

The Effect of Islamically Integrated Art Therapy on Depression, Anxiety and Stress in Patients with Musculoskeletal Pain

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Abstract

The present study examined the effect of islamically integrated art therapy on depression, anxiety and stress in patients with musculoskeletal pain in physiotherapy clinic of Rawalpindi, Pakistan. The aim of this study was to investigate whether islamically integrated art therapy reduces depression, anxiety and stress in musculoskeletal pain patients after intervention. This study employed a within-group quasi-experimental design to evaluate the differences between pre and post-intervention scores. Purposive sampling technique was used to select patients with musculoskeletal pain for depression, anxiety, and stress before baseline measurements. Selected participants were then screened for depression, anxiety and stress. The sample was drawn from a private physiotherapy clinic in Rawalpindi. The intervention involved 6 semi-structured sessions of islamically integrated art therapy over a duration of 2 weeks. The sessions involved coloring Islamic mandalas, writing thought records, reflecting on pain (sabr), gratitude (shukr) and meaning via different art based activities. The participants showed significant decrease in depression, and stress in post-intervention scores. However, the participants did not show significant changes in anxiety scores. The findings suggest that while art therapy can significantly reduce depression and stress in pain patients, longer treatment durations may be necessary to address anxiety effectively. As patients were already taking treatment as usual, further research is needed to demonstrate the effect of islamically integrated art therapy on the study variables in musculoskeletal pain patients.

Keywords: *Islamic Integrated Art Therapy, Depression and Stress Reduction, Musculoskeletal Pain, Physiotherapy Clinic, Quasi-Experimental Design*

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1. Introduction

Musculoskeletal pain is a prevalent condition that greatly impacts both physical and mental health outcomes. It often leads to high levels of depression, anxiety, and stress among patients suffering from chronic musculoskeletal pain. While medical treatments primarily focus on physical reduction of pain it overlooks the psychological and emotional challenges associated with pain. Therefore, integrative approaches that address these aspects are essential for holistic patient care. Islamically integrated art therapy offers a unique intervention that combines spirituality with art making for therapeutic purposes. This study investigates the effectiveness of this innovative therapeutic approach in managing depression, anxiety, and stress associated with musculoskeletal pain patients, providing insights into its potential as a complementary treatment in clinical settings.

Musculoskeletal pain is the pain of joints, muscles and bones. According to WHO, 1.71 billion people suffer from musculoskeletal pain and the numbers are anticipated to increase even further due to the population growth and aging. In Pakistan, many people suffer from musculoskeletal pain and often patients have little awareness regarding their pain related problems which also include distress related with their bodily pain. Associated depression, anxiety and stress can also add to the patient's suffering when in pain. Therefore, complementary psychological interventions are needed to address this issue.

Integrative therapeutic interventions have emerged as promising alternatives as they combine physical, emotional, and cultural elements to promote overall well-being. One such approach is Islamically integrated art therapy, which blends creative expression with spiritual practices rooted in Islamic teachings. Art therapy is recognized for its therapeutic benefits, fostering self-expression, emotional regulation, and psychological healing. When integrated with Islamic principles such as *sabr* (patience), *shukr* (gratitude) and *tehkeek* (research) the intervention gains a culturally sensitive dimension that resonates deeply with Muslim patients, enhancing its acceptability and efficacy (Agustina et al., 2024).

This study investigates the effect of Islamically integrated art therapy on depression, anxiety, and stress levels among musculoskeletal pain patients in a clinical setting. By focusing on a population from a private physiotherapy clinic in Rawalpindi, Pakistan. The findings intend to shed light into the capability of Islamically integrated art therapy as a complementary treatment for musculoskeletal pain patients, addressing both their physical discomfort and psychological well-being. The study seeks to give a practical approach for clinicians, researchers, and policymakers striving to improve the quality of care for patients experiencing chronic pain.

Depression, anxiety and stress are often associated with musculoskeletal pain. According to Telbizova and Aleksandrov (2022), patients with depression often report higher levels of pain intensity than that of anxiety patients. Although depression may increase pain perception but it is to be noted that pain related cognitive distortions also play a crucial role. For example, studies have shown how pain catastrophizing mediates the relationship between chronic pain and depression (Liu et al., 2024). A study by Egloff et al. (2021) also showed that pain and anxiety can trigger stress which leads to a cycle where pain, anxiety and stress interact with each other which can eventually increase the overall levels of stress.

Research also shows that when stress becomes prolonged it can interact with pain. As observed from various studies, stress can

intensify pain symptoms because of stress-induced muscle tension which creates a vicious cycle (Gatchel et al., 2007). Thus, to effectively manage pain, it is important to address the levels of stress associated with pain. Using various stress management techniques with the ongoing treatment helps to break the vicious cycle of stress and pain and leads to better treatment outcomes (Morley et al., 2008).

Among different psychological approaches to depression, anxiety, stress and pain management, integrated art therapies are being researched for their efficacy. While Art therapy has emerged as an intervention in addressing various psychological issues, integrated art therapies also show promise. A study by Bibi and Saleem (2021) featured traditional patterns and calligraphy which reduced depression and anxiety among the participants. Moreover, Islamic Modified Cognitive Behavioral Therapy (ICBT) which integrate spiritual concepts like *Tawakkal* (reliance on Allah) and *Sabr* (patience) to address mental health issues, promoting resilience and well-being (Çınaroğlu, 2024). The present study focuses on both the approaches mentioned here to tailor to the needs of musculoskeletal pain patients.

Many studies have been conducted to manage depression, anxiety and stress related to musculoskeletal pain. However, little to no work has been done on Islamically integrated art therapy approach on the study variables. This study incorporates a unique approach and can be applied in different ways to manage pain related depression, anxiety and stress. Previous studies of art therapy focused primarily on chronic pain management through art therapy. However, this study aims to find the effect of Islamic type of art therapy on musculoskeletal pain patients who are suffering from depression, anxiety and stress.

2. Method

2.1 Research Design

Within-group quasi-experimental design was used for carrying out the present study. The intervention for this study is Islamically integrated Art therapy based on coloring sheets of body maps and Islamically integrated mandalas. The duration of intervention spanned over a period of 2 weeks with 3 art therapy sessions conducted per week. After which post-test measure was obtained from the participants. The control condition for this study is the baseline measure obtained prior to intervention. Informal follow-up was taken after 2 months of intervention which was satisfactory however it is not separately analyzed in the given results.

2.2 Sample

The sample includes 18 patients with musculoskeletal pain and associated depression, anxiety and stress. Purposive sampling technique was used to collect the sample. The sample was collected from a private physiotherapy clinic in Rawalpindi, Pakistan. A strict inclusion and exclusion criteria was used to select the participants.

2.2.1 Inclusion criteria Inclusion criteria for participants was as follows:

Participants included in the study met specific criteria to ensure consistency and feasibility in the intervention. Only individuals who could move their dominant hand easily were selected, as the art therapy intervention required them to use their dominant hand for coloring. Those experiencing mild to moderate musculoskeletal pain were included, along with participants who screened positive for mild to moderate depression, anxiety, and stress. Since all research instruments were in English, only participants with a good

understanding of the English language were considered. Additionally, to maintain uniformity in medical treatment, only individuals taking the same medications for pain were included.

2.2.1 Exclusion criteria Certain participants were excluded from the study to maintain the consistency and reliability of the findings. Patients experiencing neuropathic, surgical, or cancer-related pain were not included. Additionally, individuals taking different types of medications for pain or those currently using psychiatric medication—or having used it in the past six months—were excluded. Patients with severe musculoskeletal pain were also not considered for participation

2.3 Instruments

2.3.1 Depression, Anxiety, and Stress Scale (DASS-21) The Depression, Anxiety, and Stress Scale (DASS-21) is a self-report measure that assesses depression, anxiety, and stress. It consists of 21 items and was developed by Lovibond S.H. & P.F. in 1992. The reliability of this scale is 0.72, and the validity is 0.77.

2.4 Data Analysis

To compute and analyze the data, SPSS software was used. A paired sample t-test was conducted to analyze the pre-test and post-test scores, as the data was normally distributed.

2.5 Ethical Approval

Since this study involved human participants, approval from the Institutional Review Board (IRB) was obtained from Shifa International Hospital before conducting the study. Permissions were also acquired for the use of Islamic mandala sheets developed by Bibi and Saleem (2021). Informed consent was obtained from all participants, and confidentiality was maintained.

Table 2
 Paired Sample t-test scores comparing Mean, Standard Deviation and t scores for pre-test and post-test (n=18)

	M	SD	SE	95% CI		t	df	p	Cohen's d
				LL	UP				
Depression									
(pre-test)	15.55	6.91	1.62	-1.61	.66	6.44	17	0.01	.43
(post-test)	12.00	8.20	1.95						
Anxiety									
(pre-test)	14.66	9.79	2.30	-2.52	-2.40	3.28	17	0.74	.05
(post-test)	14.22	9.01	2.12						
Stress									
(pre-test) (post-test)	20.88	8.89	2.09	-3.96	2.20	10.24	17	0.00	.81
	14.06	8.45	1.99						

Note. M=Mean; SD = Standard Deviation; SE= Standard Error; t = t-test statistic; df=degrees of freedom; 95% CI = 95% confidence interval; LL=lower limit; UP= upper limit

The table above shows the paired sample t-test values for participants along the two test scores. The findings revealed that there was a significant difference between pre-test and post-test measures of depression ($t(17)=2.60, p=0.01$) and stress ($t(17)=3.27, p=0.005$), with post-test measures of stress showing the largest effect size among the study variables.

However, pre-test and post-test measures of anxiety did not show significant difference. The table further shows there was significant reduction in the mean scores of all the variables in post intervention except anxiety scores.

2.6 Procedure

Participants were initially screened for depression, anxiety, and stress. Those who met the inclusion criteria were selected and approached for the study. The baseline measures included a demographic sheet and the DASS-21. The intervention involved Islamic mandalas, body mapping, and gratitude tree sheets, which were freely available online. Islamic concepts of *sabr* (patience) and *shukr* (gratitude) were integrated into the intervention. The program consisted of six sessions over two weeks, with three sessions conducted per week. A post-test measure was taken after completing the intervention.

3. Result

Table 1
 Demographic Variables of the Study Participants (N=18)

Demographic Statistic	f	%	
Age	20-40Years	14	77.8
	41-60	4	22.2
Gender	Male	2	11.1
	Female	16	88.9
Upper Back Pain		12	66.7%
	Leg Pain	6	33.3%

Note. f=frequency; %=percentage.

The demographic statistics of the sample (N = 18) show diverse characteristics. The age distribution show that the most of participants (77.8%) are between 20 and 40 years old, while remaining 22.2% are between 41 and 60 years old. Gender distribution shows that female participants are predominant, with 88.9% (n = 16) of the sample, with only 11.1% (n = 2) male participants. Finally, the type of pain also indicates variation and includes upper back pain (66.7%, n = 12) and leg pain (33.3%, n=6).

Table 2: Paired Sample t-test scores comparing Mean, Standard Deviation and

4. Discussion

The aim of the present study was to investigate the effect of islamically integrated art therapy intervention on depression, anxiety and stress of musculoskeletal pain patients. For this purpose, we took our sample from a physiotherapy clinic in Rawalpindi, Pakistan.

In the present study, islamically integrated art therapy was our independent variable which was carefully designed by reviewing the relevant literature. Art therapy used in various studies include activities like mandala coloring, trace images and coloring books, and art collage materials (Van Der Vennet & Serice, 2012). Due to this reason, we incorporated Islamic mandala coloring and the use of body maps in our

intervention. The islamically integrated art therapy in this study included 6 semi-structured sessions because of its brief nature and evidence in literature (O'Neil Haaga, 2015).

For this purpose, selected participants were screened for depression, anxiety and stress and their baseline measure was obtained. The screened participants undertook 6 semi-structured art therapy sessions prior to post-test measure. Although, the participants were already taking physiotherapy and medications that were ongoing at their respective clinic as usual. After data collection, pre-test and post-test scores of the study variables were analysed using SPSS software.

In the first two hypotheses of the study, it was assumed that there will be significant decrease in depression, anxiety and stress from pre-test to post-test measures after intervention. Significant change was observed in the post-test measures of depression and stress scores as compared to their pre-test scores. The probable reason for this is that art therapy provides not only a distraction from distress associated with musculoskeletal pain but also a means of processing and expressing emotions that contribute to the pain experience (Malchiodi, 2012). Many previous studies also highlight how art therapy can reduce pain anxiety, depression and stress in chronic pain patients which are consistent with the findings of the present study (O' Neill Haaga, 2015, Shella, 2018, Alwledat et al., 2023).

Furthermore, for anxiety scores, change was not significant enough as not much difference was observed between pre-test and post-test scores. This little change in the two scores may be attributed to the fact that the time and sessions for the intervention span was not enough to bring a significant change in the desired group. Literature review suggests that the ideal time for such intervention may range over a period of 3-10 weeks with 8-12 sessions (Kalmanti et al., 2022, Zhang et al., 2024). Whereas, due to time constraint for intervention, we could only design our intervention for a maximum of 6 sessions which ranged for over a period of 2 weeks. Though there is evidence in the literature regarding similar number of sessions of art therapy for chronic pain patients. For example, O'Neil Haaga's (2015) research also utilized 6 sessions of art therapy which demonstrated significant reduction in pain and anxiety scores in post-test. By and large majority of studies state that anxiety usually requires long term therapy which takes more time and patience to heal in therapeutic practice (Rouillon, 2004). It is therefore assumed that only 6 structured sessions were probably not enough to effectively manage anxiety in the present sample.

This study shows that islamically integrated art therapy can significantly decrease the level of depression, and stress in patients suffering from musculoskeletal pain, thus signaling its potential to be applied as a complementary practice to regular guidelines for musculoskeletal pain management. However, to establish the causal inference, carefully designed randomized controlled trials are required in future research that involve a control group. Future research must attempt to understand how islamically integrated art therapy reduces depression and stress in musculoskeletal pain patients.

Conflict of Interest: None to declare

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