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The Relationship between coping Strategies, Perfectionism, Beliefs Pain and the Chronic Pain after Controlling the Age Effects in Firefighters

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ABSTRACT

Stress is perhaps the most common pain with which we are faced. None of other physical symptoms are general as pain. Accordingly, since the beginning of the recorded history, trying to control the pain has been the main goal of human beings. The present study examined the relationship between coping strategies, perfectionism, pain beliefs, and chronic pain among firefighters suffering from chronic pain after controlling the age factor. The study employed a descriptive-correlational method to examine 405 firefighters suffering from chronic pain. The sample was selected by multistage cluster sampling method. The participants completed the chronic pain, coping strategies, perfectionism, and pain beliefs questionnaires. Data were analyzed by Pearson's correlation and partial correlation. There was a significant positive relationship between firefighters' age and the duration of pain, chronic pain disorder severity, emotion-focused coping strategies, pain beliefs and maladaptive perfectionism. Moreover, there was a significant negative relationship between firefighters' age and problem-focused coping strategies and adaptive perfectionism. After controlling the age factor, high levels of pain duration and chronic pain disorder severity were related to high levels of emotion-focused coping strategies, maladaptive perfectionism, pain beliefs and low levels of problem-focused coping strategies and adaptive perfectionism. Zero-order correlation revealed that, the age of subjects had little impact on the strength of the relationships between the variables of the duration of pain and chronic pain disorder severity. The results indicated that, participants' age had little impact on the strength of the relationship between the variables. It implies that young firefighters have urgent need for psychological interventions pertinent to the chronic pain for reducing chronic pain disorder severity and its duration.

Keywords: *coping strategies, perfectionism, pain beliefs, chronic pain disorder.*

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Chronic pain is more than a physical symptom. As the pain continues, patient's activity reduces which leads to depressed mood and physical reconditioning. Patient continues the treatment in order to eliminate pain. Unsuccessful treating efforts for eliminating the pain cause more despair and depression. As a result of intensified depression they may lose their interest in doing their everyday tasks. This phenomenon in its turn increases the lack of physical fitness. Additionally, due to the continuity of inefficient treatments which are mostly of passive nature, as well as the continuity of the therapist concerns focused on pain elimination, not only patient's destructive beliefs (e.g., expecting to find a solution from outside) are reinforced but also the patient is stunt by having an active role through their rehabilitation process. Moreover, some pharmaceutical treatments may add more problems to the individual's main problem. For instance, side effects of drugs (e.g., anti-pains, sedatives, antidepressants, and anti-inflammatory) prescribed for pain killing and pertinent matters could be noted. As the pain goes on, the individual may lose their job or savings; and their family may suffer due to the effects of pain and feebleness on the person's life (Turk and Monaarch; 2002). Coping is the patient's effort to eliminate or reduce stressful stimulus in order to adapt to a situation. Generally, there are some distinctions between problem-focused and emotion-focused coping strategies. In the realm of pain, the aim of problem-focused coping strategies is to solve the problem of pain or prevent its increase. Studies on these strategies suggest that, they are helpful when used together (Vlaeyen, Crombez, Goubert; 2007). Pain self-control and its effectiveness depend on unique ways through which the patient encounters with and adapts to pain in order to reduce or stop the helplessness caused by it. In other words, pain self-control depends on person's coping strategies. It seems that, coping appears in spontaneous use of voluntary and purposeful actions, and can be evaluated by overt and covert behaviors. Overt coping strategies are resting, using medication, and relaxing. Covert strategies include not paying attention to pain, assuring oneself of the end of pain, looking for information about the pain and solutions. It should be noted that, the strategies the patient uses are not just adaptive or maladaptive in all the circumstances. It is assumed that, coping strategies change both the individual's perception of pain and their ability to control or to endure it and to continue daily routines (Turk and Monaarch; 2002).

Perfectionism is one of the variables studied as a multidimensional structure in recent decades. In fact, perfectionism is an irrational belief people have about themselves and their surroundings. Perfectionists believe that, they and their surrounding world must be perfect and every effort in life must be flawless. They usually expect to be expelled by others and are afraid of it. With this fear, they become defensive to being criticized by others. Therefore, they make people frustrated and send them away. Without knowing, perfectionists expect others to have the same extremely unrealistic standards and are thus expectant and critical of others. Furthermore, they may not let others become aware of their mistakes. They do not understand that, self-disclosure gives them an opportunity of being loved and be looked at as a human being. Due to this vicious circle, perfectionist people often have problem with close relationships and therefore are less satisfied with their interactions. An important aspect of human development is their socialization process. Social living is essential in human beings and so being in touch with other people is inevitable. Positive perfectionism refers to those perceptions and behaviors aimed for the success and high achievements in order to gain positive outcomes. Negative

perfectionism refers to perceptions and behaviors aimed for the success and high achievement in order to avoid or escape from negative outcomes (Slade and Owens; 1998).Beliefs related to pain are judgments that interpret pain(Lazarus and Folkman; 1984).Beliefs are cognitive configurations that are formed either individually or through a common culture. These beliefs form person's experiences and learning, and cover all of their experiences about the pain. Pain evaluation and belief can deeply affect patient's emotions and behaviors in their response to pain. Therefore, constant and persistent pain should not be considered only as a resultant of mere physical or mental problems, but as a combination of bio-medical, psychological and behavioral factors leading to pain and its consequences. Scientific findings corroborate the idea that pain is a phenomenon consisting of biopsychosocial symptoms (Turk and Monaarch; 2002).

A futuristic study by Iman, Walter and Jeffrey (1993), on first experience of backache in New York firefighters led to the following result: 109 were selected randomly out of 115 firefighters and were tested from December 1988 to 1989. After controlling the effective factors (e.g., out of work activities), dangerous high risk factors that may cause backache in firefighters included taking the hose into the building, climbing ladder, breaking window, looking for hidden fires in the accident location, and lifting up things that weigh more than 18 kilograms. Factors with lower risk included attaching the hose to the pump, pulling hose, working with drill machine, and being exposed to the smoke of flammable substances. This experiment was conducted in a controlled situation, and evidently, both being dispatched to the accident place and being present at the scene can increase the probability of backache. It is worth mentioning that, firefighters' fire injuries reported to National Fire Incident Reporting System (NFIRS) from 2006 to 2008 estimated that, 81070 injuries occurred during these years. 39715 of them happened during the fire, and 4880 while returning to the station. According to these reports .41 of the injuries were related to upper and lower extremities and .26 were related to head and shoulders (Topical Fire Report Series). It shows that, firefighters are exposed to high physical dangers. Despite the significance of the issue, little attention has been paid to the examination of chronic pain and understanding its general features considering personality traits among firefighters in Iran. Therefore, carrying out such research along with other interventions is essential.

METHOD AND MATERIALS

Participants were 405 firefighters selected through cluster sampling from Tehran’s firefighters. First, using cluster method, Tehran’s fire stations were divided into four boroughs: North, South, East, and West and then two areas where randomly chosen. Then again, 20 stations were selected using cluster sampling with varying probabilities method. The study employed a descriptive-correlational method. 33.8% of the participants were 23-29 years old, 57% were 30-39, and 9.17% were 40-49. Age average and standard deviation were 31.85 and 6.93, respectively. 49.9% of the participants were Fars people, 43.5% were Azerbaijani people, 1.5% were from Lorestan, 3.2% were Kurdish, 1.5% were Arab people, and .5% were Baloch people. 58.3% of them had high school education, and 41.7% had higher education. Also, 77.3% of the firefighters were married, and 22.7% were single. Among the studied sample, 4% suffered from chronic pain disorder stage 1, 3% suffered from chronic pain

disorder stage 2, 25.2% suffered from chronic pain disorder stage 3, and 67.9% had no specific problem regarding chronic pain disorder.

FOR THIS RESEARCH FOUR INVENTORIES HAD BEEN USED

Chronic Pain Inventory: This inventory is designed by Asghari Moghaddam (1995) in Iran (according to Pouladi, 2006), and has been used in several studies on Iranian patients suffering from chronic pain. The inventory has 58 items which diagnoses and finds cases suffering from chronic pain as well as evaluating different aspects of chronic pain. In this inventory, items for categorizing chronic pain disorder severity are combined with items for case finding of chronic pain, identifying factors such as pain severity, pain location, pain continuity, disability related to pain, pain record, and the amount of visiting made to medical centers and using sanitation facilities. Therefore, by doing this inventory not only individuals suffering from chronic pain can be identified but also it is possible to access to the categorization of chronic pain disorder severity. In a study, Asghari Moghaddam, Karami, and Rezaee (2002) used the research data in order to calculate the coefficient of internal consistency of grading chronic pain inventory. The result indicated that, the mentioned inventory had a good coefficient of internal consistency (Cronbach's alpha coefficient =.83). For validity of the test, some criteria were designed and the correlation coefficient between the criteria and chronic pain inventory was r=.86 ($p<.001$). In the present study, the correlation coefficient between the total score and the subscales of pain severity, pain feebleness severity, and total feebleness severity were .95, .97, and .97 respectively. Coefficient of Cronbach's alpha for the whole scale was .93.

Coping Responses Inventory (CRI): To evaluate coping strategies, coping responses inventory by Blings and Moose (1981) was used. It has 32 items of problem-focused and emotion-focused copings. Blings and Moose (1981) made this inventory to study how people respond to the stressful events. Therefore, participants are asked to remember a recent crisis or stressful event and answer the items accordingly. The scoring is as follows: participants must choose how much they use coping responses based on Likert scale including never =0, sometimes =1, often =2, and always=3. As mentioned, they get a score between 0 and 3 based on the chosen answer. The sum of passive coping strategies is subtracted from the total sum of active coping strategies (passive scores are subtracted from total active scores). If the result is a high score, the individual's coping strategies are more active, and if the result is a low score, the individual's coping strategies are more passive. Blings and Moose (1981) calculated the reliability coefficient of .78 based on Cronbach's alpha and validity of internal consistency of .44 to .80 for the two subscales. Also, they reported a content validity of .88 for the inventory. Also, (Rabbani Bavojdan and et al, 2012) found a coefficient of .71 for total score by Cronbach's alpha for a sample of 354 people, and .79 for problem-focused strategy subscale, and .78 for emotion-focused strategy subscale. In the present study, the calculated coefficient of Cronbach's alpha for the whole scale, emotion-focused and problem-focused coping strategies are .81, .92, and .87, respectively.

Hilll Perfectionism Scale (2004): Hill perfectionism scale has 59 items and 8 subscales. The total score of perfectionism is sum score of 8 factors. Adaptive aspect of perfectionism includes order and organizing, purposefulness, trying to be excellent, and high expectations from others. Maladaptive aspect of perfectionism consists of perceived pressures from parents; need to be approved by others, focusing on mistakes and obsessive rumination. Items are scored by Likert scale from strongly disagree =1 to strongly agree =5. Hill and his colleagues calculated coefficient of internal consistency retest of this scale from .71 to .91. This scale was validated in Iran by Jamshidi et al. They calculated a reliability coefficient of .90 based on Cronbach's alpha. In the present study, coefficient of Cronbach's alpha was .87 for the whole scale, .98 for adaptive perfectionism, and .94 for maladaptive perfectionism.

Pain Beliefs and Perception Inventory (PBPI): This inventory is designed by Williams and Thorn (1981), and used in several studies as a measure for evaluating pain beliefs about non-cancerous chronic pains (DeGood and Tait; 2001). It has 16 items and each is score on 4-point Likert scale. The participant is also asked to read the items carefully and reply to each by choosing either "strongly agree", "agree", "disagree", and "strongly disagree". Scoring is as follows: for items1, 2, 5, 6, 7, 8, 10, 11, 14, 13, and 16 score 2 is given to strongly agree, 1 to agree, -1 to disagree, and -2 to strongly disagree. For items 3, 9, 12, and 15 score -2 is given to strongly agree, -1to agree, 1 to disagree, and 2 to strongly disagree. Sum score of items 5, 9, 12, and 15 is the score of belief in continuity of pain in future. Sum score of items 7, 11, and 13 is the score of belief in self-recrimination. Sum score of items 3, 6, 10, and 16 is score of belief in stability of pain in present time. Sum score of items 1, 2, 8, and 14 is the score of belief in mysteriousness of pain. It should be noted that, higher score indicates individual's deeper belief in the matter. Psychometric features of the inventory were confirmed through a sample of 232 suffering from cancerous pains (Asghari et al, 2006). In this present study, coefficients of internal consistency of four factors varied from .70 to .77 and it was acceptable. In the present study, the calculated Cronbach's alpha for the belief in the continuity of pain in the future, belief in self-recrimination, belief in the mysteriousness of pain, and belief in the stability of pain in the present are.84, .88, .88, and .86, respectively.

After the approval of Tehran Firefighting and Safety Services Organization, the researchers went to every chosen fire station. They explained the purpose and significance of the research to the leader of each station, acquired the permission to interview and distribute the inventories. Finally, after a primary interview with every firefighter, they were asked to take their time, read the inventories carefully and respond to them. The gathered data were analyzed via SPSS.

RESULTS AND FINDINGS

Table 1 reports the mean and standard deviation of examined variables. In table 2 and 4 Pearson correlation is provided, and table 3 and 5 provide coefficient of partial correlation of examined variables after controlling the age factor, severity of chronic pain disorder, pain records, and significance level.

Table 1- descriptive statistics of the examined variables

Variables	Average	SD	Max. Score	Min. Score	Total
Chronic pain disorder severity	.85	1.3065	3	0	405
Pain records (in month)	17.597	27.3019	185	6	405
Belief in continuity of pain in future	9.1679	2.2867	15	3	405
Belief in self-recrimination	7.0790	2.31305	11	3	405
Belief in stability of pain in present time	9.6074	2.73797	16	6	405
Belief in mysteriousness of pain	9.6864	1.67626	16	4	405
Emotion-focused coping strategies	37.0741	7.39343	54	20	405
Problem-focused coping strategies	31.9728	4.70220	41	19	405
Adaptive aspect of perfectionism	85.8988	34.7092	140	32	405
No adaptive aspect of perfectionism	91.3679	26.0785	145	43	405
Age	31.5827	5.04349	49	23	405

Table 2- Pearson correlation matrix of coping strategies, perfectionism, chronic pain disorder severity, and pain records

Variables	1	2	3	4	5	6	7
1.Chronic pain disorder severity	1						
2.Pain records	.889**	1					
3.Emotion-focusedstrategies	.583**	.573**	1				
4.Problem-focusedstrategies	-.660**	-.598**	-.506**	1			
5.Adaptive perfectionism	-.524**	-.511**	-.411**	.391**	1		
6.Maladaptive perfectionism	.681**	.699**	.388**	-.451**	-.544**	1	
7.Age	.329**	.337**	.261**	-.237**	-.154*	.190**	1

**p<.001*p<.05

Table 3- partial correlation matrix of coping strategies, perfectionism, chronic pain disorder severity, and pain records after age control

Variables	1	2	3	4	5	6
1. Chronic pain disorder severity	1					
2. Pain records	.875**	1				
3. Emotion-focusedstrategies	.545**	.534**	1			
4. Adaptive perfectionism	-.634**	-.566**	-.473**	1		
5. Adaptive perfectionism	-.507**	-.494**	-.389**	.369**	1	
6. Maladaptive perfectionism	.667**	.687**	.357**	-.425**	-.531**	1

**p<.001

Table 4- Pearson correlation matrix of pain beliefs, chronic pain disorder severity, and pain records

Variables	1	2	3	4	5	6	7
1. Chronic pain disorder severity	1						
2. Pain records	.889**	1					
3. belief in continuity of pain in future	.614**	.580**	1				
4. belief in stability of pain in present time	.570**	.554**	.480**	1			
5. belief in self-recrimination	.596**	.586**	.304**	.353**	1		
6. belief in mysteriousness of pain	.695**	.586**	.434**	.356**	.434**	1	
7. Age	.329**	.337**	.185**	.183**	.178**	155**	1

**p<.001

Table 5- coefficient of partial correlation of pain beliefs, chronic pain disorder severity, and pain records, and age control

Variables	1	2	3	4	5	6
1. Chronic pain disorder severity	1					
2. Pain records	.875**	1				
3. belief in continuity of pain in future	.596**	.560**	1			
4. belief in stability of pain in present time	.549**	.532**	.461**	1		
5. belief in self-recrimination	.578**	.568**	.280**	.332**	1	
6. belief in mysteriousness of pain	.690**	.574**	.417**	.338**	.418**	1

**p<.001

Partial correlation is used to examine the relationship among emotion-focused coping strategies, problem-focused strategies, adaptive and maladaptive perfectionism, chronic pain disorder severity and pain records (in month). As seen in Table 3, there is a significant relationship between all the variables after controlling the age. Results in Table 2 suggest that, there is a positive significant relationship between firefighters' age and chronic pain disorder severity, pain record, emotion-focused coping strategies and maladaptive perfectionism. In addition, a negative significant relationship was observed between age and problem-focused coping strategies and adaptive perfectionism. According to table 3, it can be concluded that, after controlling firefighters' age factor, high levels of pain records and severity of chronic pain disorder are related to high levels of emotion-focused coping strategies and maladaptive perfectionism, and low levels of problem-focused strategies and adaptive perfectionism. Also, partial correlation is used to examine the relationship between pain beliefs, severity of chronic pain disorder, and pain record (in month). The results are shown in table 5 and suggest that firefighters' age has little influence on the relationship between beliefs and perceptions of pain, chronic pain disorder severity, and pain records. Finally, high levels of pain records and chronic pain disorder severity are related to high levels of pain beliefs. Study of zero-order correlation indicates that, participants' age has little influence on the strength of the relationship between the variables, pain records, and chronic pain disorder severity.

DISCUSSION AND CONCLUSION

Main purpose of this research was to study the relationship between coping strategies, perfectionism, pain beliefs, and chronic pain after age control. Zero-order correlation suggested that, participants' age had little influence on the strength of the relationship between the variables, pain records, and chronic pain disorder severity. According to the research findings, emotion-focused coping strategies had a positive significant correlation with chronic pain disorder severity and pain records (in month). In addition, there was a negative significant correlation between problem-focused coping strategies, pain records, and

chronic pain disorder severity. This finding was consistent with other research findings such as (Vlaeyen, Crombez, Goubert; 2007). In order to clarify the above findings, it can be referred to the definition of coping by Vlaeyen, Crombez, and Goubert (2007) as an effort that one makes in order to adapt to a situation and to eliminate or reduce the stressful stimulus. Also, to shed more light on the present research, result of the research by Carroll, Mercado, Cassidy and Cjte (2002), can be referred to, in which they suggest that, in the realm of pain management, active coping strategies can increase individual's power of coping that leads to fewer feebleness reports. Because after learning cognitive-behavioral elements, patients reevaluate pain more often; and through learning problem solving skills they solve problems in a better organized way.The results also indicated that, adaptive perfectionism had a negative significant relationship with chronic pain disorder severity and pain records; and maladaptive perfectionism had a positive significant relationship with chronic pain disorder severity and pain records. This result was consistent with the findings of different studies like Domingues (2009). As mentioned earlier, positive perfectionism refers to those perceptions and behaviors aimed for the success and high achievements in order to gain positive outcomes; and negative perfectionism refers to the perceptions and behaviors aimed for the success and high achievement in order to avoid or escape from negative outcomes (Slade and Owens; 1998).Findings suggested a strong positive correlation ($p<.001$) between pain belief (belief in continuity of pain in future, belief in self-recrimination, belief in pain stability in present, and belief in mysteriousness of pain), chronic pain disorder severity, and pain records. High levels of pain beliefs were related to high levels of chronic pain disorder severity and longer pain records. In other words, the stronger patients' pain beliefs are, the more chronic pain disorder severity they perceive and the longer the pain record is. Significance of pain beliefs for successful adaptation with pain is shown in several studies as Williams, Thorn (1989). As the studies suggest, even when real pain and its duration is stable, beliefs in the continuity of pain leads to more pain complain (Williams, Thorn; 1989). Also, other studies have found that, pain beliefs are shaped during individual's life experiences and learning, and cover all their pain experiences. Pain beliefs and evaluation can deeply affect their emotions and behaviors in responding to pain. If pain symptoms are interpreted as threat and it is also believed that, pain is accompanied by tissue damage, patient responds with more intensity and shows escape and avoidance behavior. Pain evaluation and pain belief are important determinants in patient's adaptation of chronic pain(Turner, Jensen and Romano; 2000).Also, as mentioned before, zero-order correlation suggested participants' age had little influence on the strength of relationship between the variables and chronic pain disorder severity and pain records. However, due to the nature of this research, causal interpretation of the relation between the variables was not possible. Although, the result indicated that, age had little influence on the strength of the relation between the variables. Considering the young majority of firefighters, the importance of psychological interventions pertinent to chronic pain is obvious, and more studies in this area are essential. Practical and theoretical outcomes of this study are as following: in theoretical outcomes, these findings increase psychological knowledge of effective elements in the development of physical diseases and their continuity. Moreover, identifying personality traits of people suffering from chronic pain could help them know themselves better. In practical outcomes, considering the increase in treatment duration and its high cost for the person, Firefighting Organization, society, and Health system, identifying effective elements and using suitable training such as training programs for enhancing mental

health and using effective psychological treatments along with common therapies could help the prevention, prognosis, and recovery. According to the biopsychosocial models which underline the state of being ill as a process of complicated interaction among biological, psychological and social variables, pain exerts multidimensional effects on patient's life; and effective adaptation requires compliance of all aspects of life with pain experience. Therefore, change in psychological factors accompanied in pain experience can decrease limiting effects of pain in patient's life. Finally, limitations of the population and type of research bring up some restrictions in the generalization of the findings and causal interpretation of the relationship between the variables. Since this research has used inventories and short non-structured interview, using structured interviews in future studies is suggested. Also, since the population of the study was Tehran firefighters, it is suggested that, future studies examine other populations. One should be careful in the generalization of the results, because the participants in this study were firefighters. It is suggested to use common treatments as cognitive-behavioral, psychotherapy and other psychological treatments the effect of psychological functions on chronic pain disorder severity, in order to deepen the understanding of the issue.

REFERENCES

Asghari A, Karami B, Rezai S, 2002. The prevalence of pain and chronic pain in both Elam and Qorveh.Journal of Psychology. 6: 30-5.

Asghari A, Karim M N, Amarlou P, 2006. The role of beliefs about pain on coping with cancer pain.DaneshvarRaftar. 13: 1-22.

Benjamin J, Morasco Travis I, Lovejoy M L, Dennis C, Turk L L, Steven K D, 2013. The relationship between PTSD and chronic pain: Mediating role of coping strategies and depression. PAIN. 154(4): 609-616.

Billings AG, Moos R H, 1981.The role of coping responses and social; resources in attenuating the stress of life events.Journal of Behavioral Medicine.4: 139-157.

Carroll L, Mercado AC, Cassidy JD, Cjte P A, 2002. A population based study of factors associated with combinations of active and passive coping with neck and low back pain. J Rehabil Med. 34(2): 67-72.

DeGood DE, Tait R C, 2001. Assessment of pain beliefs and pain coping. In: Turk DC, Melzack R (Eds.) Handbook of pain Assessment, Second Edition (pp. 320-345), New York: Guilford Press.

Dick D B, Rashiq S, 2008. Chronic low back pain: Review of treatment and standards. J Behave Anal Health Sports Fit Med. 1: 19-25.

Domingues R, Cezar P, SchmidtFilho J, De Moraes Filho M, Pinheiro M, Marchiori J, et al. 2009. Prevalence and impact of headache and migraine among Brazilian Tupiniquim Natives. Arq Neuropsiquiatr. 67(2):413-415.

Forman E M, Herbert J D, Moitra E, Yeomans P D, Geler P A, 2007. A randomized controlled effectiveness trial of acceptance and commitment therapy and cognitive therapy for anxiety and depression.Behaviour Modification. 31: 772-799.

Golchin N, Janbozorgy M, Alipour A, Agah-Heris M, 2011. TheEffectiveness of cognitive-behavioral therapy with Interference coping strategies in women with chronic low back pain.Quarterly of Mental Health.50(9).

Hill RW, Huelsman TJ, Furr RM, Kibler J, Vicente BB, Kennedy C A. 2004. New measure of perfectionism: The Perfectionism Inventory. J Peres Assess. 82(1): 80-91.

Iman A, Nuwayhid1 WS, Jeffrey V J, 1993. Work Activities and the Onset of First-Time Low Back Pain among New York City Fire Fighters. Am. J. Epidemiol. 137(5): 539-548.

Lazarus R S, Folkman. 1984. Coping and adaptation In W. D. Gentry (Ed.), Hand book behavioral medicine (pp: 87-116). New York: Guilford press.

Mohammadi S, Dehghani M, Heidari M, SedaghtM, Khatibi A, 2013. Explore Psychological similarities in patients with chronic pain and pain associated with muscle - Bones and their spouses. Journal of Behavioral Sciences.23(57).

PooladieReyshahri A, 2006.Psychology of Pain. Tehran: NasleNoandishe.

Jamshidi H, JariHussain M, HaghighatSh, Razmi M R, 2009.Validation of a new measure of perfectionism.Journal of Behavioral Sciences.3(1).

RabaniBavojdan M, RabaniBavojdan M, Nickazin A,Kaviani N, KhezrimoghadamA, 2012. The relationship between self-efficacy and metacognitive with coping strategies inMen who are addicted to drugs. . Journal of Applied Psychology. 6(3): 102-85.

Savari K, 2012. The relationship between mental health, life satisfaction and perfectionism patients with migraine.Quarterly Knowledge and Health.8(1).

Slade PD, Owens R G, 1998.A dual process model of perfectionism based on reinforcement theory.Behavior Modification.22: 372-9.

Turk D C, Meichenbaum D, Genest M, 1983. Pain and Behavioral Medicine: A Cognitive-Behavioral perspective. New York: Guilford press.

Turk DC, Monaarch E S, 2002.Biopsychsocial perspective on chronic pain. In: DC, Turk and RJ, Gatchel, Eds, psychological Approaches to pain Management, Second edition new. Pp. 3-29. York: Guilford.

Turner JA, Jensen MP, Romano J M, 2000. Do beliefs, coping, and catastrophizing independently predictfunctioning in patients with chronic pain? Pain. 85: 115-125.

Vlaeyen J, Crombez G, Goubert L, 2007. The psychology of chronic pain and its management.Phys Ther Rev. 12: 179-88.

Williams D A, Thorn B E, 1986. Can research methodology affect treatment outcome? A comparison of two cold press or test paradigms.Cognitive Therapy and research, 10, 539 – 546.

Williams D A, Thorn B E, 1989.An empirical assessment of pain beliefs.Pain. 36: 351 – 358.