

Effect of Reciting the Name of God on the Pain and Anxiety Experienced by Burn Patients during Dressing Change

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Morteza Nasiri¹, Hanieh Bahadori², Akram Heidari³, Ali Akbar Jafari⁴, Meysam Hosseini Amiri^{3*}

1 Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran.

2 Student Research Committee, Qom University of Medical Sciences, Qom, Iran.

3 Spiritual Health Research Center, Qom University of Medical Sciences, Qom, Iran.

4 Nekouei-Hedayati-Forghani Hospital, Qom University of Medical Sciences, Qom, Iran.

Abstract

Background and Objectives: The pain and anxiety experienced by burn patients during dressing change cannot be thoroughly controlled by painkillers and anxiolytics. Evidence has documented that reciting the name of God can positively impact the reduction of pain and anxiety caused by aggressive procedures. Therefore, the present study aimed to investigate the effect of reciting the name of God on the pain and anxiety caused by dressing change in patients with burn injuries.

Methods: The present clinical trial study was performed on 71 patients admitted to the burn ward of Nekouei-Hedayati-Forghani Hospital affiliated to Qom University of Medical Sciences in 2017. Patients were selected by the convenience sampling method and randomly assigned to experimental and control groups using the stratified randomization method. Thereafter, 10 min before dressing change, the patients in the experimental group were asked to recite the name of God, while the cases in the control group received the routine care. Patients' pain intensity was measured before mentioning the name of God and immediately after dressing change. Anxiety caused by burn pain was measured before mentioning the name of God, before dressing change, immediately after dressing change, and 15 min later. Data were analyzed in SPSS software (version 22) using descriptive and analytical statistics (chi-square, independent t-test, and paired t-test).

Results: The mean age of participants was reported as 44.59±9.13. The result of the independent t-test showed that the mean score of pain immediately after dressing change was found to be lower in the intervention group, compared to the control group (P=0.04). Moreover, the result of pair t-test in the intervention group demonstrated that the mean score of pain-induced anxiety was lower immediately after dressing change, in comparison with the time before reciting the name Of God (P<0.001).

Conclusion: As evidenced by the obtained results, reciting the name of God can reduce the anxiety and pain associated with wound dressing changes in burn patients. Therefore, it is suggested that the name of God be used along with pharmaceutical interventions to control pain and anxiety experienced at dressing change.

Keywords: Burn, Dressing, Islam, Pain, Pain-induced Anxiety.

*Correspondence: Should be addressed to Dr. Meysam Hosseini Amiri. Email: Hoseini_amiri@yahoo.com

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Introduction

Burn patients go through a large number of daily dressing changes (1) which are associated with agonizing pain and anxiety (2). Anxiety is a commonly reported disorder which exists and persists in the acute phase of burn care (1). The results of a study

indicated that anxiety is an emotional response reported in 61% of patients with emotional or physical trauma caused by burn injuries (3). Anxiety induced by burn pain is associated with painful therapeutic interventions. This type of anxiety is the most severe form of

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anxiety which is accompanied by a feeling of dread and anticipation of pain caused by painful therapeutic procedures (4).

The results of a study conducted by Manzari et al. pointed to a direct two-way relationship between pain and pain-induced anxiety. It signifies that adequate pain control can reduce anxiety, which in turn, reduces pain and increases the cooperation of patients throughout painful therapeutic practices (5). Mahmoudi Fakhar et al. (2012) stated that the pain and anxiety experienced during dressing changes cannot be completely managed by painkillers and anxiolytics (6). Moreover, this anxiety can aggravate pain during therapeutic practices and the complication of burn, such as impaired burn wound healing (1, 7, 8). Therefore, the management of burn-associated pain and anxiety is considered fundamental to burn care (9, 10). This highlights the importance of prompt measures to control pain and anxiety caused by dressing changes.

Non-pharmaceutical methods are superior to pharmaceutical ones due to their cost-effectiveness, ease of implementation, non-invasiveness, the promotion of confidence, client participation, their few side effects, and patient satisfaction (11). Spirituality which contributes significantly to the prevention and relief of pain and anxiety is one of the non-pharmaceutical measures (12-1). Clinical nursing research has demonstrated that the spiritual dimension is one of the most important aspects of nursing in achieving pain and anxiety relief for patients. Therefore, it is essential that nurses gain at least a basic knowledge of the religious beliefs of local people for successful palliative care (15-16).

Dua (prayer), invocation, or supplication, which are among the religious practices performed individually or in groups, play a peculiar role in the relief of pain and anxiety caused by various diseases (17-18). Among the types of invocations, we can mention calling on the names of God, which play an important role in intimacy with God and the recognition of hidden human talents. From the Islamic point of view, the remembrance of God calms the hearts, soothes the pains, and purifies the souls (19). In the Qur'an, God considers his

remembrance to be beyond human imagination and equals it with Salat (Namāz) signifying the importance of Islamic prayer (dhikr) among other religious practices (20).

Today, many psychologists and psychiatrists have found that dhikr and immersion in God work an obstacle against life problems and mental occupations. In so doing, they eliminate anxiety, worry, and fear, and create a state of mental peace (21). The results of recent studies were also indicative of the positive effect of reciting the names of God on the reduction of pain and anxiety caused by invasive procedures (19, 22, 23, 24). In patients with burn injuries, the results of a quasi-experimental study performed by Avazeh et al. pointed out that reciting the word God effectively reduced the pain and anxiety caused by dressing change in burn patients (22).

The results of a study performed by Wiechman pointed to the effective role of religious beliefs in the successful treatment of burn patients (25). Moreover, the reduction of pain and anxiety in patients with burn injuries is of utmost importance; moreover, common painkillers and anti-anxiety medications are costly and cause adverse effects. To the best of our knowledge, there exists only one similar study conducted on patients with burn injuries (22). Therefore, the current study aimed to use the religious beliefs of patients and assess the effect of reciting the name of God, which is one of the known and common dhikrs in Islam, on the pain and anxiety caused by dressing change in burn patients.

Methods

The present study was a randomized double-blind clinical trial which was conducted in 2017. The statistical population of this study included all patients with burns admitted to the burn ward of Nekouei-Hedayati Hospital of Qom University of Medical Sciences. The participants of the study comprised of 80 eligible patients hospitalized in the burn ward who were selected by stratified randomization method. The sample size was obtained at 40 cases in each group according to the mean and standard deviation of pain intensity caused by dressing change in patients with burns in the study by Avazeh et al.

(22)(control group=7.85±4.1 and experimental group=5.21±3.2) regarding the formula for comparing the means, $\alpha=0.05$, and $\beta=0$.

The inclusion criteria were as follows: 1) willingness to participate in the study, 2) being Muslim (Shiite), 3) belief in Islamic prayer (Dhikr), 4) a minimum level of literacy and ability to speak and communicate, 5) at the end of the emergent phase and the initial acute phase of bum injury (starting 48- 72 h after the onset of the burn), 6) second or third-degree burn, 7) of 20- 50% TBSA burns, 8) acuteness of the wound, 9) patient alertness, and 10) the need for povidone-iodine dressing. On the other hand, the exclusion criteria entailed: patient in an emergency situation (including respiratory distress, as well as water and electrolyte imbalance) and the patient's unwillingness to continue the study.

After obtaining the approval of the Ethics Committee of Qom University of Medical Sciences (IR.MUQ.REC.1396.84) and the code of the Iranian Clinical Trial Center (IRCT 20140428017468N5), sampling was performed in accordance with the ethical considerations of the Helsinki Declaration (26). Initially, personal and clinical characteristics questionnaire (including age, gender, place of residence, marital status, body mass index, belief in Islamic prayer (Dhikr), ethnicity, length of hospital stay, cause of the burn, location of the burn, percentage of burn, and drug addiction) was completed for each patient by a research colleague. Thereafter, patients were selected by the convenience sampling method and randomly assigned to experimental and control groups using the stratified randomization method.

The variables were classified as follows: degree (including two categories of first and second-degree), percentage (including two categories of numerical intervals), and the type of burn (including three categories of thermal, electrical, and chemical). The patients were then assigned to the appropriate category according to the variables using a simple random sampling method. Patients in both groups received analgesics and sedatives as needed, and the type, amount, timing, and frequency of doses were recorded.

Thereafter, 10 min before dressing change in the dressing room, the patients were asked to recite the Tasbīh of Lady Fāṭīma Al-Zaha (PBUH) which includes reciting the name of God 100 times (34 times God Akbar (God is the greatest), 33 times al-Hamd li God (Praise be to God) and 33 times Subhan God (Glory be to God)). Patients in the control group only received routine care. Patients' pain intensity was measured before reciting the name of God and immediately after dressing change. The self-report questionnaire of anxiety caused by burn pain was administered by a research colleague immediately before the commencement of reciting the name of God (in the experimental group) and 15 min before the start of dressing change (in the control group).

The questionnaire was also completed by the research colleague immediately and 15 min after Dhikr. In the present study, the research colleagues randomized research subjects and entered and analyzed the data. The pain VAS is a continuous scale comprised of a horizontal (HVAS) or vertical (VVAS) line, usually 10 centimeters (100 mm) in length, labeled as 0-10 (0= the absence of pain and 10= the maximum pain imaginable to the patient). The validity of the pain VAS has been confirmed in several studies, including an investigation conducted by Gallagher (2002). Moreover, the reliability of this scale was approved in a study performed by Gallagher et al. (2002) using the retest method rendering the correlation coefficient of $r = 0.99$ (27).

The Pain Anxiety Self-Report Questionnaire consists of 9 items that are answered on a 4-point Likert scale: never=1, somewhat=2, moderately=3, and extensively=4. In each measurement, a score of 9 indicates the lack of anxiety, while a score of 36 is suggestive of the highest level of anxiety. The validity of this questionnaire has been confirmed by experts using construct and content validity (8). In 2013, Najafi Ghezalchah et al. confirmed the content validity of this questionnaire after Persian translation (28). Furthermore, the reliability of this questionnaire was confirmed in Iran rendering a Cronbach-alpha coefficient of 0.96 (28).

The data were entered into the computer after

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being collected and coded and the accuracy of data entry was ensured. Thereafter, the obtained data were analyzed in SPSS software (version 22) using descriptive statistics (mean and standard deviation, frequency and percentage) and analytical statistical tests (including independent and dependent t-tests, Chi-square, and Fisher's exact test). A 95% confidence interval ($\alpha = 5\%$) was considered for the tests which were performed in this study. Nine patients provided incomplete questionnaires. Therefore, statistical analysis was performed on the remaining 71 patients.

Result

The mean age of patients was 44.59 ± 9.13 years. In the present study, 34 (85%) patients of the experimental group were male and 15% (6 patients) were female. 80.6% (25 patients) of the control group were male and 19.4% (6 patients) were female. In terms of analgesia administration, all patients in the study received analgesics (5 mg of morphine only once). 1mg of Midazolam was administered as a sedative only once to 6 (15%) and 5 (16.1%) patients in the experimental and control group, respectively. The participants in both study groups were homogeneous in terms of cause, degree, percentage, and location of burns, gender, age, and medicines which were used to control pain and induce sedation ($P < 0.05$)

(Table 1).

The results of the independent t-test did not show a statistically significant difference between the two groups in terms of the mean score of pain intensity after dressing change before reciting the Name of God ($P > 0.05$). Nonetheless, the results of this test demonstrated a statistically significant difference between the two groups in terms of the mean pain intensity of dressing change immediately after dressing change ($t=0.2$; $P=0.04$; Table2). Moreover, the results of the independent t-test did not find a statistically significant difference between the two groups in terms of the mean score of pain-induced anxiety before reciting the Name of God, before dressing change, immediately after dressing change, and 15 min later ($P > 0.05$).

However, the results of the dependent t-test illustrated a statistically significant difference between the mean score of pain-induced anxiety before reciting the name of God and immediately after dressing change in the experimental group ($t=4.8$, $P < 0.001$). Nevertheless, the results of this test did not show a statistically significant difference between the mean score of pain-induced anxiety before mentioning the name of God and 15 min after dressing change in the experimental group ($t = 1.7$; $P = 0.094$) (Table 3).

Table 1. Demographic characteristics of burn patients in experimental and control groups

variable	Experimental group	Control group		Test result	Significance level
Gender	Male	34 (85.0%)	25 (80.6)	$X^2=0.23$	$P=0.627$
	Female	6 (15.5%)	6 (19.4%)		
	Mean \pm SD	46.02 \pm 9.3	42.74 \pm 11.4	$t=1.51$	$P=0.134$
Cause of burn	Thermal	31 (77.5%)	25 (80.7%)	$X^2=1.4$	$P=0.690$
	Electrical	8 (20.0%)	5 (16.1%)		
	Chemical	1 (2.5%)	1 (3.2%)		
Burn level	Second-grade	3 (7.5%)	7 (22.6%)	$X^2=5.6$	$P=0.06$
	Third-degree	37 (92.5%)	24 (77.4)		
Burn percentage	Mean \pm SD	29.8 \pm 9	31.3 \pm 9.8	$t=0.37$	$P=0.971$
Location of burn	trunk	12 (30.0%)	13 (40%)	$X^2=6.7$	$P=0.152$
	Upper extremity	19 (47.5%)	16 (23.3%)		
	Others	9 (22.5%)	2 (20%)		
Administration of sedatives (1mg)	Yes	6 (15.0%)	5 (16.1%)	$X^2=0.01$	$P=0.896$
	No	34(85.0%)	26 (83.9%)		

Table 2. Comparison of the mean and standard deviation of pain intensity in the two groups of experimental and control

Pain severity	Group		Test result	Significance level
	Experimental group (Mean \pm SD)	Control group (Mean \pm SD)		
Before dhikr	3.4 \pm 1.4	4.0 \pm 1.6	$t=1.7$	$P=0.09$
Immediately after dressing change	4.9 \pm 1.8	5.8 \pm 1.9	$t=2.0$	$P=0.04$

Table 3. Comparison of the mean and standard deviation of pain-induced anxiety in the two groups of experimental and control

Degree of pain-induced anxiety	Group		Test result	Significance level
	Experimental group (Mean±SD)	Control group (Mean±SD)		
Before reciting the name of God	27±5.1	27.5±4.4	t=0.26	P=0.795
Before dressing change	26.9±5.3	25.5±6.1	t=0.99	P=0.323
Immediately after dressing change	24.7±5.7	25.2±5.8	t=-0.36	P=0.717
15 min after dressing change	24.2±4.6	23.0±5.9	t=0.9	P=0.369

Discussion

Evidence has documented that the control of pain and anxiety associated with wound dressing changes is one of the most important priorities in wound care after burn injury (9). The findings of the present study pointed to the positive effect of reciting the name of God on the pain and anxiety caused by dressing change. According to the results of this study, a significant decrease was observed in the pain and pain-induced anxiety immediately after dressing change. The results of the present study are consistent with the study conducted by Avaze et al. in the burn ward of Ayatollah Mousavi Medical Center in Zanjan (22).

Nikbakht Nasrabadi et al. (2003), conducted a study to evaluate the effect of reciting recommended Dhikrs (100 times La Hawla Wa La Quwwata illa BillAhil Aliyyil Azeem and 7 times "Surah Al-Hamd) in patients undergoing abdominal surgery in one of the hospitals affiliated to Tehran University of Medical Sciences. In accordance with the results of the present study, the results of the mentioned study showed that the repetition of Dhikrs reduced patients' anxiety (19).

Moreover, in line with the findings of the current study, the results of a study carried out by Nasiri et al. (2013) pointed to the effect of reciting the name of God on the anxiety of patients after cardiovascular bypass surgery. In this study, the patients in the intervention group recited the name of God as Tasbīḥ of Lady Fāṭīma Al-Zaha, while the patients in the control group received routine care (24). Belief in a benevolent God and Dua (prayer) are recognized as one of the most common mechanisms to deal with stressful situations (29). Ayatollah Makarem Shirazi in his book "Tafseer-e-Namoona, Volume 1" states that people obtain power and strength from reciting the name of God (30).

In 2013, Nasiri et al. conducted a study on

the effect of reciting the name of God on the severity of post-operation pain after coronary artery bypass graft surgery. The researchers of the current study concluded that reciting the Name of God is effective in the reduction of post-operation pain after coronary artery bypass graft surgery (24). The results of a study performed by Hoven denoted that mentioning the name of God can lead to the stabilization of vital signs and the relief of pain (31). Repetition of God's name reduces respiratory rate and brain wave activities. Dua (prayer) can positively impact health as medicines do (19).

Therefore, it is recommended that in the care program of patients with burns, more attention be paid to their religious beliefs. Moreover, reciting the Name of God is suggested to be used in the management of pain caused by dressing change. It is also suggested that future studies assess the effect of other Islamic dhikrs, such as La Hawla Wa La Quwwata illa BillAhil Aliyyil Azeem, on the pain and anxiety caused by dressing change.

Conclusion

The results of the present study indicated the beneficial effects of reciting the name of God on the pain and anxiety caused by burn dressing change. Therefore, this dhikr can be recommended as a complementary treatment along with analgesics and anti-anxiety drugs. Every study has some limitations which must be addressed in the study. As a remarkable limitation, there was the possibility of different pain thresholds and individual differences between patients in this study. Moreover, the study only included Shiite Muslims; therefore the obtained results can be generalized to this population only.

Conflict of interest

The authors declare that they have no conflict of interest regarding the publication of the

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