The Relationships Between Pain Perception and Quality of Life in Addicts

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How to cite this article

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ABSTRACT

Aim: Pain in addicts is a physiological and psychological variable that can affect Quality of Life (QOL). The purpose of this study was to investigate the relationships between pain perception and (QOL) in addicts.
Method and Instrument: This study has a descriptive – correlational method. In this cross-sectional study 100 addicts who were referred to addiction treatment centers and aged between 20 and 55 years old were studied. The sample was selected by purposive sampling method. They completed the WHO-QOL scale and McGill pain questionnaire. To test the hypotheses, Pearson correlation & multiple regression tests were used. Data were analyzed by SPSS-22.
Findings: The results of this study showed that there is a significant relationship between pain and QOL in addicts. According to the results of this study, 18.1% of the variance in QOL variables were explained by pain.
Conclusion: To conclude, it seems that addicts who percept more severe pain percept lower QOL. Therefore, it is possible to predict the QOL of addicts through their pain severity perception.

Keywords: Pain Perception, Quality of Life(QOL), Addicts.

Introduction

Pain is an unpleasant sensory and emotional experience with actual tissue damage or damage to other kind of tissue [1]. In medical diagnosis, pain is considered as a symptom of an underlying situation [2]. Pain is created by stimulation of the peripheral or central nervous system[3]. Most pain resolves immediately after removing the painful stimulus or body heal, but sometimes it persists despite the removal of the stimuli and the physical appearance of the body, and sometimes due to lack of recognizable conditions, injury or pathology, the pain increases [4].

Pain is an important symptom and is significantly related to a person's Quality Of Life (QOL) and overall performance [5]. Quality of life is a highly subjective measure of happiness that is an important component of many financial decisions [6]. The term (QOL) There is still no precise definition of QOL because this concept is very broad and has a different definition from time to time or place to place [7]. But some standard indicators of life such as income, educational and employment status, healthcare, etc. affect the QOL [8].

Two important reasons that indicate the relationship between QOL and pain are related to the significant relationship between these two variables and another factor that is more important than the first factor is related to the category of physical and psychological therapies treatment of pain[9]. Many studies have examined the relationships between pain & QOL in clinical/ non-clinical samples.

In a study on the QOL of chronic patients, the results showed that in addition to personality factors, pain is an important

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factor that reduces the QOL of patients[10]. Another study found that the dimensions of QOL were affected by chronic pain [9]. In a study researchers showed that physical and psychological pain treatment increased the QOL in patients suffering from chronic pain [11]. Results of previous studies showed the multidimensional negative impact of chronic pain leads to poorer QOL among patients with chronic pain [12, 13].

In recent years, interest in assessing the relationship between pain and QOL in addicts has been increased. Moreover, improving the daily functioning and QOL of addicts with different types of pain has become a goal to withdraw among addicts. There is an interrelationship between pain and QOL, and tendency to addiction and physical symptoms have a direct effect on all aspects of QOL[14]. On the other hand, the QOL and its components affect the addiction and its treatment. Accordingly, a study on adolescents showed that reducing their QOL has led to addiction and vice versa [15].

A previous study showed physical and mental of Health-Related Quality Of Life (HRQOL) between addicts and healthy people differed significantl [16]. On the other hand, pain is an important factor of QOL among addicts. For example, existed evidences have shown that reducing pain in addicts could lead to increasing their QOL [17, 18].

However, according to literature review, various studies have been conducted in different countries to determine the reason for the decrease in the QOL of addicts or that a low QOL may lead to addiction. It seems in Iran and other countries, studies in this field have often been conducted on different clinical and non-clinical samples as addicts and researchers have not found a link between the pain and QOL in addicts. Therefore, according to these reasons, the purpose of this study was to investigate the relationships between pain perception & QOL in addicts.

Method and Instruments
This study was a descriptive – correlational cross-sectional study in which 100 Addicts who were referred to addiction treatment centers(and aged between20 and 55 yearsOld) were studied. The statistical population of this study was selected through purposive method. In this study the following questionnaire were used to collect data.

Instruments
Demographic questionnaire that includes gender, age, the duration of drug use, and so on.
McGill Pain Questionnaire (MPQ): The McGill Pain Questionnaire is the most widely used standard tool for measuring chronic pain. This questionnaire was developed by Malzak in 1997. It assesses both quality and intensity of subjective pain. In different countries, the validation of this questionnaire has been performed on different patients, such as cancer patients, patients with musculoskeletal pain. This questionnaire has 20 phrases that aim to measure people's perception of pain from different dimensions. Its four subscales are pain descriptors (questions from 1 to 10), affective components of pain (questions from11 to 15, evaluation of pain question 16, miscellaneous) questions from 17 to 20. Scores are tabulated by summing values associated with each word; scores range from 0 (no pain) to 78 (severe pain). Qualitative differences in pain may be reflected in respondent's word choice [19]. Ferraz, et al (1990) reported test-retest reliability [20] .Lung et al reported concurrent validity as number of words chosen predicted by using standardized regression coefficients [21].**WHO-quality of life scale (brief form):** This questionnaire was developed by the World Health Organization in 1999[22]. There are 26 questions for the QOL and two

general questions. This questionnaire deals with four dimensions of people's QOL, which are: 1- physical health, 2- mental health, 3- environment health & 4- Social health. For each dimension, a score from 1 to 5 is considered. Therefore, the scores of physical health dimension are between 7 and 35, mental health dimension is between 6 and 30, social relationship dimension is between 2 and 10, and finally the living environment dimension is between 8 and 40. This questionnaire has been translated into Persian by Nejat et al. (2006) used the simultaneous validity method to determine the validity of this questionnaire. The relationship between the total score of the test and the score of the subjects in the subscales of the present questionnaire was measured by the total score and the subscales of the general health questionnaire through the correlation coefficient [23]. The reliability and validity of the general health questionnaire calculated by Nejat et al. (2008) has been reported at the desired level [24].

Data were analyzed by using SPSS 22. To test the hypotheses, in addition to descriptive statistics such as Mean and Standard Deviation, Pearson correlation and multiple regressionswere used. In this study, all ethical principles are respected. All participants were satisfied to be studied and signed the consent form. In this study all ethical principals were considered. Therefore, the aim and procedures of the research have been explained for the participants and all of them signed the consent form.

Findings

In this study 100 addicts including 92 men and 8 women with mean age of 28.34 years old (SD=3.27) The mean and standard deviation of addicts' response to research variables are given in Table 1.

To test sub-hypotheses of the research, using the Pearson correlation coefficient method, the correlation between predictor (pain) and

criterion variables (quality of life) was first evaluated and the coefficients obtained shows in Table 2. As the result, there is significant relationship between the variables of pain & QOL components (Table 2).

To test the main and specific hypotheses of the research, that is, predicting QOL based on pain, multiple regression analysis was used and the results showed that the obtained R^2 value (0.181) means that 18.1% of variance of QOL is explained by pain. In other words, 18.1% of the observed dispersion in the QOL variable is explained by the variable of pain. The observed R value (0.27) also indicates that the linear regression model can be used for prediction. In addition, the calculated F ratio (12.32) is significant at a confidence level of 99%. Therefore, it can be concluded that there is a significant correlation between the variable studied and the QOL variable. As a result, evidence is sufficient to accept the main hypothesis of the research. By referring to t statistics and meaningful levels, it can be concluded that both variable of pain with QOL variable have a significant correlation. The sign of β coefficients showed that pain has a positive and significant correlation with QOL. Finally, according to these explanations and coefficients, the regression equation can be calculated based on the not standardized regression coefficients (Table 3)

Discussion

The purpose of this study was to investigate the relationship between pain and QOL of addicts, and accordingly predict the QOL of this target group by pain. The results of this study showed that there was a significant correlation between the dimensions of pain and dimensions of QOL. This finding is consistent with the previous studies [10-12]. All these studies on different samples showed that pain is related to QOL and chronic pain reduces the QOL. Therefore, the evidence is sufficient for this assumption.

Table 1) Summary of statistical indicators related to participants' scores in variables (N = 100)

Variables	Components	Mean	Standard deviation
Pain	Pain descriptors	7.26	0.06
	Affective components of pain	3.67	1.09
	Evaluation of pain	11.16	2.20
	Miscellaneous	18.38	1.82
	Total score	40.47	5.17
Quality of Life	Physical health	8.89	1.26
	Mental health	10.13	1.85
	Living environment	5.91	0.82
	Social relationships	8.23	2.46
	Total score	33.16	6.39

Table 2) Summary of Pearson correlation coefficient test results among variables (N = 100)

Variables	Quality of life				
Components	Physical health	Mental health	Social relationships	Living environment	Total score
	R	R	R	r	R
Pain descriptors	0.317**	0.250**	0.275**	0.280**	0.359**
Affective components of pain	0.274**	0.422**	0.297**	0.397**	0.465**
Evaluation of pain	0.381**	0.302**	0.171*	0.248**	0.370**
Miscellaneous	0.259**	0.320**	-0.002	0.136	0.265**
Total pain score	0.265**	0.360**	0.160*	0.179*	0.331**

* Significant at the level of 0.05   **Significant at the level of 0.01

Table 3) Summary of regression analysis for predicting quality of life based on pain (N = 100)

Predictors	Dependent variable: Quality of life		
	Standardized coefficients	Not standardized coefficients	T	Sig
Constant number		10.03	2.82**	0.001
Pain		0.13	2.543**	0.022

**R= 0.27 ; R^2 = 0.18 ; Adjusted R^2 = 0.17 ; F =12. 32 * Significant at the level of 0.05 **Significant at the level of 0.01

Pain catastrophizing is generally defined as excessive negative orientation towards pain/noxious stimuli [20]. High levels of pain catastrophizing were associated with disability, poor outcomes, and pain severity for patients with different problems [21]. One study found that addicts' QOL was lower than that of normal people [25]. Many studies show that low QOL of addicts and their background pain make their condition worse [26]. As a study showed chronic pain in people addicted to opium mediates the tendency to become addicted [27]. Therefore, pain and addiction tendencies, as a result of which QOL indicators decrease, are a complex and multifactorial problem and it cannot be attributed to a variable. This varies from person to person, from period to period and so on. In different studies, different factors of addiction have been studied. But it is not possible to say for sure that pain is addictive or anyone with chronic pain also has a tendency to become addicted.

Another finding of this study showed that there was predicted QOL dimensions based on pain in addicts. This result is consistent with the study of Rodriguez et al.[13] that the QOL of cancer patients was predicted by their pain and results of Prater et al.[14] that there was a significant relationship between the QOL dimensions, the severity of pain[17]. Moreover, this study verified that management of pain could increase in substance users and so there is a relationship between pain, addiction and psychological symptoms [17]. Therefore, the evidence is sufficient for this assumption.

In addicts, QOL is a determining factor for the amount of misuse, type of substance and continued use of the substance. However, a history of physical (i.e. Pain) and psychological illness (i.e. Low social support) can reduce the QOL of addicts and disrupt the treatment process for addicts [28]. Our finding of worse QOL in addicts with pain is not surprising since people with chronic pain have more different problems. This supports earlier studies showing that health-related QOL is worse in addicts with pain or chronic pain compared to the general population [29]. On the other hand, substance use may relieve pain, especially chronic pain, and this is what people tend to substance use especially opium and its derivatives, and this leads to an undesirable cycle.

Up to now, few studies have focused on the underlying causes of pain in relation to QOL [30]. Moreover, this study is not without limitations, including that this variable has not been investigated in larger samples with different and the sampling method was purposive. Therefore, it is recommended that future studies provide a more comprehensive study with a higher sample size and probabilistic sampling in order to generalized the findings. Finally, teaching addicts how to improve their QOL can help them to drug withdrawal and the pain caused by it. However, this study has just descriptive analytical method and so intervention was not applied for addicts.

Conclusion

To conclude, it seems that addicts who percept more severe pain percept lower QOL. Therefore, it is possible to predict the QOL of addicts through their pain severity perception

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