کارگاه های آموزشی مرکز اطلاعات علمی جهاد دانشگاهی

کارگاه آنلاین
کاربرد نرم افزار SPSS در پژوهش

کارگاه آنلاین
اصول تنظیم قراردادها

کارگاه آنلاین
پروپوزال نویسی
Quality Assessment of Randomized Control Trials Applied Psychotherapy for Chronic Pains in Iran: A Systematic Review of Domestic Trials

Fakhrudin Faizi 1; Abbas Tavallaee 1,*; Aboulfazl Rahimi 2; Amin Saburi 3; Masoud Saghafinia 4

1Behavioral Sciences Research Center, Baqiyatallah University of Medical Sciences, Tehran, IR Iran
2Faculty of Nursing, Baqiyatallah University of Medical Sciences, Tehran, IR Iran
3Chemical Injuries Research Center, Baqiyatallah University of Medical Sciences, Tehran, IR Iran
4Trauma Research Center, Department of Anesthesia, Baqiyatallah University of Medical Sciences, Tehran, IR Iran
*Corresponding Author: Abbas Tavallaee, Behavioral Sciences Research Center, Baqiyatallah University of Medical Sciences, Tehran, IR Iran. Tel: +98-2188053768, E-mail: tavresearch@gmail.com

Received: October 7, 2013; Revised: April 7, 2014; Accepted: January 8, 2014

Context: Keeping in mind the burden of psychotherapy can play a crucial role concerning chronic pain (CP). Psychotherapy techniques are widely used to relieve Chronic Pain (CP) worldwide. Applying psychotherapy needs to consider both individual and popular cultures. In addition to international requirements; nation-wide legitimacy should be regarded too. Psychological methods have provided a lot of articles in Iran, but they were neglected by the reviewers because the documents only have abstracts in English. The current study aimed to assess all Farsi Randomized Control Trials (RCTs) addressing psychotherapy to relieve chronic pains.

Evidence Acquisition: Six nation-wide medical databases were investigated in 2012 using the keyword chronic pain in the Abstracts, systematically. Applying PICO question format (patient problem or population, intervention, comparison, and outcomes) all the interventional studies were reviewed for eligibility. Retrieving full text (in Farsi) and making the articles indistinguishable, two native reviewers assessed the quality of the articles independently using Jadad scale.

Results: Inclusion criteria met 1542 abstracts. After refining and excluding, seventeen experimental studies were retrieved and evaluated. Mean quality score of Jadad was 1.53 ± 1.37 (median = 1.0). Cognitive Behavior Therapy (CBT) was the dominant approach (11 out of 17) and the majority (6 out of 17 studies) of the treated cases was Low Back Pain (LBP). Patient-therapist gender adjustment has clearly reported in most of the studies, based on the requirements.

Conclusions: Cognitive Behavior Therapy was more effective than the other psychotherapy approaches relieving chronic pain in the studies. Well-designed studies and comprehensive clarification of the studies demonstrating groups, intervention, follow-up and drop outs can improve the quality of the RCTs.

Keywords: Psychotherapy; Chronic Pain; Quality Assessment

1. Context

Intolerable burden of Chronic Pain (CP) in the machinery-living today (1-3), can be diminished. Psychotherapy methods can play a crucial role in management of chronic conditions. Nowadays, psychotherapy techniques are widely used to relieve all types of chronic pains worldwide (4, 5). Choosing appropriate techniques of psychotherapy not only depends on the client’s condition, but also on the individual and popular culture (6). Besides international requirements, some countries have adopted nation-wide Codes and legitimacies that should be regarded in treatment setting. Many of psychotherapy methods are being used in Iran, and a lot of articles addressing psychotherapy have reported in local journals. However; the articles were neglected by the reviewers because the documents only have abstracts in English without providing full text. The non-commercially published papers usually contain useful information for health promotion (7). However access to the raw resource is challenging but useful and innovative (8). The number of the articles is growing considerably.

In the past decade (2002-2012); Iranian publications in the international journals have dramatically increased. Searching Pubmed database using Iran keyword in the [Tittle/Abstract] obviously reveals a twelve fold increase (1195.42%) i.e. 393 records from 1993 to 2002 has risen to 4698 at the end of years 2003-2012. Meanwhile, national databases have been developed to publish the research documents. Gathering, analyzing and assessing quality of the RCTs and reporting the culture-bound results may help sharing experiences with the other researchers.
2. Evidence Acquisition

A systematic review for the year 2012 was conducted using keywords of chronic pain and/or its Farsi keywords in the Abstract through the main national scientific and medical databases named Magiran (http://www.magiran.com), Iranmedex (http://www.irmedex.barakatkn.com/index.asp), Scientific Information Database (www.SID.ir), Irandoc (http://www.irandoc.ac.ir), Medlib (http://medlib.ir), and Yektaweb (http://yektaweb.com). After checking for duplication, all the abstracts concerning psychotherapy solely or in combination with the other treatment regimens for chronic pain were assessed using PICO format (Population, Intervention, Comparison, Outcome) (9). Observational studies and/or publications in the world-wide data bases were excluded. The process of searching, selecting, and recruiting the studies are shown in Figure 1. Authors’ names, their affiliations, and the journal names were omitted. Peer-review process started and quality assessment of all retrieved full text articles in Farsi were examined independently by two reviewers using Jadad Scale as a reliable, valid, and specific scale in pain studies (10). The scale rates the quality of studies in the range of zero to five. Randomization, blindness and withdrawals/drop-outs each were allocated one point and then, two additional points were added if the described randomization and dropout manner were appropriate. In case of discrepancy, the agreement was appointed by the third reviewer. Applied psychotherapy and the protocol are briefly presented in Table 1.

3. Results

A total of 17 experimental studies out of 1542 (treating 829 patients) were retrieved out of which eleven had pretest-posttest (six with controls), four parallel, and

| Table 1. Applied Protocol of Psychotherapy for Chronic Pain a |
|-------------------------------------------------------------|
| Reference | Protocols for Chronic Pain |
| Pouladi et al. (11) | PMR b, Stimulus control c and Stress inoculation d: 45-60 minutes for eight sessions. |
| Khanzadeh et al. (12) | Massage + exercise: 60 minutes three times a week for eight weeks (total = 24 × 60 minutes) |
| Khezri et al. (13) | Hypnotism: 60 minutes for nine sessions |
| Akbari and Forough (14) | APS: warm pad 20 minutes, APS 16 min then activity up to tolerance; TENS: warm pad 20 min, TENS 16 minutes, and activity up to tolerance for 10 sessions. |
| Rafiee et al. (15) | CBT: 50 minutes for eight sessions, follow-up to one month. |
| Shaban et al. (16) | PMR: 30 minutes for three days, Music therapy: 30 min for three days |
| Abbasi et al. (17) | Spouse-Assisted educational Package and or patient-oriented education (without spouse support): two hours per a week for seven sequential weeks. |
| Mohammadi et al. (18) | Mindfulness-based Cognitive therapy: two hours in a week for two month. |
| Rahimian (19) | CBT: 90 minutes per a week for eight sequential weeks. Follow-up to four months. |
| Golchin et al. (20) | CBT: 90 minutes per a week for twelve sequential weeks. |
| Nadjafi Ghezeljeh et al. (21) | Massage: 10 minutes (five minutes for each foot) for three consecutive days. |
| Yousefi Nejad et al. (22) | Music therapy: for three days and then pain intensity measuring. |
| Gharaei et al. (23) | ACT: 60 minutes a week for eight consecutive sessions. |
| Sadoughi et al. (24) | CBT (Stress Management Training) then apprising headache in frequency, severity and duration using Headache Diary). |
| Alavi et al. (25) | Hypnotism: three to seven sessions and then follow-up for three months. |
| Momen et al. (26) | PMR: two times (10 minutes) a day for a month and then follow-up for two months. |
| Vakili et al. (27) | CBPMT: 8 sessions in eight consecutive weeks and follow-up for two months. |

a Abbreviations: ACT, acceptance and commitment therapy; APS, action potential stimulation; CBT, cognitive behavior therapy; CBGT, cognitive-behavioral group therapy; CBT, cognitive behavior therapy; CBPMT, cognitive behavior pain management therapy; PMR, progressive muscle relaxation.

b Jacobson (1962).
c Kanfer (1985).
d Michenbaum & Turk (1976).
two cross-over designs. Only one study obtained full points (five score). Mean score of Jadad was 1.53 ± 1.37 (median = 1.0). Details of quality assessment of the RCTs are summarized in Table 2. There were six studies on Low Back Pain, the majority, four studies on Tension Headache (TH), four Musculoskeletal pain (MSP), and one cancer pain. Cognitive Behavior Therapy (CBT) had been applied in 11 out of 17 studies in patients with different conditions as LBP (four studies), MSP (four studies), TH (two studies) and cancer pain (one study). Two studies reported music therapy and massage for cancer pain, emphasizing that foot massage was more effective in terms of increasing relaxation and lowering pain intensity (P < 0.0001). One study (16) which had compared CBT and music therapy for cancer pain reported that PMR was more effective (P < 0.01). Table 2 presents more information and clarifies differences of the studies. One parallel study (17) used combination of family therapy and interpersonal therapy for LBP named Spouse-Assisted Multidisciplinary Pain Management Program (SA-MPMP) versus Patient-Oriented Multidisciplinary Pain Management Program (P-MPMP) reported significant reduction in Kinesiophobia (patient) and lesser spouse's negative response to activity (P = 0.05). The two methods not only significantly decreased depression, anxiety, stress, disability, and pain, but also increased marital adjustment in comparison to the baseline. Besides, the positive outcomes of the two methods, the spouse’s stress, anxiety, and depression rose as a negative outcome in SA-MPMP method. Hypnotism as a psychodynamic psychotherapy was applied in the two studies for patients with tension-type headaches (13, 25). Despite the low quality of articles (Jadad score zero and one); both articles reported significant reduction in pain occurrence and consumption of analgesics. The notable finding was that nine studies (11, 27) clearly reported that both the therapists and the patients were the same sex. The patient’s or therapist’s gender were not directly mentioned in the rest (eight studies). Female patients should be treated only by female therapists based on the local rules.

Table 2. Quality Assessment: Jadad Score for Iranian Randomized Control Trials

| References          | Randomization | Double Blinding | Drop Outs | Total Score |
|---------------------|---------------|-----------------|-----------|-------------|
|                     | Randomized    | Double-blind    |           |             |
|                     | Appropriate   | Appropriate     |           |             |
|                     | and Reported  | and Reported    |           |             |
| Pouladi et al. (11) | 1             | 0               | 0 (NR)    | 2           |
| Khanzadeh et al. (12)| 0 (NR)       | 1               | 0 (NR)    | 1           |
| Khezri et al. (13)  | 0 (NR)        | 0 (NR)          | 0 (NR)    | 0           |
| Akbari et al. (14)  | 0 (NR)        | 0 (NR)          | 0 (NR)    | 1           |
| Rafiee et al. (15)  | 0 (NR)        | 0 (NR)          | 0 (NR)    | 0           |
| Shaban et al. (16)  | 1             | 0               | 0 (NR)    | 2           |
| Abbasi et al. (17)  | 1             | 1               | 0 (NR)    | 4           |
| Mohammadi et al. (18)| 0             | 1               | 0 (NR)    | 1           |
| Rahimian et al. (19)| 1             | 1               | 1         | 5           |
| Golchin et al. (20) | 1             | 1               | 0 (NR)    | 2           |
| Nadjafi Ghezeljeh et al. (21)| 1 | 1 | 0 | 2 |
| Yousefinejad et al. (22)| 0 (NR) | 0 (NR) | 0 (NR) | 0 |
| Gharaei et al. (23) | 0            | 1               | 0 (NR)    | 1           |
| Sadoughi et al. (24)| 0            | 1               | 0 (NR)    | 1           |
| Alavi et al. (25)   | 0 (NR)        | 0 (NR)          | 0 (NR)    | 1           |
| Momen et al. (26)   | 0 (NR)        | 0 (NR)          | 0 (NR)    | 0           |
| Vakili et al. (27)  | 1             | 1               | 0 (NR)    | 2           |

Abbreviations: NR, not reported; NA, not appropriate.
Table 3. Randomized Control Trials of Psychotherapy for Chronic Pain

| Reference                        | Study Design | Quality Score | Allocation, Concealment | Condition | Sex   | Sample Size | Intervention(s) | Control(s)       | Measurement Method(s) | Main Results                                                                 |
|----------------------------------|--------------|---------------|--------------------------|-----------|-------|-------------|----------------|------------------|----------------------|-----------------------------------------------------------------------------|
| Pouladi et al. (11)              | RCT          | (2)           | No                       | LBP       | Male  | 100 (4 * 25) | Cognitive therapy (Stress Inoculation), Behavior therapy (Stimulus Control), Relaxation (PMR) | SC, Baseline | PBP, PBO, PSEQ, BDI, MPI-F | Cognitive therapy and PMR improved pain beliefs and behaviors ($P = 0.01$) more than behavior therapy, Pain Self-Efficiency enhanced ($P = 0.006$) and depression decreased ($P = 0.001$) in all intervention groups in comparison to controls. |
| Khanzadeh et al. (12)            | RCT          | (3)           | Yes                      | LBP       | Male  | 30 (2 * 15)  | Combined Exercise therapy & Massage | SC, Baseline | VAS, Physical Activity | Pain score lowered ($2.85 \pm 1.8, P = 0.003$) and Physical Performance improved ($31.44 \pm 3.34, P = 0.002$) |
| Khezri et al. (13)               | RCT (MBD)    | (0)           | No                       | TH        | NR    | 3            | Hypnotism        | Baseline | VAS, BDI             | Decreased Pain Intensity and Anxiety after intervention and after one month follow-up comparing base line. |
| Akbari and Forough (14)          | RCT          | (1)           | No                       | Osteoarthritis | Male and Female | 32 (16 + 16) | APS, (Female); TENS, (Male and Female) | Baseline | VAS                  | No significant differences between two groups. Each stage had significant improvement comparing other stages in each group (ANOVA, $P < 0.05$). |
| Rafiee et al. (15)               | RCT (MBD)    | (0)           | No                       | CP (MSP)  | Male and Female | 4            | CBT             | Baseline | VAS, BDI, PCS, CCSI | CBT reduced depression, pain intensity, catastrophizing, and improved coping strategies in the follow up. The effects were maintained to some extent |
| Shaban et al. (16)               | RCT          | (2)           | yes                      | Cancer pain | Male and Female | 100 (50 + 50) | PMR, Music therapy | Baseline | VAS                  | Pain ↓ significantly in both groups comparing baseline ($P < 0.002$). PMR was more effective than Music therapy ($P < 0.006$). |
| Abbasi, et al. (17)              | RCT          | (4)           | Yes                      | LBP       | Male and Female | 24 (12 + 12) | SA-MPMP; Vc; P-MPMP | Baseline | RDQ, VAS, DASS, TSK, SRI, MAT | SA-MPMP ↓ kinesiophobia and spouse negative response to activity comparing P-MPMP ($P = 0.05$). Pre and Post comparison showed significant ↓ in depression, anxiety, stress, disability, pain, and ↑ marital adjustment (patient). Increased the spouses’ stress, anxiety and depression. |
| Mohammadi et al. (18)            | RCT          | (1)           | Yes                      | CP (MSP)  | Female | 30 (2 * 15)  | MBCT             | SC, Baseline | GPO, RDQ          | MBCT reduced severity of pain ($P < 0.002$) and lowered disability comparing controls ($P < 0.001$). |
| Rahimian (19)                    | RCT          | (5)           | Yes                      | LBP       | Male and Female | 35 (11 + 12) b| CBGT             | Baseline | MPI-F               | Mean pain score ↓ significantly after intervention in comparison to controls and baseline. ($P < 0.01$). Power of the study reported as 1 and 0.94. |
| Study Authors                  | Design  | Treatment Details | Study Population | Outcome Measures | Study Findings |
|--------------------------------|---------|-------------------|------------------|------------------|----------------|
| Golchin et al. (20)            | RCT     | CLBP              | Female           | 30 (2 * 15)      | CBT, SC, Baseline | QBPDS, WOC     |
|                               |         |                   |                  |                  | Scores of experimental individuals significantly in all the subscales of maladaptive coping, back pain, and in all the subscales of adaptive coping compared with control group (P < 0.05). |
| Nadjafi Ghazizadeh et al. (21) | RCT     | Chronic Pain      | Female           | 75               | Foot Massage and Relaxation, Cross-over, Baseline | VAS            |
|                               | 3 Group |                   |                  |                  | Significant ↓ relaxation and ↑ pain intensity (p < 0.0001). There were also statistically significant differences in variables trends of change (p < 0.0001). |
| Yousefi Nejad et al. (22)      | RCT     | Cancer Pain       | Male and Female  | 40 (2 * 20)      | Music therapy, Cross-over, Baseline | VAS            |
|                               |         |                   |                  |                  | Pain in stages of pre and post-implementation of music therapy showed significant differences on the basis of variables including age, sex, duration and the type of tissue involved (a = 55, Z = 1.645). |
| Gharaie Ardekani et al. (23)   | RCT     | TH                | Female           | 30 (2 * 15)      | ACT, SC, Baseline | VAS, CPAQ      |
|                               | (2)     |                   |                  |                  | Acceptance and Commitment Therapy caused significant reduction in pain intensity (P < 0.001). |
| Sadoughi et al. (24)           | RCT     | TH                | Female           | 38 (18 + 20)     | CBT + Drug, SC (Drug) | Headache Diary |
|                               | (1)     |                   |                  |                  | Significant differences between experimental and control groups in the frequency (P < 0.01), intensity (P < 0.05) and duration (P < 0.001) of headache attacks. |
| Alavi et al. (25)              | RCT     | TH                | Male and Female  | 38               | Hypnotism, Baseline | VAS            |
|                               | (1)     |                   |                  |                  | Comparison to baseline; 33% reported no headache, 13% not effective and 20% alleviated. The days of treatment for analgesic ↓ significantly. |
| Momen et al. (26)              | RCT     | MPDS              | Male and Female  | 33 (8 + 25)      | PMR, Baseline | VAS            |
|                               | (0)     |                   |                  |                  | Comparison to baseline; intensity of pain, tenderness of masticatory muscles, maximum opening of mouth with and without pain, anxiety (P < 0.001) and depression (P = 0.005) improved significantly after treatment. |
| Vakili et al. (27)             | RCT     | LBP and Anxiety   | Female           | 24               | CBPMT, SC (Drug), Baseline | SCL-90-RBDI |
|                               | (2)     |                   |                  |                  | Experimental group had low depression in comparison to baseline (P < 0.02) and controls (P < 0.006). They also reported lower depression than controls after two months of follow-up (P < 0.004). |

*Abbreviations: ACT, acceptance and commitment therapy; APS, action potential stimulation; BDI, beck depression inventory; CBGT, cognitive-behavioral group therapy; CBPMT, cognitive behavior pain management therapy; CBT, cognitive behavior therapy; CCSI, cognitive coping strategies inventory; CP, chronic pain; CPAQ, chronic pain acceptance questionnaire; DASS42, depression-anxiety-stress scale; GPQ, graded pain questionnaire; LBP, low back pain; MAT, marital adjustment scale; MBCT, mindfulness-based cognitive therapy; MBD, multiple baseline design; MPI-F, multi-dimensional pain inventory-farsi (ASGHARI MOGHADAM-2008); MPDS, myofascial pain dysfunction syndrome; MSP, musculoskeletal pain; PMR, progressive muscle relaxation; P-MPMP, patient-oriented multidisciplinary pain management program; PSEQ, pain self-efficiency questionnaire; QBPDS, Quebec back pain disability scale; QDS, Quebec disability scale; RCT, randomized controlled trial; RDQ, roland-morris disability questionnaire; SA-MPMP, spouse-assisted multidisciplinary pain management program; SC, standard care, SCL90-R, symptom checklist 90-revised; SF-36, short form quality of life 36; SRI, spouse response inventory; TH, tension headache; TENS, trans electrical nerve stimulation; TSK, tampa scale for kinesiophobia; VAS, visual analog scale; WOCQ, ways of coping questionnaire. 

Intervention group divided to male (12) and female (11) due to cultural conservation.
4. Discussion

According to Barrett’s definition, which is: “relaxation methods include deep breathing, imagery, massage and music therapy” (28), nine studies used the relaxation techniques one by one or thorough interdisciplinary programs. According to many documents, relaxation techniques play an incredible role in psychological therapy of chronic pain leaving muscular and vegetative stabilization along with the interruption of pain cycle (29). Chronic LBP was the most prevalent patient condition in the review, and CBT was applied as a choice psychotherapy method but the mean score was 2.33. CBT was also the most dominant applied approach (11 out of 17) to overcome chronic pain in the review. According to Lin and Vaska, each country can use cognitive behavioral therapy approach to develop local educational programs enriching its gray literature (30). Considering the affected psychological functioning in chronic pain such as LBP (31), CBT has proved to be a useful approach dealing with both cognitive therapy and behavioral manipulation. One study (18) applied mindfulness-based cognitive therapy for chronic pain and reported positive effects. The usefulness of the technique in chronic pain was mentioned before (32) but the limitation here was that only female subjects were recruited in the pre- and post-test study. Based on Jadad Scale, every RCT should acquire at least two points to enter quality assessment (33), regarding the low quality of the assessed articles, they had not been entered into any reviews before. It is time to mention that most of the articles in the country are provided by students or junior researchers and then edited by faculty members. Unfortunately, students may forget to comprehensively describe their research methodology leaving the reports to be categorized as low quality regarding standard quality assessment tools. In fact, any Ph.D. or M.Sc. thesis and/or research proposals should be carefully assessed before application by a Research Counsel in Deputy of Research organized in universities countrywide. The research reports can be published only if they are supervised regarding all the standards during implementation. A remarkable difference that should be mentioned here is the National Adaptation Code (Tarhe-e-Intebah) adopted in 1998. Based on the code, every treatment on a patient should be done only by a therapist with the same sex of the patient. In conclusion, all female patients should be treated by female therapists. The code has flexibility in some situations like human resource stricture. This new approach can minimize all therapeutic misconducts and improve patient-therapist relation. Same patient-same therapist proposal was recommended to improve patients’ rights and protect them through legal prohibition from psychotherapeutic misconduct (34). Psychotherapy is applied to relieve chronic pain as a predominant technique in Iran. Therapists applied CBT as an effective technique more than the other types of psychotherapy to overcome chronic pain. The current study reflects country-wide conformity between the applied techniques and population’s culture under legitimate rules. Keeping in mind the low quality trials in the review; it is recommend that well-designed RCTs with rigorous methodology can offer better view of psychotherapy.

Acknowledgements

Authors wish to offer their special thanks to Dr. Khodabakhsh Ahmadi, Director of Behavioral Science Research Center, for his guidance and financial supports. Authors also wish to sincerely thank all the personnel of the research center for their quick responsiveness during the review.

Funding/Support

The review was done by financial supports from Behavioral Sciences Research Center of Baqiyatallah University of Medical Sciences.

References

1. Langley PC. The societal burden of pain in Germany: health-related quality-of-life, health status and direct medical costs. J Med Econ. 2012;15(6):5201-15.
2. Kanzler KE, Bryan CJ, McGearry DD, Morrow CE. Suicidal ideation and perceived burdensomeness in patients with chronic pain. Pain Pract. 2012;12(6):602-9.
3. Kurita GP, Sjogren P, Juell K, Hojsted J, Ekholm O. The burden of chronic pain: a cross-sectional survey focussing on diseases, migration, and opioid use. Pain. 2012;153(12):2312-8.
4. Donatone B. Focused suggestion with somatic anchoring technique: rapid self-hypnosis for pain management. Am J Clin Hypn. 2013;55(4):325-42.
5. Slavin-Spenny O, Lumley MA, Thakur ER, Nevedal DC, Hijazi AM. Effects of anger awareness and expression training versus relaxation training on headaches: a randomized trial. Ann Behav Med. 2013;46(2):181-92.
6. de Figueiredo JM, Gostoli S. Culture and demoralization in psychotherapy. Adv Psychosom Med. 2013;33:75-87.
7. Turner AM, Liddy ED, Bradley J, Wheatley JA. Modeling public...
health interventions for improved access to the gray literature. J Med Libr Assoc. 2005;93(4):487-94.
8. Pappas C, Williams L. Grey literature: its emerging importance. J Hosp Librariansh. 2011;11(1):228-34.
9. Elkins MY. Using PICO and the brief report to answer clinical questions. Nursing. 2010;40(4):59-66.
10. Clark HD, Wells GA, Huet C, McAlister FA, Salmi LR, Fergusson D, et al. Assessing the quality of randomized trials: reliability of the Jadad scale. Control Clin Trials. 1995;16(5):448-52.
11. Pouland Reishahri AK, Najarian B, Shokrkon H, Mehrabizadeh M. Evaluation of the effectiveness of Cognitive, Relaxation and Behavior therapy on chronic low back pain in male teachers of Ahvaz. J Educ Psychol. 2001;3(1):49-72.
12. Khanzadeh R, Hashemi Javaheri AA, Omidi Kashani F, Zandi M, Khodabakhshi M. The Effect of Combined Therapeutic Protocol (Therapeutic Exercises and Massage) on the Pain and Physical Performance in Men with Chronic Low Back Pain Due to Lumber Disc Herniation. Evid Based Care. 2012;2(2):29-36.
13. Khezri N, Baniasadi H, Kahrizaei F. An Evaluation of Hypnotherapy Efficacy In The Treatment of Chronic Tension Headache. J Educ Psychol. 2007(3).
14. Alkabi M, Forough A. Comparison of the Effect of APS and TENS in Reduction of Pain and Functional Improvement of Patients with Mild to Moderate Osteoarthrosisof Knee. Univ Med Sci IRAN. 2005;12(12):659-61.
15. Raifee S, Sohrabi F, Shams J, Forough AA. The efficacy of Cognitive Behavioral Therapy in patients with chronic musculoskeletal pain. J Jahrom Univ Med Sci. 2012;12(9).
16. Shaban M, Rasoolzadeh N, Mehran A, Moradzadeh F. Study of two non-pharmacological methods, progressive muscle relaxation and music, on pain relief of cancerous patients. Hayat. 2006;52(3):53-72.
17. Abassi M, Dehghani M, Jafari H, Behbashi H, Shams J, Panaghi L. Comparing Two Chronic Low Back Pain Intervention Models: Spouse-Assisted vs. Patients-Oriented. J Fam Res. 2012;10(1):191-211.
18. Mohammadi F, Mohammadkhani F, Dolatshahi B, Asghari MA. The effects of “mindfulness meditation for pain management” on the severity of perceived pain and disability in patients with chronic pain. Iran J Ageing. 2016;11(9).
19. Rahimian Boogar B. The Effect of Cognitive-Behavioral Group Therapy on Improving the Multidimensional Pain Symptoms of the Patients with Chronic Low Back Pain. J Army Univ Med Sci Iran. 1996(9):319.
20. Golchin N, Jannoozorgi M, Alipour A, Agah Heid M. The Efficacy of Cognitive Behavioral Therapy on Using Coping Strategies and Decreasing Pain Among Females With Chronic Back Pain. J Fun- damentals Ment Health. 2011;13(2):16-9.
21. Nadji Ghezeljeh T, Rahimifard M, Mohaddes Ardebeli F, Hosseini F. Effect of Foot Massage on Relaxation and Pain Intensity of Cancer Patients. Iran J Nurs. 2002;2(3):75-82.
22. Yousefi Nejad ostad Kelayeh A, Madadi A, Majd Zadeh SR, Shaban Nia R, Sadeghian N, Zarin Ara AR. The Effect of Music Therapy on Chronic Pain in Patients With Cancer. J Qazvin Univ Med Sci. 2005;9(1):39-42.
23. Gharai Ardekani S, Azad Fallah P, Tavallaie A. The Effectiveness of Acceptance and Commitment Therapy on Pain Experience in Women with Chronic Pain. J Clin Psychol. 2012;4(2):39-50.
24. Sadoughi M, Akkashe G. Effectiveness of Cognitive-Behavioral Therapy on Reduction of Chronic Tension Headache. J Shahrekord Univ Med Sci. 2009;11(3):85-92.
25. Alavi SM, Mahjoobifard M, Lashkariour K, Fathi M. Evaluation of the Effect of Hypnosis on the Treatment of Tention Headache. J Iran Soci Anesthesiology Intensive Care. 2001;12(4):22-5.
26. Momen Beitollahi J, Sahebjamie M, Manavi A, Farrokhiha T, Zohroodin A, Golestan B. Effect of Progressive Muscle Relaxation Therapy on Improving Signs and Symptoms of Patients with myofacial pain Dysfunction Syndrome. J Dent Med. 2009;28(4):24-54.
27. Vakili N. The Effect of Cognitive-Behavioral Group Pain Management Therapy on Depression of the Female with Chronic Low Back Pain. J Clin Psychol. 2009;15(4):21-9.
28. Barrett AM. Pain In the Elderly. JH Wittink H, Hoskins Michel T editors. Chronic pain management for physical therapists: British Library Cataloguing-in-Publication Data; 2002. pp. 247-55.
29. Diogimann A. [Relaxation techniques for chronic pain]. Schmerz. 2011;25(4):445-54.
30. Lin Y, Vaska M. Raising awareness of grey literature in an academic community using the cognitive behavioral theory. Grey J. 2010;11:57-63.
31. Jarosch T, Kurylowicz J, Steudn S. Psychosocial Functioning Questionnaire for Patients with Low Back Pain: development and psychometric properties. Arch Med Sci. 2005;1(3):357-62.
32. Hügel Colle KF, Vincent A, Cha SS, Loherer IL, Bauer BA, Wahner-Roedler DL. Measurement of quality of life and participant experience with the mindfulness-based stress reduction program. Compliment Ther Clin Pract. 2010;16(1):36-40.
33. Amande RA, Moore RA, Carroll D, Jenkinson C, Reynolds DJ, Gavaghan DJ, et al. Assessing the quality of reports of randomized clinical trials: is blinding necessary? Control Clin Trials. 1996;17(1):12-12.
34. Riemer M, Schneider G. [Improving prevention of sexual abuse by therapists during ongoing psychotherapeutic or psychiatric treatment]. Z Psychosom Med Psychother. 2006;52(4):406-24.
