

THE RELATIONS BETWEEN SELECTED PERSONALITY FEATURES AND SYMPTOMS OF DEPRESSION IN A GROUP WITH MUSCULOSKELETAL CHRONIC PAIN

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ABSTRACT

There is evidence that chronic musculoskeletal pain is associated with personality characteristic and mental problem, although the nature of the relation, especially in terms of cause and effect, is often unclear. Along with the biopsychosocial understanding of the phenomenon of pain in many cases pain cannot be reduced to a simple reaction. The aim of the research was to obtain knowledge concerning the relations between selected personality features, level of anxiety and the symptoms of depression in a group of patients suffering from musculoskeletal chronic pain. The research covered 98 patients qualified to the programme of pain therapy in the Center for Pain Treatment. The Personality Inventory and the data from the documentation (Pain Assessment Card) were applied. On the basis of the obtained data, the relations between selected personality features, effects in chronic pain therapy and the symptoms of depression with the use of the analysis of regression were examined. The research programme was concentrated on creating regressive models that cover the examined variables and allow us to find out which personality factors cause regular changes of symptoms of depression and effects in chronic pain therapy. Personality factors: neuroticism ($B=0.59$) and extraversion ($B=-0.59$) was significant in shaping the level of depression symptoms ($p<0,01$). The correlation between the positive cognitive-behavioural approach and ability to prolonged exercise during pain treatment was observed ($p<0.05$). Neuroticism seems to be potential positive predictor of depressive symptoms occurrence concerning persons suffering from musculoskeletal chronic pain.

Keywords: chronic pain, personality, predictors, contextualization, psychological factor

INTRODUCTION

Due to the overwhelming evidence of the biopsychosocial nature of pain and the value of psychological assessments, the majority of chronic pain guidelines recommend a psychological evaluation as an integral part of the diagnostic workup [1]. A significant issue concerns understanding why although the majority of people with acute musculoskeletal symptoms recover in reasonable time - a significant minority evolve into patients with chronic pain and prolonged pain-related depression. Reliable measures of personality have been found to predict

health. Much research on personality has focused on two broad personality traits: extraversion and neuroticism (also referred to as negative affect and emotional stability). There is also evidence that chronic musculoskeletal pain is associated with personality characteristic and mental problem, although the nature of the relation, especially in terms of cause and effect, is often still unclear[1],[2]. Chronic pain is a complex sensory and emotional experience that varies widely between people depending on the context and meaning of the pain and the psychological state of the person. Chronic musculoskeletal pain, by its very nature, will be associated with many negative emotions and psychological distress. There are individual differences in personality, coping skills, behavioural adaptation, and social support that dramatically alter the psychological outcomes of patients with chronic pain [2],[3].

Many psychological processes have an influence on both the experience of musculoskeletal chronic pain and the treatment outcome. The factors like personality, cognitive interpretation of pain, emotional states, level of activity, of musculoskeletal pain sufferers are very important [4],[5]. A significant issue concerns daily health habits and wide understanding active lifestyle [6],[7],[8],[9]. Along with the biopsychosocial understanding of the phenomenon of pain in many cases pain cannot be reduced to a simple reflexive reaction. There have been many works from health psychology that concern the specific role a personality in chronic pain [3],[4].

Contemporary knowledge makes it obvious that there might be many factors influencing on an chronic musculoskeletal pain illness. Personality features and emotional factors have a surprisingly important influence on musculoskeletal pain perception. The relationship between pain and emotions including pain-related fear is multidimensional[10].

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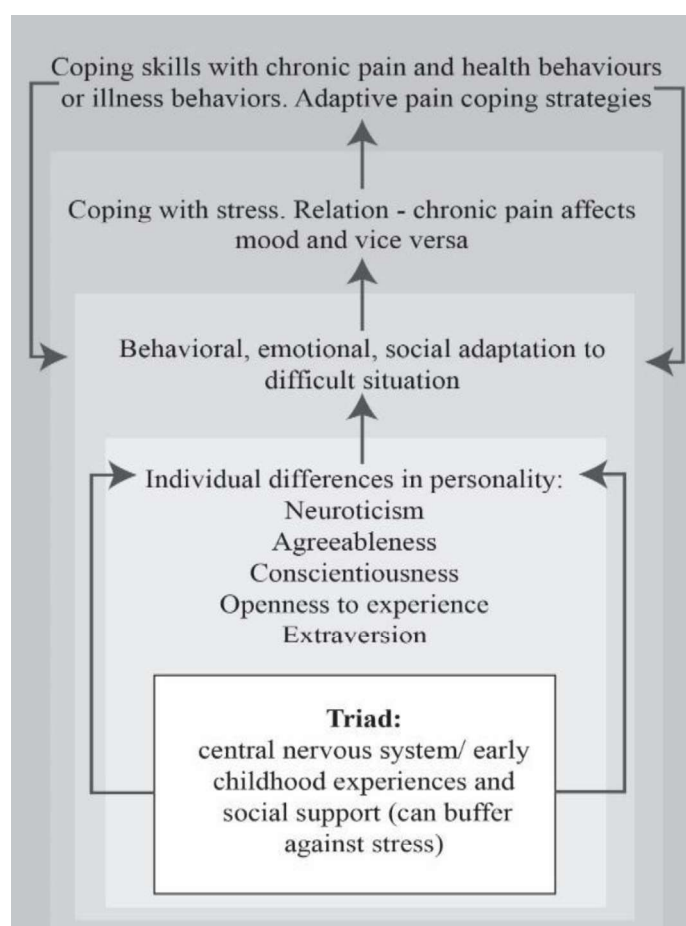


Figure 1. Individual differences in coping with pain according biopsychosocial understanding of the phenomenon of chronic pain. Source: Own elaboration from the model.

Pain perception, together with cognitive-behavioural strategies of coping with pain, are under the influence of one's personality and temporary mediating variables [2],[3]. Anxiety, fear and anger can exacerbate the sensation of pain or can exist as the consequence of chronic pain. Several personality constructs, including neuroticism have been implicated in the onset and progression of

chronic pain, and both constructs have been identified as key targets for multidisciplinary pain treatment[4].

The aim of the our research was to obtain knowledge concerning the relations between selected personality features, level of anxiety and the symptoms of depression in a group of patients suffering from musculoskeletal chronic pain.

MATERIAL AND METHOD

The research covered 98 patients (range: from 26 to 59 years) qualified to the programme of pain therapy in the Center for Pain Treatment (PTC) in Czestochowa, Poland. The Personality Inventory [11] and the data from Pain Assessment Card were applied. On the basis of the obtained data, the relations between selected personality features, effects in chronic pain therapy and the symptoms of depression with the use of the analysis of regression were examined.

RESULTS

On the basis of these studies, it can be carefully confirmed that there is a correlation between in the examined group of patients neuroticism seems to be potential predictor of depressive symptoms occurrence concerning persons suffering from chronic pain (Table 2). The research programme was concentrated on creating regressive models that cover the examined variables and allow us to find out which personality factors cause regular changes of symptoms of depression and effects in chronic pain therapy. Additionally, the correlation between the positive cognitive-behavioural approach and ability to prolonged exercise during pain treatment was observed $r=0.64$, $p<0.05$ (Figure 2).

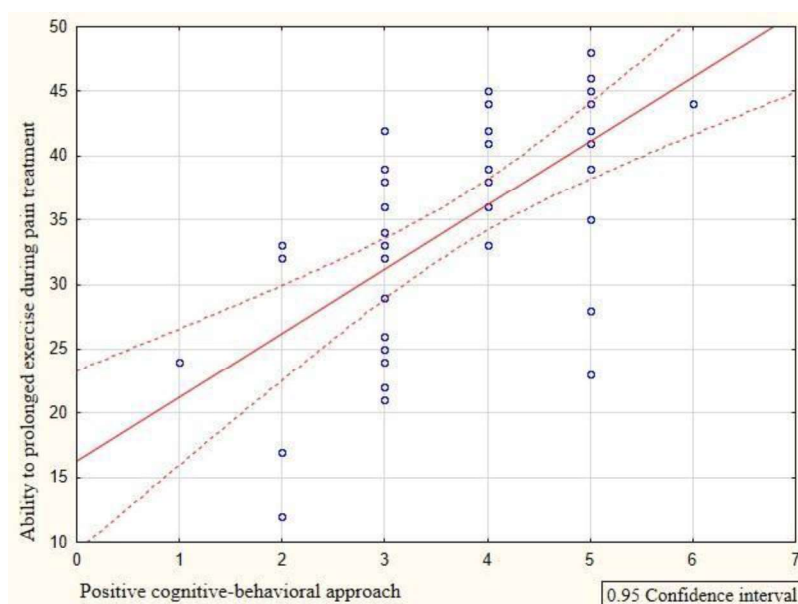


Figure 2. Correlation between the positive cognitive-behavioural approach and ability to prolonged exercise during pain treatment ($r=0.64$, $p<0.05$)

Table 1. Two personality factors statistically significant at patients with musculoskeletal chronic pain, based on the analysis of regression. Statistical validity ($p < 0.01$).

Personality factor	B	p-value
Neuroticism	0.59	0.00
Extraversion	-0.51	0.00

B - Index of predictor participation in shaping the changeability of a dependable variable.

DISCUSSION

Based on the presented research, it can be concluded that in the examined group of patients neuroticism ($B=0.59$) seems to be potential positive predictor of depressive symptoms occurrence concerning patients suffering from chronic pain (Table 1). These results are consistent with prior research indicating that neuroticism negatively affect adaptation to health own situation. Instead, extraversion unlike the neuroticism, play a considerable role in positive adaptation to difficult situation. It can be concluded that in the examined group of patients this psychological factor seems to be potential significant negative predictor ($B=-0.59$) of depressive symptoms occurrence concerning patients suffering from chronic pain (Table 1). The value of the index of correlation between the registered level of anxiety and neuroticism was $r=0.69$ ($p < 0.05$). It corresponds with the research results indicating that, high neuroticism correlates with negative emotions [3],[12]. Following the interpretation of other researchers the results suggest important connections. A cluster of chronic pain patients was identified with a personality profile (high neuroticism, lower extraversion) that reflects a proneness to experience emotional distress, a difficulty for positive emotion, and a tendency to ineffective use of emotional regulation processes rather exhibiting rumination and maladaptive behaviours. The patients with high neuroticism also exhibited more psychosocial problems [3].

The adaptive coper patients report the lower levels of pain and interference, as well as the highest activity levels. Our findings show (Figure 2) that, the positive correlation between the constructive cognitive-behavioural approach and ability to prolonged physical exercise during pain treatment was observed ($r=0.64$, $p < 0.05$). The less adaptive patients report more negative responses to pain [13].

CONCLUSION

The conducted analysis indicates that the relations between selected personality features like neuroticism and extraversion and the symptoms of depression in a group of patients suffering from musculoskeletal chronic pain were observed. Based on the presented research, it can be concluded that in the examined group of patients neuroticism seems to be potential positive predictor of depressive symptoms occurrence concerning patients suffering from chronic

pain ($B= 0.51$). Extraversion seems to be negative predictor of depressive symptoms ($B=- .59$). The positive correlation between the constructive cognitive-behavioural approach and ability to prolonged physical exercise during pain treatment was observed ($r=0.64$, $p<0.05$). We may say that neuroticism of the patients with chronic pain play a considerable role in shaping the automatic thoughts of the patients with musculoskeletal pain.

Some study limitations merit comment. In a future study, it is recommended that more subjects of both sexes be chosen. This was a research design that relied on survey data. Future research designs may benefit from the inclusion of a qualitative wider approach to understanding patients' perceptions. Even then, any conclusions pertaining to the influence of personality features on level of depression would be limited to patients with musculoskeletal pain. As a result of obtaining the data stating the influence of modulation role of personality on psychic condition of persons suffering from chronic pain, the question concerning the range of possible practical influences of psychological and social character that could counteract the depression worsening comes up. Every man tries to deal with it using, among others, different strategies that are more or less adaptive. However, for some people (due to personality) the process of adaptation to this may be more difficult.

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