



## Original Article

### Effectiveness of Morita Therapy on Emotional Distress and Social Isolation of Older Adult Women with Chronic Knee Pain

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## ABSTRACT

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**Introduction:** People do health care not only to diagnose and relieve pain but also to reduce pain, anxiety, and loneliness in their daily lives. The present study aims to evaluate the effectiveness of Morita therapy among older women suffering from emotional distress and social isolation with chronic knee pain.

**Methods:** The research method was pretest - posttest with a control group. The statistical population of the study included the older adults with chronic knee pain in the period of May to August 2020 in Tabriz, Iran. The sample consisted of 30 female patients aged 60-70 years with chronic knee pain who entered the study by convenience sampling method and randomly assigned to experimental and control group (15 patients each group). The research instruments included the Depression Anxiety and Stress Scale (DASS-21) and the Lubben Social Network Scale (LSNS). In the experimental group, Morita therapy was held during nine sessions for 90 minutes once a week.

**Results:** The results of multivariate analysis of covariance showed significant effectiveness of Morita therapy on emotional distress and social isolation ( $p < 0.001$ ). Morita therapy significantly reduced patients' depression and anxiety scores ( $\eta^2 = 0.68$ ). In addition, the social isolation scores of the experimental group significantly reduced compared to the control group ( $p < 0.001$ ), which indicates an increase in the quality of social network ( $\eta^2 = 0.49$ ).

**Conclusion:** Morita therapy can help reduce emotional distress and social isolation in older women with chronic knee pain and can be used in conjunction with other common therapies.

**Keywords:** Chronic Knee Pain, Emotional Distress, Social Isolation, Morita Therapy, Aged

### Introduction

Pain in older adults causes interference in daily life and the degree of support and dependence on their spouse or important person in life. The severity of the pain also causes limitation of movement, which is a major barrier to social and emotional functioning (1). Reports indicate that 80 to 92% of the older adults have at least one chronic disease (2). One of the causes of disability in the older adult is believed to be arthritis. Knee osteoarthritis, the most common form of arthritis, causes pain and limited mobility (3). Older people with arthritis have difficulty with normal activities and

report 27% of severe joint pain (4). The disease increases in accordance with age factor. Men are more likely to develop osteoarthritis by age 45, and then women are more likely to catch it (5). Prevalence of knee pain is 46.2% (32.2% in men and 58.0% in women) and increased with age in women (6). No accurate statistics are available on the status of osteoarthritis of the knee in older adult Iranian population (7). However, reports show that more than 10% of the population over the age of 60 in the United States suffers from osteoarthritis of the knee, and the

most common complaint is pain, which leads to stress, sleep disorders, and poor general health. This greatly affects health, limits physical activity and function of the older adult, brings known risk factors for mortality (8), and more importantly causes an economic burden (9).

Depression, anxiety, and stress, as common hallmarks of emotional distress associated with negative emotions, thoughts, and behaviors are probably the most common psychological factors in the patients with chronic pain (10). Emotional distress are more common in older people due to the increased risk of adverse life events. Depression disorders appear to be slightly lower in the older adult compared to those in young adults, but still affect about 2-3% of the older adult of communities (11).

The estimated prevalence of anxiety disorders in the older adult is 6% to 10%, which is slightly lower than the estimated prevalence of anxiety in younger adults but, still indicates a significant cause of disability in the older adult (12). The study on patients with chronic pain shows that depression, anxiety and emotional distress are high in these patients (13). Although psychological symptoms are considered as consequences of chronic pain, the underlying psychological factors are the risk factor for a number of chronic pains including muscle soreness (14). A 20-month longitudinal study showed that depression and long-term anxiety predict pain and pain-related disabilities (15). Other line of evidence suggests that symptoms of anxiety and depression lead to physical disability (16), health-related costs (17), mortality (18), and suicide (19) in the patients with chronic pain.

Loneliness and social isolation reveal the dissatisfaction with the quantity and quality of social relations (20). These factors have significant effects on the health, disability, and mortality of the older adults (21). The prevalence of social isolation among the older adults living in nursing homes is estimated to be 7% to 17%, and approximately 40% of the older adults feel lonely (22). Although it is difficult to determine a causal relationship, loneliness and social isolation can have significant impacts on functional limitations, disability, and death of the older adults (21). A study showed that low social capital is associated with high levels of psychosomatic symptoms, musculoskeletal pain, depression (23), and experience of illness (24). Social interactions play important roles in patient's responses to stress and pain perception (25). Social distress increases sensitivity to physical pain (23). In fact, People who are socially isolated have a lower pain threshold during unpleasant heat stimulation (26).

Chronic pain in old ages has serious side effects such as increased depression, anxiety, functional limitations, sleep disorders, social isolation, and poor quality of life (27). Older adults, meanwhile, seek medical treatment for chronic pain, but are often dissatisfied due to the use of opioid in medications, which is often associated with side effects. On the other hand, patients and physicians are always concerned about addiction to drugs (28). In this vein, self-management programs have been designed and recommended in recent decades due to

the ineffectiveness of standard therapies for chronic pain (29).

One of the therapies suggested in the field of psychosomatic medicine is Morita therapy that was discovered in 1919 by Shoma Morita (30). Morita therapy aims to help people accept that anxiety is a natural feeling and to complete their life goals. It is thought to work by redirecting attention away from anxiety and towards constructive behavior. The primary goal of the therapy is to reach the state of *arugamama*, that is, to accept reality as it is. In fact, Morita therapy seeks to improve daily functioning through an approach based on compassion and encouraging people to accept rather than targeting specific symptoms (31). Reducing a patient's resistance and encouraging her/him to experience the Morita approach in daily life is the key to the success of Morita therapy (32). Research shows that the symptoms of neurosis and anxiety are probably diminished by learning to accept anxiety as a natural emotion and using traits and potentials to fulfil life goals (33). In a study, after six weeks of Morita therapy, there was a significant reduction in anxiety symptoms. This decrease continued in the six-month and one-year follow-up (34). In another study on obsessive-compulsive disorder, the patients who were treated with Morita therapy plus venlafaxine for 12 weeks showed a significant reduction in symptoms compared to those in the control group treated with venlafaxine on their own (35).

Due to the aging population in Iran, it seems necessary to devote attention to the challenges and issues of the older adults. Moreover, there is no evidence on Morita therapy works specifically for chronic knee pain. Therefore, the present study sets out to examine the efficiency of Morita therapy in alleviating emotional distress and social isolation in the older adults with chronic knee pain.

## Methods

### *Participants and procedure*

This study was an experimental pretest – posttest control group design that conducted May 3 to the middle of August, 2020. The statistical population of the study included all older people aged 60-70 years with chronic knee pain who referred to day care rehabilitation centers for the adult people in Tabriz, Iran. Due to a higher prevalence of knee pain in older women (5), this study was conducted on female patients.

Inclusion criteria for the participants included primary education and higher, a minimum of physical and cognitive ability according to the patient's medical file to participate in intervention sessions, a mean knee pain intensity of 50mm or more on a Visual Analog Scale (VAS), no anti-anxiety and anti-depressant drug use according to the patient's medical files. All the older adults were taking painkillers prescribed by a doctor that was not aware of the research plan.

Exclusion criteria were absence from more than two consecutive sessions, other psychotherapy participation, a history of fractures, and lower limb surgery according to the patient's medical files. According to the patient's

medical files, among those who referred to the older adult daycare rehabilitation center, 30 literate women aged 60 to 70 years with radiological evidence of knee osteoarthritis by convenience sampling method were included in the study. Patients marked the level of their pain on a 100 mm on the right (extreme pain), and on a 0 mm on the left (no pain), and when the pain intensity score, according to the self-reports, was above 50 mm, each file was assigned a number 1 to 30, and then those were placed in a box without following any special order. Next, the numbers were mixed, and 30 selected numbers were assigned one by one to the Morita and control groups by simple random sampling. All patients completed a set of questionnaires on demographic variables at the initial assessment, DASS-21, and LSNS-6 at pre-test, post-test.

#### Instruments

Demographic variables questionnaire included age, education level and intensity of pain based on VAS. Our instrument was Lovibond and Lovibond's (1995) Depression, Anxiety, and Stress scale (DASS-21) (36), which consists of three subscales. Each subscale consists of 7 items. In this questionnaire, questions 3, 5, 10, 13, 16, 17, and 21 measure negative emotional states of depression. Questions 2, 4, 7, 9, 15, 19, and 20 are designed to examine anxiety. Finally, questions 1, 6, 8, 11, 12, 14, and 18 measure the level of stress. The reliability of this scale was significant ( $p < 0.001$ ) (37). In this study, Cronbach's alpha was found to be 0.73.

(LSNS-6): Social Network Lubben Scale has 6 questions and two subscales of family (three questions) and friends (three questions). A higher score indicates better social network quality. The internal consistency for the scale is 0.83, and for the subscales of family and friends is 0.84. 0.89 and 0.80-0.82 respectively (38). In Iran, a research reported that Cronbach's alpha of the questionnaire was 0.89, and the validity of the scale was 0.97, indicating acceptable reliability and validity (39). Besides, in this study, Cronbach's alpha was estimated to be 0.78.

#### The intervention program: Morita therapy

Morita therapy sessions based on Morita theory (40) and using available research and dissertation (41,42) and health protocols of covid-19 prevention were implemented in 9 sessions once a week. The therapy was conducted in three groups each including five participants. Each session was held for 1.5 hours (9 to 10.5 in the morning) (Table 1). During the therapy, the control group engaged in routine center programs. We intended to implement the program on the control group as well if the Morita therapy was effective.

#### Ethical considerations

This research is based on the ethical code approved by the Medical Committee of Urmia University with the number of IR.URMIA.REC.1399.003. In addition, we observed the principle of participant confidentiality, obtained consent from the participants, and gave them the right to withdraw from the study at any time.

#### Data analysis

The data were entered into the SPSS software version 22. Descriptive statistics included frequency, mean, and standard deviation, and inferential analysis was run using Multivariate analysis of covariance.

#### Results

The participants in the present study included 30 people whose mean age was  $67.4 \pm 1.82$ , in the experimental group, the mean age was  $66.8 \pm 1.59$ . The mean age of the control group was  $68.2 \pm 1.43$ , the mean pain intensity in the experimental group was  $8.73 \pm 1.53$ . The mean pain intensity in the control group was  $8.20 \pm 1.56$ .

In the experimental group, 8 elderly people were taking Celecoxib (Celebrex), 4 were taking Gabapentin (Neurontin) and 3 were taking Piroxicam (Feldene). In the control group 6 elderly people were taking Celecoxib, 5 were taking Gabapentin and 4 were taking Piroxicam. Thus, as can be seen, the groups were homogeneous in the use of painkillers.

In Table 2, the mean and standard deviation of emotional distress and social isolation in the experimental and control groups are reported. As Table (2) shows, the mean and standard deviation of the experimental group decreased in emotional distress and increased in the social isolation scale. It is noteworthy that the increase in scores on the scale of social isolation indicates an increase in the social network.

With regard to the normality of the data, the results of Kolmogorov-Smirnov were not significant for the variables of emotional distress and social isolation and were equal to 0.766 and 0.416, respectively at ( $p \geq 0.05$ ). Based on the results of Levene's test, the level of statistics (F) was not significant for all dependent variables ( $p \geq 0.05$ ). This indicates that the variances were equal. Additionally, Box's M test was used to test the hypothesis of homogeneity of covariance, which was not significant ( $P = 0.831$ ,  $F = 0.607$  and  $BOX = 30.89$ ).

Table 3 shows that the significance levels of all tests allow the use of multivariate analysis of covariance. These results show that there is a significant difference between the experimental and the control groups in at least one of the dependent variables. Based on Table 4, there is a statistically significant difference between the experimental and control groups in the dimensions and total score of emotional distress and social isolation. After Morita therapy, the score of the experimental group compared to the control group in the overall score of DASS test and its subscales decreased significantly. Besides, the average quality of social network of the experimental group compared to the control group significantly increased. These results indicate the effectiveness of this intervention method.

**Table 1. Meetings, content, and assignments of Morita-based therapy steps**

Sessions	Content	Homework
1	Introduce the group leader and explain the goals. Perform conscious mind breathing exercises along with the barriers to breathing awareness.	Do mindfulness breathing exercises, identify at least three daily distractions that interfere with the experience, and consider the full presence of the "here and now"
2	Discuss the automatic guide and generalize it to our own ignorance or lack of awareness. Implement consciously eating slices of apple in the group with attention to feelings, thoughts, and barriers to awareness.	Perform mind-conscious daily activities such as conscious walking, eating, and conscious breathing.
3	Understand the unstable nature of unpleasant feelings, get acquainted with the positive and negative aspects of human nature, challenge beliefs about how to deal with emotions, and practice abdominal breathing.	Identify pleasant and unpleasant emotions, pay attention to the stability and instability of existing emotions, and identify several cases of coexistence of positive and negative aspects in human nature.
4	Introduce different types of awareness (self-awareness and environmental awareness), use the hot seat technique on a volunteer member, and list superficial and deep feelings and possible behavioral consequences.	Complete the following questions: What I really do is: .... thoughts, feelings, and behaviors that I have no control over while doing.... are: ... (43).
5	Practice abdominal breathing with mental imagery of anxiety. Pay attention to the fluidity of thoughts, changing emotions through changing focus and attention. Challenge beliefs in controllable and uncontrollable areas.	Practice focusing on different subjects (objects or thoughts), perform at least three effective behaviors despite unpleasant feelings, and pay attention to the outcome.
6	Encourage familiarity with the Morita concept of anxiety. In this way, constructive desires are on the other side of the anxiety coin, directing energy and attention from focusing on anxiety to performing efficient behaviors in line with constructive desires.	Pay attention to different areas of life including physical, emotional, etc. Devote attention to the constructive desire as on the other side of the anxiety coin and a behavioral step towards constructive desires.
7	Empirically understand the fear of death and the desire for life, pay attention to the remaining opportunities of life, and take effective measures towards constructive desires.	Identify goals and needs and prioritize them. Take behavioral steps in line with prioritized goals and needs.
8	Identify realistic and perfectionist desires and examine slides of self-destructive attitudes.	Perform at least three cases of efficient and consistent behavior in line with realistic desires and identify behavioral attitudes.
9	Train Problem solving skills, consolidate learning, review unfinished work in the group and members' concerns in the final stage, evaluate and deal with feelings of separation, express unfinished feelings of group members towards each other at the end of the session.	

**Table 2. Mean and standard deviation of the variables of anxiety, depression, stress, and social isolation**

Groups	Variables	Experimental group		Control group	
		Mean	SD	Mean	SD
Pretest	Depression	17.26	2.18	17.13	2.13
	Anxiety	17.06	2.08	17.33	2.28
	Stress	17.00	2.00	17.80	1.78
	Emotional distress	51.33	3.41	52.26	4.44
	Social isolation	8.53	3.13	8.33	2.69
Post test	Depression	12.66	2.16	17.00	1.81
	Anxiety	12.88	2.56	17.00	2.17
	Stress	12.80	2.14	17.00	1.81
	Emotional distress	38.20	4.58	51.00	4.15
	Social isolation	13.20	2.62	8.73	3.17



**Table 3. Results of multivariate tests to compare groups**

Effect	Value	F	Hypothesis df	Error df	Sig	Eta
Pillai's Trace	0.695	146.58	4.00	21.00	0.000	0.695
Wilks' Lambda	0.035	146.58	4.00	21.00	0.000	0.695
Hotelling's Trace	27.92	146.58	4.00	21.00	0.000	0.695
Roy's Largest Root	27.92	146.58	4.00	21.00	0.000	0.695

**Table 4. Multivariate analysis of covariance (the effects of therapy method on the dependent variables)**

Dependent variable	Sum of square	df	Mean square	F	Sig	Eta
Depression	103.13	1	103.13	22.84	0.001	0.406
Anxiety	104.80	1	104.80	17.02	0.001	0.441
Stress	103.86	1	103.86	17.70	0.001	0.450
Emotional distress	338.34	1	338.34	47.00	0.001	0.682
Social isolation	153.82	1	153.82	19.88	0.001	0.499

### Discussion

The main purpose of this study was to evaluate the effectiveness of Morita therapy in older adult women with chronic knee pain. The first question examines the effect of Morita therapy on depression and anxiety in the older adults who underwent this therapy compared to the control group. The results showed differences between the experimental and control groups, and Morita therapy had a strong and significant effect on reducing the overall score of emotional distress and subscales. Morita reduced the score of depression, anxiety, and stress. Previous studies included various variables along with Morita therapy (34, 35, 44-46) confirmed the effectiveness of this therapy which is line with our findings. In the intervention program of the present study, there were exercises such as deep abdominal breathing that had a significant effect on reducing depression and anxiety. This finding is similar to a review which shows that these exercises significantly reduce depression and anxiety (47). Experiencing unpleasant feelings is an inevitable part of the process of coping with life tasks and stressful situations. According to Morita therapists, anxious people tend to be preoccupied with their unpleasant feelings. This mental hyperactivity acts as a break in behavioral and mental functioning. In such situations, people may be confronted with unacceptable mental conditions and consider the elimination of that feeling as a precondition for a desired behavior (48). Older people feel empowered when they learn in Morita therapy whereby they can do life tasks simultaneously despite the symptoms of pain and emotional distress, and this leads to increase self-confidence and mood. This process of engaging in purposeful activities gradually disengages older people from habituated self-preoccupations and avoidance of anxiety-provoking situations (49). The older adults also feel to have more control over their lives. This change seems to be possible by accepting and moving from controlled conditions toward uncontrolled situations (41). Indeed, Morita-based therapy helps the older adults to move from anxiety and struggle with symptoms to acceptance. Thus, through shifting attention, they give up any attempt to

control, resist, and avoid and therefore respond to phenomenological realities as they are. Besides, by practicing and incorporating the Morita therapy approach into everyday life, they improve daily functioning and reduce negative emotions.

The next finding also showed the effect of Morita therapy on social isolation in the older adults. The older people who had little contact with their relatives or could not easily talk to them about personal issues, after the therapy, showed significantly different quality in their social communication, and their isolation diminished. Through Morita therapy, the older adults learn to identify behavioral attitudes and can directly and voluntarily control their behavior by showing effective behaviors in the group and extending it to everyday life (50). Older people are concerned about being judged by others if they show symptoms of anxiety or other uncontrollable feelings. Such situations make them more preoccupied (48) and lead to isolation and withdrawal from family and groups. The lives of people who give up expected behaviors are predictable and have psychological security, and the risk is minimal. Nonetheless, this passivity leads to the loss of new experiences and opportunities that could develop people's constructive desires and enrich their quality of life (50). In this study, Morita therapy encouraged the older adult to re-engage by reducing extreme preoccupations and challenging beliefs about fear of rejection in the society or among relatives. The older adults accept unpleasant thoughts and feelings as parts of natural human conditions (41). They can identify their habits, hatreds, attachments, and negligence as the factors disrupting constructive desires and behaviors and establish positive social relationships.

### Study limitations

This study has two main limitations to note, and our results must be interpreted with great caution. First, we could not employ randomly selected participants and men participants because all patients were older adult women. Secondly, the study was conducted only in one older adult daycare centers in Tabriz, and it may not be possible to generalize the results.

## Conflict of interests

The authors state no conflict of interests with regard to this study.

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## Authors' contributions

All authors read the final draft of the manuscript, provided the necessary revisions, and accepted the responsibility its contents.

## References

- Chiaranai C, Chularee S, Srithongluang S. Older people living with chronic illness. *Geriatric Nursing*. 2018; 39(5): 513-20.
- Ward BW, Schiller JS, Goodman RA. Multiple chronic conditions among US adults : a 2012 update. *Preventing Chronic Disease*. 2014; 11(3): 4-7.
- Barbour KE, Helmick CG, Boring M, Brady TJ. Vital signs : Prevalence of Doctor- Diagnosed Arthritis and Arthritis-Attributable Activity Limitation — United States, 2013 – 2015. *Morbidity and Mortality Weekly Report*. 2017; 66(9): 246-53.
- Barbour KE, Boring M, Helmick CG, Murphy LB, Qin J. Prevalence of severe joint pain among adults with doctor-diagnosed arthritis — United States, 2002–2014. *Morbidity and Mortality Weekly Report*. 2016; 65(39): 1052-6.
- Bavardi Moghadam E, Shojauddin SS, Akbarnejad A. Evaluation of a period of traband training on knee proprioception changes in older men with knee osteoarthritis. *Journal of Research in Sport Rehabilitation*. 2017; 5 (9): 75-84. [Persian]
- Akbarnejad N, Mohammadi Shahbalaghi F, Khankeh H, Sokhangoyi Y, Biglerian A, Seddighi N. Effect of acupressure on knee pain and stiffness intensity in elderly patients with osteoarthritis: a randomized clinical trial. *Iranian Journal of Rehabilitation Research in Nursing*. 2016; 2(2): 22-31. [Persian]
- Kim IJ, Kim HA, Seo YI, Jung YO, Soug YW, Jeong JY, et al. Prevalence of knee pain and its influence on quality of life and physical function in the Korean elderly population: a community based cross-sectional study. *Journal of Korean Medical Science*. 2011; 26(9): 1140-6.
- Patel KV, Turk DC. Chronic pain and the risk of death: findings from the 1999-2004 NHANES mortality follow-up study. *The Journal of Pain*. 2015; 16(4): S11.
- Murphy L, Helmick CG. The impact of osteoarthritis in the United States: a population-health perspective A population-based review of the fourth most common cause of hospitalization in U.S. adults. *Orthopaedic Nursing / National Association of Orthopaedic Nurses*. 2012; 112(3): 13-19.
- Edwards R, Dworkin HR, Sullivan MD, Turk D, Wasan DA. The role of psychosocial processes in the development and maintenance of chronic pain disorders. *The Journal of Pain*. 2016; 17(9): 70-92.
- Beekman AT, Copeland JR, Prince MJ. Review of community prevalence of depression in later life. *The British Journal of Psychiatry*. 1999; 174(4): 307-11.
- Schuurmans J, van Balkom A. Late-life anxiety disorders: a review. *Current Psychiatry Reports*. 2011; 13(4): 267-73.
- Turk DC, Fillingim RB, Ohrbach R, Patel KV. Assessment of psychosocial and functional impact of chronic pain. *The Journal of Pain*. 2016; 17(9): 21-49.
- Clauw DJ. Diagnosing and treating chronic musculoskeletal pain based on the underlying mechanism(s). *Best Practice & Research Clinical Rheumatology*. 2015; 29(1): 6-19.
- Lerman SF, Rudich Z, Brill S, Shalev H, Shahar G. Longitudinal associations between depression, anxiety, pain, and pain-related disability in chronic pain patients. *Psychosomatic Medicine*. 2015; 77(3) 333-41.
- Howe CQ, Robinson JP, Sullivan MD. Psychiatric and psychological perspectives on chronic pain. *Physical Medicine and Rehabilitation Clinics of North America*. 2015; 26(2): 283-300.
- Baumeister H, Knecht A, Hutter N. Direct and indirect costs in persons with chronic back pain and comorbid mental disorders—a systematic review. *Journal of Psychosomatic Research*. 2012; 73(2): 79-85.
- Smith D, Wilkie R, Uthman O, Jordan JL, McBeth J. Chronic pain and mortality: a systematic review. *PLoS ONE*. 2014; 9(6): e99048.
- Noyman-Veksler G, Shalev H, Brill S, Rudich Z, Shahar G. Chronic pain under missile attacks: role of pain catastrophizing, media, and stress-related exposure. *Psychological Trauma: Theory, Research, Practice, and Policy*. 2017; 10(4): 463-9.
- Gierveld JdJ, Keating N, Fast JE. Determinants of loneliness among older adults in Canada. *Canadian Journal on Aging*. 2015; 34(02): 1-12.
- Nyqvist F, Forsman AK, Giuntoli G, Cattani M. Social capital as a resource for mental well-being in older people: a systematic review. *Aging and Mental Health*. 2012; 17(4): 394-410
- Dickens AP, Richards SH, Greaves CJ, Campbell JL. Interventions targeting social isolation in older people: a systematic review. *BMC Public Health*. 2011; 11(647): 1- 22.
- Aslund C, Starrin B, Nilsson KW. Social capital in relation to depression, musculoskeletal pain, and psychosomatic symptoms: a cross-sectional study of a large population-based cohort of Swedish adolescents. *BMC Public Health*. 2010; 10(1): 1-10.
- Aoki T, Yamamoto Y, Ikenoue T, Urushibara-Miyachi Y, Kise M, Fujinuma Y, et al. Social isolation and patient experience in older adults. *Annals of Family Medicine*. 2018; 16(5): 393-8.

25. DeVries AC, Glasper ER, Detillion CE. Social modulation of stress responses. *Physiol & Behavior*. 2003; 79(3): 399-407.
26. Eisenberger NI, Jarcho JM, Lieberman MD, Naliboff BD. An experimental study of shared sensitivity to physical pain and social rejection. *Pain*. 2006; 126(1-3): 132-8.
27. Scudds RJ, Robertson J. Empirical evidence of the association between the presence of musculoskeletal pain and physical disability in community-dwelling senior citizens. *Pain*. 1998; 75(2-3): 229-35.
28. Badiezhadeh K. Pain management for total knee & total hip arthroplasty. *Iranian Journal of Orthopaedic Surgery*. 2018; 15(3): 101-9. [Persian]
29. Marks R, Allegrante JP, Lorig K. A review and synthesis of research evidence for self-efficacy-enhancing interventions for reducing chronic disability: implications for health education practice (part II). *Health Promotion Practice*. 2005; 6(2): 148-56.
30. Kitanishi K, Mori A. Morita therapy: 1919 to 1995. *Psychiatry and Clinical Neurosciences*. 1995; 49(5-6): 245-54.
31. LeVine P. Classic morita therapy: advancing consciousness in psychotherapy. *Psychotherapy and Counselling Journal of Australia*. 2016; 4(1): 1-19.
32. Jia Y, Li M, Cheng Z, Cui L, Zhao J, Liu Y, Leng M, et al. Morita therapy for depression in adults: A systematic review and meta-analysis. *Psychiatry Research*. 2018; 269(17): 763-71.
33. Chen CP. Morita therapy and its counseling implications for social anxiety. *Counselling Psychology Quarterly*. 2010; 23(1): 67-82.
34. Qiyi M, Xiongwei Z, Yiming C. Morita therapy in the treatment of obsessive-compulsive disorder: efficacy and follow-up. *Chinese Mental Health Journal*. 2000; 11(1): 59-61.
35. Fei H. A control study of morita therapy combined with venlafaxine in the treatment of obsessive-compulsive disorder. *Medical Journal of Qilu*. 2012.
36. Lovibond PF, Lovibond SH. The structure of negative emotional states: comparison of the depression anxiety stress scale (dass) with the beck depression and anxiety inventories. *Behaviour Research and Therapy*. 1995; 33(3): 335-43.
37. Sahebi A, Asghari MJ, Salari RS. Validation of the depression, anxiety and stress scale (DASS-21) for the Iranian population. *Journal of Iranian Psychologists*. 2005; 1(4): 36-54. [Persian]
38. Lubben J, Blozik E, Gillmann G, Iliff S, Kruse WVR, Beck JC, et al. Performance of an abbreviated version of the lubben social network scale among three european community-dwelling older adult populations. *The Gerontologist*. 2006; 46(4): 503-13.
39. Tavakoli Ghousehchi H, Lashkardoost H, Khankolabi M, Asghari D, Hekmatara E, Nabavi S H. Validity and reliability of persian version of lubben social network-6 scale in elderly adult. *Journal of North Khorasan University of Medical Sciences*. 2020; 12 (2): 64-69. [Persian]
40. Morita SH, Kondo A, Levin P. Morita therapy and the true of anxiety based disorders (shinkeishitsu). New York press; 1998.
41. Sugg HVR, Frost J, Richards DA. Morita therapy for depression (Morita Trial): an embedded qualitative study of acceptability. *BMJ Open*. 2019; 9(5): 1-13.
42. Azimi B. Evaluation of the effectiveness of morita therapy in a group method on the degree of self-differentiation of students in the School of Health of Iran University of Medical Sciences [MSc Thesis]. Tehran: Allameh Tabatabaei University; 2007. [Persian]
43. Levine P. Morita-based therapy and its use across cultures in the treatment of Bulimia Nervosa. *Journal of Counselling and Development*. 1993; 72(1): 82-95.
44. Azadi N, Jahanshahi Hesari N, Barzegar Z, Tornas G, Pashaei Z. Examination the effectiveness of morita therapy on marital boredom of married women. *Proceedings of the 4th International Conference on Recent Innovations in Psychology, Counseling and Behavioral Sciences*; 2017 Jul 13; Tehran; 2017.
45. Esmaili M. A survey of the influence of Murita therapy on reducing the rate of anxiety in clients of counseling centers. *Research in Clinical Psychology and Counseling*. 2011; 1(1): 15-30. [Persian]
46. Wu H, Yu D, He Y, Wang J, Xiao Z, Li C. Morita therapy for anxiety disorders in disorders in adults (Review). John Wiley & Sons; 2015.
47. Klainin-Yobas P, Oo WN, Yew PY, Lau Y. Effects of relaxation interventions on depression and anxiety among older adults: a systematic review. *Aging & Mental Health*. 2015; 19(12): 1043-55.
48. Ogrisseg JF. Communication apprehension and morita therapy: evaluation of a brief morita therapy workshop against a stress management education workshop[PhD thesis]. Ohio: Bowling Green State University; 1998.
49. Ishiyama FI. A bending willow tree: A Japanese (morita therapy) model of human nature and client change. *Canadian Journal of Counselling* 2003; 37(3): 216-31.
50. Ishiyama I. Japanese perspective on client inaction and procrastination: Morita therapy. *International Journal for the Advancement of Counselling*. 1990; 13(2): 119-28.