):26-30. <http://irj.uswr.ac.ir/article-1-188-en.html>
- [15] Kjekken I, Dagfinrud H, Uhlig T, Mowinckel P, Kvien TK, Finset A. Reliability of the Canadian Occupational Performance Measure in patients with ankylosing spondylitis. *J Rheumatol.* 2005; 32(8): 1503-9. [PMID]
- [16] Vroland-Nordstrand K, Eliasson AC, Jacobsson H, Johansson U, Krumlinde-Sundholm L. Can children identify and achieve goals for intervention? A randomized trial comparing two goal-setting approaches. *Dev Med Child Neurol.* 2016; 58(6):589-96. [PMID] [DOI:10.2106/ JBJS.D.02060] .
- [17] Beaton DE, Wright JG, Katz JN; Upper Extremity Collaborative Group. Development of the QuickDASH: Comparison of three item-reduction approaches. *J Bone Joint Surg Am.* 2005; 87(5):1038-46. [DOI:10.2106/ JBJS.D.02060] [PMID]
- [18] Atroshi I, Gummesson C, Andersson B, Dahlgren E, Johansson A. The disabilities of the arm, shoulder and hand (DASH) outcome questionnaire: Reliability and validity of the Swedish version evaluated in 176 patients. *Acta Orthop Scand.* 2000; 71(6):613-8. [DOI:10.1080/000164700317362262] [PMID]
- [19] Ebrahimzadeh MH, Moradi A, Vahedi E, Kachooei AR, Birjandinejad A. Validity and reliability of the Persian version of shortened disabilities of the arm, shoulder and hand questionnaire (Quick-DASH). *Int J Prev Med.* 2015; 6:59. [DOI:10.4103/2008-7802.160336] [PMID] [PMCID]
- [20] Shah S, Cooper B, Maas F. The barthel index and ADL evaluation in stroke rehabilitation in Australia, Japan, the UK and the USA. *Aust Occup Ther J.* 1992; 39(1):5-13. [DOI:10.1111/j.1440-1630.1992.tb01729.x]
- [21] Tagharrobi Z, Sharifi K, Sooky Z. [Psychometric evaluation of Shah version of modified Barthel index in elderly people residing in Kashan Golabchi nursing home (Persian)]. *Feyz.* 2011; 15(3): 213-24. <http://feyz.kaums.ac.ir/article-1-1241-en.html>
- [22] Bodian CA, Freedman G, Hossain S, Eisenkraft JB, Berlin Y. The visual analog scale for pain: Clinical significance in postoperative patients. *Anesthesiology.* 2001; 95(6):1356-61. [DOI:10.1097/0000542-200112000-00013] [PMID]
- [23] DeLoach LJ, Higgins MS, Caplan AB, Stiff JL. The visual analog scale in the immediate postoperative period: Intrasubject variability and correlation with a numeric scale. *Anesth Analg.* 1998; 86(1):102-6. [DOI:10.1097/0000539-199801000-00020] [PMID]
- [24] Mendelson G , Selwood TS. Measurement of chronic pain: A correlation study of verbal and non verbal scales. *J Behav Assess.* 1981; 3(4):263-9. [DOI:10.1007/BF01350830]
- [25] Hossein Kaviani H, Mousavi A S. [Psychometric properties of the Persian version of Beck Anxiety Inventory (BAI) (Persian)]. *Tehran Univ Med J.* 2008; 66(2):136-40. <http://tumj.tums.ac.ir/article-1-641-en.html>
- [26] Pahlavanzade S, Kiasatpoor M, Nasiri M. [Depression in athlete and non- athlete university students (Persian)]. *J Res Behav Sci.* 2006; 4(1):26-32. <http://rbs.mui.ac.ir/article-1-105-en.html>
- [27] Khosravifar S, Bandi MG, Alavi K, Javadi PH. Evaluation of the psychometric properties of the Persian version of the Pittsburgh Sleep Quality Index in depressed patients. *Electron Physician.* 2015; 7(8):1644-52. [DOI:10.19082/1644] [PMID] [PMCID]

آیا عوامل روان‌شناختی، درد و کیفیت خواب با ناتوانی و عملکرد کاری در افراد با آسیب سوختگی دست و اندام فوقانی ارتباط دارد؟

مهنوش خانی‌پور^۱، لاله لاجوردی^۱، قربان تقی‌زاده^۱

۱. گروه کاردرمانی، دانشکده علوم توانبخشی، دانشگاه علوم پزشکی ایران، تهران، ایران.

چکیده

تاریخ دریافت: ۲۹ مهر ۱۳۹۹

تاریخ پذیرش: ۰۷ آذر ۱۳۹۹

تاریخ انتشار: ۱۰ دی ۱۳۹۹

مقدمه: سوختگی یکی از شایع‌ترین آسیب‌ها پس از حوادث رانندگی، سقوط و خشونت بین‌فردی است. این مطالعه با هدف بررسی ارتباط بین عوامل روان‌شناختی، درد و کیفیت خواب و ناتوانی و عملکرد شغلی در افراد مبتلا به سوختگی دست و اندام فوقانی انجام شد.

مواد و روش‌ها: در این مطالعه مقطعی غیرآزمایشی ۸۰ بیمار (۱۶ زن و ۶۴ مرد) با آسیب سوختگی دست و اندام فوقانی با میانگین سنی ۳۹/۹±۱۰/۷۹ سال، میانگین عمق سوختگی (DPT / FT) ۳/۴۲±۲/۶۶ و میزان سوختگی ۲/۵ یا ۳ با استفاده از روش نمونه‌گیری غیراحتمالی، انتخاب شده و مورد بررسی قرار گرفتند. اختلالات روان‌شناختی این افراد با استفاده از پرسشنامه اضطراب بک، پرسشنامه خودارزیابی افسردگی زونگ، مقیاس ارزیابی درد، پرسشنامه ارزیابی کیفیت خواب، پرسشنامه کوتاه شده ارزیابی ناتوانی بازو، شانه و دست، پرسشنامه ارزیابی عملکرد کاری کانادایی، پرسشنامه ارزیابی فعالیت‌های روزمره زندگی بارتل اندازه‌گیری شدند.

یافته‌ها: عوامل روان‌شناختی، درد و کیفیت خواب با سطح ناتوانی و عملکرد کاری ارتباط معنی‌داری داشتند. مدل‌های رگرسیون ۳۴/۴ درصد واریانس سطح ناتوانی (Quick DASH) و ۱۲/۴ درصد واریانس عملکرد کاری (COPM) را توضیح دادند. با ارزیابی ارتباط بین اختلالات روان‌شناختی، درد و کیفیت خواب بر سطح ناتوانی و عملکرد کاری در این بیماران، متوجه شدیم که کیفیت خواب قوی‌ترین عامل مؤثر است.

نتیجه‌گیری: کیفیت خواب یکی از عوامل مهم و تأثیرگذار بر عملکرد کاری بیماران با آسیب سوختگی دست و اندام فوقانی است و باید توسط درمانگران مورد توجه قرار گیرد.

کلیدواژه‌ها:

سوختگی، عوامل روان‌شناختی، همبستگی

Use your device to scan and read the article online



Cite this article as Khanipour M, Lajevardi L, Taghizadeh Gh. Do Psychological Factors, Pain, and Sleep Quality Correlate With Disability and Occupational Performance in Hand Burns? Function and Disability Journal. 2020; 4:???. <http://dx.doi.org/10.32598/fdj.4.28>

<http://dx.doi.org/10.32598/fdj.4.28>

* نویسنده مسئول:

لاله لاجوردی

نشانی: تهران، دانشگاه علوم پزشکی ایران، دانشکده علوم توانبخشی، گروه کاردرمانی.

تلفن: +۹۸ (۲۱) ۲۲۲۲۸۰۵۱

رایانامه: laleh23275@yahoo.com