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The comparison of life events and self-efficacy between outpatients and patients suffering from chronic pains

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Abstract: Several researchers had pointed out psychological events to be risk factors for the development of chronic pain. Life events stress and negative emotions had been found to play an important role in pain disorders.(Francis, Timothy ,Lyncy et al.,2001;Ghosh & Puja,2004).
The findings from several studies demonstrated that beliefs of self-efficacy were correlated to adjustment with chronic pain and explained the different aspects of experiencing the pain(Pecukonis,2009.Nicholas,2007).
The purpose of the study was to compared of life events and self-efficacy between outpatients and patients suffering from chronic pains. 70 Patients with chronic pains and 70 outpatients referring clinic of Imam Khomeini Hospital in Uremia city were selected randomly and were asked to fill out the West Haven Yale multidimensional Pain inventory (WHYMPI), Paykelinventory of life events and coping Self-Efficacy Scale.
The major finding showed there was positive and meaningful correlation between daily activities and self-efficacy and also the experience of pain and life events. It was also found that life events and self-efficacy are able to predict the multiple dimensions of pain in outpatients and patients suffering from chronic pains.
Key words: chronic pain, life events, self-Efficacy.

Introduction

International Association for the Study of Pain (IASP) interprets Pain as an unpleasant personal emotional or intuitive experience which was in relation with real or potential injury. The experience of pain consists of intuitive and sentimental dimensions. The intuitive dimension of pain represents the intensity of pain and its sentimental dimension represents the rate of individual's discontent about experiencing the pain (Turk & Okifuji, 2002, Turk& Monarch, 2006).

According to time duration the pain was divided into Acute Pain and Chronic Pain. Acute pain was usually resulted from a disease or injury and lasts less than three months. Chronic pain lasts at least three months and can be accompanied with texture injury or reappeared after a while. Chronic pain influences different aspects of individual's life such as emotional performance, inter-individuality, Occupation and physics and imposes high expenses upon society and health care System (Turk &Okifuji, 2002, Turk& Monarch, 2006).

Studies carried out in Iran had reported that the infection of ongoing chronic pain in adult population (age between 18-65 years) were around 9 up to 21 percent. (Ghaffari,Alipour,Jensen, Farshad, Vingard ,2006).

Previously, researchers suggested numerous negative events of life were in relation with chronic pain (Turk, Kerens, Rosenberg, 1992). This problem of life-event happenings in females to be more in comparison with males has not been supported but it seems some events are different in males and females according to importance. For instance, Kendler, Thornton, Prescott, Gender (2001) demonstrated that males react more to divorce and occupational problems and females to disease and death of close-relatives. Some factors such as lack of supportive network, weak confronting skills, pessimism and anxiety result in decrease in individuals'

resistance to tenseness and increase in vulnerability to tension-causing events whereas supportive elements such as efficient confronting guidelines, social support and personality elements like self-efficacy, optimism, psychological skills, tenacity, self-esteem and etc. As personal or environmental resources would reduce the dissatisfaction rate of an evaluated event or threat by reducing the evaluation of threat (Cohen, Doyle, Turner, Alper, Skoner, 2003).

The findings from several studies demonstrated that beliefs of self-efficacy were correlated to adjustment with chronic pain and explains the different aspects of experiencing the pain (Pecukonis, 2009. Nicholas, 2007).

Beliefs of self-efficacy of pain are correlated with levels of functions continuing the activity in spite of pain and utilizing different and efficient confronting guidelines (Turner & et al, 2005).

Higher self-efficacy was also correlated with higher threshold of pain and more power of bearing the pain (Keefe, Lefebver, Maixner, Salley, Caldwell, 1997).

Self-efficacy has been represented as one of the definitions of social learning theory and for the first time it was introduced by Bandura. In 1988, Rosenstock et al. Considered it as an important case for the pattern of hygienic belief especially when the pattern was used for predicting the changes of life style in chronic diseases (Rodgers, Kanfi, 2000).

In pain texture, self-efficacy was defined as the rate of individual's belief in his abilities for preserving the performance in spite of pain (Nicolas, 2007).

The main purpose of this research was to study the life events and self-efficacy in patients suffering from chronic pain and compare them with outpatients.

Methods

The subjects (N=140) were drawn from patients with chronic pain (Orthopedic, Nephrology) and outpatients (Emergency ward) who referred to the clinic of Imam Khomeini Hospital in Uremia city. Criterions for being in the sample were: 1) suffering from chronic pain was confirmed by specialist (more than 6 months from beginning of pain and pain has been continuous daily since 3 months ago, 2) range of age between 18 to 65. and 3) holding education at least high school.

Measures

1. West Haven Yale multidimensional Pain inventory (WHYMPI). This inventory was one of the instruments utilized for identifying biological, mental and social agents of pain (or multiple dimensions of chronic pain) (Branstinand Employees, 1995). This test had 48 items and 12 scales and each question was valued from 0 to 6. This inventory had 3 sections: important dimensions of pain, patient's evaluating and understanding of interest and worry which his/her spouse or especial person of his life shows, patient's evaluating and reporting of routine and normal activities of life.Validity of this inventory was studied in Iran (Mirzamani,2007).
2. Paykel and et al's inventory of life events (1971) principally consists of 69 important events of life and the participant would mark the events which he particularly had experienced since last 2 years or more and then defines mental pressure on himself at the time of happening of the events with grades from 1 to 20. This test was translated into Farsi in 1989 and normalized over a group of university students and employees (Mohajer and Employees, 1989)
3. Scale of self-efficacy of confronting with problems in 2006 was made by Chesney and et al. For evaluating the self-efficiency of individual's methods of confronting with problems. This scale was a test with 26 phrases in which the participant was asked to define how much he was able to do the mentioned affairs in the case of confronting with problems in an eleven-degree Likert scale (from 0=I can never cope with that up to 10=I am sure I can cope with it).

Results

140 male and female participants collaborated with this research who were classified into two groups of patients suffering from chronic pain and outpatients and in each group there were 35 males and 35 females. The range of age was from 18 to 64.

In males there were 25 patients (%17.9) with muscle-bone pain and 10 patients (7/1) with kidney pain and in female group there were 21 patients (15) with muscle-bone pain and 14 patients(10) with kidney pain.

Table 1: Comparisons between self-efficacy and life events in two groups

Variable	Group	n	M	t	df	Sig.
Self-Efficacy	With chronic pain	69	153.22	2.17	126.56	0.03
	Outpatients	70	135.53			
Life-Events	With chronic pain	70	213.57	1.63	137	0.11
	Outpatients	69	185.04			

According to Table. 1, it can be concluded that due to ($p<0.05$), with 95% certainty there was difference between the average variable of self-efficiency in individuals suffering from chronic pain and outpatients. But there was no difference between average variable of life-events in individuals suffering from chronic pain and outpatients.

Table. 2: Correlation coefficient among dimensions of pain and self- efficacy

Variable	n	Correlation Coefficient	Significance Level
Experience of pain	69	0.22	0.06
Important person in life	69	0.08	0.52
Daily activity	69	0.31	0.01**
Multidimensional pain (Total)	69	0.34	0.004**

** Correlation at significance level P<0.01 in both domains

According to Table. 2, the correlation coefficients between variables of daily activities (0.31) and multidimensional pain (Total) (0.34) and self-efficiency were meaningful at the level of P<0.01 and this means that with 99% certainty, variables of multidimensional pain (Total) and daily activity were in relation with self-efficacy.

The orientation of this relation was direct and positive and demonstrated that with increase in any of the variables of multidimensional pain (Total) and daily activity, the value of self-efficacy increases too and vice versa. The findings from table.2 demonstrated that correlation coefficients between variables of pain experiencing (0.22) and important person in life (0.08) were not meaningful with the variable of self-efficacy ($p>0.05$) and this means there was no relation between these variables and self-efficacy.

Table. 3) Correlation coefficient among dimensions of pain and life events

Variable	n	Correlation Coefficient	Significance Level
Experience of pain	69	0.33	0.006**
Important person in life	69	0.07	0.53
Daily activity	69	-0.07	0.53
Multidimensional pain (Total)	69	0.22	0.07

** Correlation at significance level 0.01 in both domains r=0.33

According to Table. 3, correlation coefficients between experience of pain (0.33) and variables of life events were meaningful at p<0.01 and this means that with 99% certainty, there was relation between experience of pain and life events. The orientation of this relation was direct and positive and demonstrated that with increase in rate of life events, the value of experience of pain increases too and vice versa.

The results from Table. 3 demonstrates that correlation coefficients between important person in life (0.07), daily activity (-0.07), multidimensional pain (Total) (0.22) and life events are not meaningful (p<0.05) and this means there was no relation between these variables and variable of life events.

Table. 4) Results of hierarchical regression analyses predicting the dimensions of pain in individuals suffering from chronic pain

Model (Step)	Predictor Variables	R	R^2	R^2_{adj}	Std. Error of the Estimate	B	Std. Error	Beta	t	Sig.
1	Self-Efficacy	0.34	0.12	0.11	3.94	0.21	0.07	0.34	2.96	0.004
2	Self-Efficacy	0.44	0.19	0.17	29.81	0.23	0.07	0.38	3.42	0.001
	Life Events					0.08	0.03	0.28	2.48	0.01

Criterion variable: Multiple dimensions of pain

Having confirmed the primary defaults regarding doing the regression, Multiple Linear Regression was used in step-by-step method for predicting the criterion variable according to predictor variables.

Results demonstrated that the first model (first step) in which only the variable of self-efficacy was inserted, the value of correlation coefficient was 0.34 and regulated coefficient of determination was 0.11 which means approximately 11 percent of variable variance of chronic pain was addressed by predictor variable of self-efficacy.

In the second and final model (second step) of regression equation, by adding the variable of life events into the model, the correlation coefficient increases to 0.44 and regulated coefficient of determination promotes to 0.17. This means that about 17 percent of variable variance of pain was addressed by predictor variables of self-efficacy and life events.

According to the values of t and sig, it can be concluded that all models of regression being studied are meaningful. Also, it was observed that in model 2, variable of "self-efficacy" with Beta coefficient of 0.38 at the rate of (p<0.01) had a positive and meaningful relation with "chronic pain". This means the share of variable of self-efficacy in predicting the variable of chronic pain in 0.38 and similarly variable of "life events" with Beta coefficient of 0.28 at the rate of (p<0.01)had a positive and meaningful relation with "chronic pain". This means the share of variable of life events in predicting the variable of chronic pain in 0.28.

Hence, according to the results from multiple regression analysis in step-by-step method it can be concluded that predicting variables (self-efficacy and life events) address (predict) approximately 17 percent of criterion variance of the variable (chronic pain). Also variables of self-efficacy and life events have the most influential role and importance in predicting the variable of chronic pain respectively.

Discussion

The purpose of current study was to compare life events and self-efficiency between patients suffering from chronic pain and outpatients. The results of this study demonstrated that the days of interruption in daily activities for individuals with more self-efficiency beliefs was less. These findings were favorable with

previous research which referred to the role of self-efficacy in more successful adjustment with pain (Nicolas, 2007).

As Cioffi (1991) mentioned, when self-efficacy individuals have ability to disconnect their attention from physical feeling (pain) and doing their daily activity, they have success adjustment with pain. In other words, they would not ignored physical feeling (pain), but they interpret new meaning of their physical feeling.

The conceptual biological-mental-social model of chronic pain as a multidimensional model had been replaced with a simplistic model of pain with physical origination. In this model, psychological and social elements are considered as the factors which are related to the procedure of pain feeing indirectly. As pain gets more chronic, the role of psychological and social elements in aggravating the pain and its continuation in comparison with the role of biological elements becomes more conspicuous (Turk ,1996).

In brief, the results of research demonstrated that life events and self-efficacy were able to predict multiple dimensions of pain in individuals suffering from chronic pain. Based on this, two categories of practical and theoretical consequences of this research can be addressed. At the level of theoretical consequences, the findings from this research could increase the psychological knowledge in field of influential elements in generation of physical diseases and their continuation.

At the level of practical consequences, considering the duration and costliness of treatment for the patient, the society and hygiene and treatment system could contribute to predict, improve and prevent from these diseases by identifying the influential factors and utilizing appropriate educational affairs such as preparing training programs for raising the level of mental hygiene and applying effective psychological treatments together with common and traditional treatment.

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