



Prevalence of Chronic Pain and Its Association with Depression in Adult Patients Referring to Health Centers in Yazd

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ABSTRACT

Aims CP (Chronic pain) is a common problem that substantially impairs physical and psychological health and economic well-being. The aim of the present study was to determine the prevalence of chronic pain and its association with depression in over 30-years-old clients referring to health centers.

Instruments & Methods This descriptive study was conducted among 397 people from April to August 2015. The participants were the adults who came to governmental health centers in the province. These health centers were selected based on random sampling. Two health centers were located in Yazd and 4 were in the provincial cities DASS-21 (Depression, Anxiety, and Stress Scale) was used to measure depression and VAS (Visual Analog Scale) was used to measure chronic pain. Six psychologists with a master's degree collected the data. The results were analyzed using Chi-square test by SPSS 23 software.

Findings The prevalence of chronic pain was 66.8%. The highest prevalence of knee pain was 41.3%. The prevalence of depression was 67.5%. The relationship between chronic pain as an independent variable and dependent variable depression was significant ($p=0.029$).

Conclusion The prevalence of patients with chronic pain is 66.8%, and the prevalence of depression is reported 67.5%. There is a relationship between chronic pain and depression.

Keywords Chronic Pain; Depression; Adults

CITATION LINKS

[1] Prevalence and correlates of suicidal thoughts and suicide attempts in people prescribed pharmaceutical opioids for ... [2] Chronic pain in the Japanese community-prevalence, characteristics and impact on ... [3] Relationship between depression and coping strategies in chronic back ... [4] Ethnic differences in the association between depression and chronic pain: Cross sectional ... [5] Depression and pain comorbidity: A literature ... [6] Chronic pain and comorbid mental health conditions: Independent associations of posttraumatic stress disorder and depression with pain, disability, and ... [7] Association of traumatic brain injury with chronic pain in Iraq and Afghanistan veterans: Impact of comorbid mental health ... [8] The relationship between chronic pain, social support, and depression in ... [9] Pilot feasibility study of a brief, tailored mobile health intervention for depression among patients ... [10] Understanding the link between depression and ... [11] Longitudinal associations between depression, anxiety, pain, and pain-related disability in chronic pain ... [12] Observing the effects of mindfulness-based meditation on anxiety and depression in chronic pain ... [13] The effectiveness of acceptance and commitment therapy (ACT) on the rate of chronic pain and pain catastrophizing in women with chronic low ... [14] The roles of pain coping strategies in adjustment to chronic ... [15] Comparing the role of psychological ... [16] Validation of depression anxiety and stress scale (DASS-21) for an ... [17] The depression anxiety stress scales (DASS): Normative data and latent structure in a large ... [18] Effects of music therapy on anxiety, stress and depression of patients undergoing ... [19] Correlation between visual analogue scale and short form of McGill questionnaire in patients with chronic low ... [20] Chronic pain, depression, and quality of life: Correlations and predictive value of ... [21] Depression: An important factor associated with disability among patients with chronic low ... [22] Comorbidity of chronic pain & depression and its treatment ... [23] Self-reported depression, anxiety and evaluation of own pain in clinical sample of patients with different location ... [24] Exploring the relationship between spirituality, coping, and ... [25] Integrating psychosocial and behavioral interventions to achieve optimal rehabilitation ...

Introduction

Chronic pain (CP) is recognized as a public health problem that affects the general population physically, psychologically, and socially [1, 2]. CP is a common problem that substantially impairs physical and psychological health and economic well-being [2]. The prevalence of depression is higher in people with CP than in society [3]. The prevalence of chronic pain was 40% and the incidence rate of chronic depression and chronic pain was 11% in England at the same time [4]. The incidence of pain in depressed patients at different time rates ranged from 15% to 100% (mean prevalence, 65%) [5].

Many studies have shown that chronic pain is associated with depression [6, 7]. Chronic pain has been predictive of depression [8]. In a study, for more than half of the patients, chronic pain was a positive result of screening for depression [9, 10].

In other studies, depression had an impact on the severity of chronic pain [10, 11]. The concurrence of these 2 diseases has been confirmed in some studies [4]. Cognitive-behavioral interventions have been effective in patients with chronic pain and depression [9].

Cognitive interventions such as mindfulness, acceptance, and commitment lead to better recovery in these patients [12, 13].

Many studies in the field of chronic pain showed that the high prevalence of psychological factors (anger, depression, and anxiety) is related to the perception and attitude of the sufferer towards pain, coping strategies, and environmental, social, and cultural behaviors. In sum, the process of adjustment of people with chronic pain and how it responds to it has a major role [14].

Cognitive distortions, such as catastrophic disorder, feelings of helplessness, how patients evaluate pain, how they control it, how to interpret patients from the pain and its outcome, and generally the cognitive system, and beliefs associated with pain with depression [15]. The importance of this issue in the prevention and treatment of these two diseases, which affects one another, is felt.

Therefore, in order to determine the effects of these two diseases on each other, this study was conducted to with the aim of determining

the prevalence of chronic pain and its association with depression in over 30-years-old clients referring to health centers.

Instrument and Methods

This descriptive cross sectional study was conducted from April to August 2015. The calculation of the sample size was calculated based on the statistic formula. The samples were determined 382, and 400 samples were considered reliable. Three incomplete questionnaires were deleted. The participants were the adults who came to governmental health centers in Fars province. These health centers were selected based on random sampling. Two health centers were located in Yazd and 4 were in the provincial cities.

Standard DASS-21 (Depression, Anxiety, and Stress Scale) was used to obtain depression and VAS (Visual Analog Scale) was used to measure chronic pain.

The DASS-21 was prepared in 1995 by Lawebond and Lawebond. This scale has 2 forms. The short form has 21 terms; psychological structure evaluates "depression", "anxiety", and "stress" by 7 different phrases. Its long form consists of 42 sentences, measuring each of the 14 phrases. A short form of 21 phrases was validated for the Iranian population [16]. Crawford and Henry in a sample of 1,771 people in England compared this tool with 2 other tools for depression and anxiety, and compared it with Cronbach's alpha for 0.95 anxiety, 0.90 depression, and 0.97 for total scores [17]. In Iran, the reliability of the research (Cronbach's alpha) was 0.94 in depression, 0.92 in anxiety, and 0.82 in stress [18]. The DASS-21 has the ability to diagnose and test signs of anxiety, depression, and stress during the past week. The scale is applicable for adults.

The pain measurement questionnaire is the most widely used pain measurement tool in the world. In addition to its reliability and validity, its advantage is its simplicity. This questionnaire is a 10-degree scale, with the left side of the zero number, indicating no pain and the right side of the 10 represents the most severe pain [19].

The data were collected by 6 psychologists with master's degree. The volunteer and free-

of-charge clients completed the questionnaire, and those who were depressed at this scale were advised to go to the psychiatrist.

The results were analyzed using Chi-square test by SPSS 23 software.

Findings

A total of 397 people participated in the study. The mean age of participants were 61.52 ± 11.52 , ranging between 31 and 87 years. Among the participants, 70.3% were female and 29.7% were male. Among the participants, 75.3% were married, 21.2% were those whose wives had died, and 3.5% were single. No case of divorce was reported. The place of residence was 77.3% in the city and 22.7% in the village. Most of the occupations were housewives (Table 1).

Table 1) Demographic characteristics of studied participants (N=397).

Variables	Number	Percent
Job		
Housewife	272	68.5
Employed	18	4.5
Self-employed	33	8.5
farmer	31	7.8
Retired	43	10.8
Literacy		
Illiterate	189	47.6
Primary school	167	42.1
High school	28	7.1
Collegiate	13	3.3
Gender		
Female	279	70.3
Male	118	29.7
Marital status		
Single	14	3.5
Married	299	75.3
Widow	84	21.2
Location of residency		
City	307	77.3
Village	90	22.7

The prevalence of chronic pain in patients referring to health centers showed that 66.8% have chronic pain. The highest incidence of knee pain in 164 cases (41.3%) was reported (Table 2).

132 people were normal for depression (33.2%), and the rest of the 265 patients (66.8%) had a mild to severe depression (Table 3).

The relationship between chronic pain as an independent variable and dependent variable depression was significant ($p=0.029$).

Table 2) Frequency of different chronic pain in studied participants (N=397).

Variables	Number	Percent
Chronic pain		
Yes	295	74.0
No	102	26.0
Headache		
Yes	41	10.3
No	356	89.7
Neck pain		
Yes	30	7.6
No	367	92.4
Shoulder pain		
Yes	30	7.6
No	367	92.4
Hand pain		
Yes	49	12.3
No	348	87.7
Low back pain		
Yes	49	12.3
No	348	87.7
Abdomen pain		
Yes	7	1.8
No	390	98.2
Hip pain		
Yes	13	3.3
No	384	96.7
Knee pain		
Yes	164	41.3
No	233	58.7

Table 3) Frequency of depression among studied patients health centers (N=397).

Depression rate	Number	Percent
No depression	132	33.2
Mild depression	73	18.4
Moderate depression	106	26.7
Severe depression	51	12.8
Very severe depression	35	8.8

Discussion

The aim of this study was to determine the prevalence of chronic pain and its relationship with depression in adult patients in health centers in Fars province. The results of this study showed that the prevalence of patients with chronic pain was 66.8%. The prevalence of depression was reported 67.5%. Although the relationship between these 2 diseases is two-way, in this study, the relationship between chronic pain as an independent variable and dependent variable depression was significant. The significance of these 2 diseases is very high in terms of which one causes another.

In various studies, the prevalence of these 2 diseases has been reported high. In 2003, the prevalence of major depressive disorder in patients with chronic pain was 52% [20]. But,

in this study, a higher prevalence was found. The 2 diseases are debilitating. The World Health Organization has remarked that depression will be the second illness to be disabled by 2020. On the other hand, disability is higher in patients with chronic low back pain and depression [21].

For the causal relationship between chronic pain and depression, 5 main hypotheses have been raised: first, the "hypothesis", in which chronic depression has occurred, the second is the "hypothesis of the outcome," that depression is the result of chronic pain. The third hypothesis "label hypothesis" is that when a depression occurs, a person is prone to chronic pain. The fourth hypothesis is "cognitive mediation", in which psychological factors, such as weak coping strategies, have a cross-correlation between depression and chronic pain. The fifth hypothesis is "independent hypothesis", in which depression and chronic pain are shared by some mechanisms and are both separate diseases [22].

In a study, 63% of depression and 54% of anxiety were found in patients with chronic pain and the highest level of depression and anxiety for back pain and lowest for headache [23]. But, in this study, knee pain was the most common pains (41.3%) and the lowest pain was abdominal pain (1.8%). This study does not investigate race; racial differences can be meaningful in terms of psychological, social, and cultural characteristics. In a study conducted in Japanese and American patients with low back pain, significant differences were found between race and psychological and social components [24].

A person's cognitive characteristics can also be a predictor of depression in patients with chronic pain. People with negative thinking and generally catastrophic thoughts are susceptible to the treatment of their illnesses and those suffering from diseases; including chronic pain were less likely to be improved in due time through usual treatment. The catastrophe in people who have a sense of pain involves magnification and fear, and is followed by behavioral thoughts that avoid movement and activity. The results of the catastrophic thoughts show that catastrophic thoughts are associated with 40% of depression [25].

The limitation of the present study was the self-report signs of depression. Another limitation of the study was that some of the individuals identified as severe depression required the psychiatrist to confirm their depression.

Although this study has some strong points, some limitations such as self reporting of pain and depression by the patients may interfere the results of the study. Furthermore, this study is a cross sectional research which could not find the certain relationship between chronic pain and depression.

Conclusion

The majority of the patients are suffering from chronic pain accompanied with depression and chronic pain and depression are related to each other.

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