Original Article

doi: 10.16926/par.2020.08.26

Types of convictions concerning coping with pain of the participants of territory defence activities

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Authors' Contribution: A – Study Design, B – Data Collection, C – Statistical Analysis, D – Manuscript Preparation, E – Funds Collection

Abstract

Introduction: The complexity of physiological, emotional and behavioural reactions is connected with experiencing pain. A few components appear here: sensory, affective, motivational and cognitive. Relatively strongly fixed beliefs, concerning the possibilities of coping with this feeling, make an important cognitive effect in coping with pain. Knowledge about beliefs about controlling pain influence understanding of pain mechanisms. *Material and methods:* The research covered 48 hospitalised participants of territorial defence (33.94±9.54 years old; range: 21-56 years old), provided treatment in hospitals in Luck and in the region (Ukraine) with the use of standardised questionnaires within psychology of health and documents' analysis. The patients differed with respect to diagnosis concerning the presence of neuropathic pain: confirmed neuropathic pain and not fully confirmed neuropathic pain, and the lack of pain of a neuropathic character. *Results:* In the case of pain of a probable, but not fully confirmed neuropathic pain, the value of conviction relying on one's own internal abilities to coping with pain amounted to 20.73 ± 2.35. The values of the indicators of the two remaining types of convictions analysed in the research are lower. The obtained results indicate that neuropathic pain differentiated beliefs referring to the possibility of coping with pain on one's own ($p<0.001$). *Conclusions:* The obtained results indicate that neuropathic pain differentiated beliefs referring to the possibility of copying with pain on one's own. No significant correlations have been noticed between the level of externalised and extinguished anger and certain types of beliefs concerning coping with pain.

Keywords: types of concerning, pain, neuropathic pain, anger, physical activity, participants of territory defence activities

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Recevied: 2.11.2020; Accepted: 20.11.2020; Published online: 2.12.2020

Cite this article as: Ortenburger D, Wąsik J, Tsos A. Types of convictions concerning coping with pain of the participants of territory defence activities. Phys Activ Rev 2020; 8(2): 97-103. doi: 10.16926/par.2020.08.26

INTRODUCTION

One of the most serious challenges facing a man is that of coping with pain, stress and anger [1,2]. One of the aspects of coping is the subjective evaluation of the possibilities of coping with the possible pain (current and anticipated), stress and illness, while also injury that is not only current, but also over a long term perspective [3-7]. These phenomena may enter into interactions based on feedback. The intricate relation between the cognitive factors and coping with pain should not be reduced to a very simple notion as the feeling of pain is associated with a complex of physiological and behavioural reactions. Various components permeate here such as: sensory, affective, motivational and cognitive components [8-12]. The cognitive convictions tinged with emotions relating to the potential possibilities of coping with pain are of an intricate structure. There is significant differentiation between people from the viewpoint of the feeling of effectiveness in this area [4,13-17]. The experience of combat action (of a defence nature) confronts a man with his own possibilities of coping with emotions that accompany danger to his own safety. In a situation whereby on the one hand, help is provided to other people, while on the other hand facing the challenges associated with endangering his own safety, in which it is significant to cope with the feelings of negative emotions, anxiety, frustration and anger [1,2]. On the one hand, we are fighting to avoid suffering. On the other hand, it frequently "opens our eyes and ears to the pain of others. This fulfils an awareness function that increases the level of understanding of the fears of others, as well as the desire to provide help" This also relates to the situation of undertaking defence action associated with endangering his own safety and health[1,2,18-24]. However, this preparation is to a lesser extent with relation to people called at urgent notice, incorporated into the formations directed towards territorial defence with relation to an auxiliary role in the professional army as they are not professional soldiers (the vast majority have been encompassed into the research in the herein paper.

The conducted study was to determine if there is a relation between this type of conviction concerning the possibility of copying with pain the appearance of neuropathic pain. We concentrated on the following types of beliefs [2,15] relying on one's own internal abilities (Internal) relying mainly on doctors' activity (Doctor's) and conviction about a decisive role of an incident (Incident). An additional, though also important problem, was checking if these types of beliefs concerning copying with pain correlate with externalising anger.

MATERIAL AND METHODS

Participans

Research encompassed 48 hospitalized participants of action conducted within the framework of territorial defense who were treated in hospitals in Ukraine (Luck and the surrounding region); age: 33.94±9.54 years; range: 21-56 years. Among the analyzed group, four patients have the status of professional soldiers, while the remaining 44 fulfilled tasks in the form generally defined as auxiliary formation.

Protocol

Data was collected by applying standardized questionnaires from the field of psychology of health relating to the types of convictions and forms of expressing anger [2,15] and acquiring data from documents existing in the medical centers. Patients differed from the viewpoint of diagnosis relating to the presence of neuropathic pain:1-confirmed neuropathic pain; 2- mixed, not fully confirmed, probable, yet not confirmed.

Statistics

In order to analyse the recorded data, a statistical analysis was conducted. Median values, standard deviations were determined and analysis of variance was conducted. The statistical analysis was performed by means of the statistical software package Statistica 12.

Ethics

The research includes human data. It has been performed in accordance with the Declaration of Helsinki and has been approved by the Lesya Ukrainka Eastern European National University, Lutsk, Ukraine Bioethics Commission. Before interviews, the nature and the purpose of the study were explained, and full confidentiality was assured to all participants. All participants were informed about their right not to participate in the study and gave their oral consent before the study.

RESULTS

In Table 1, the descriptive statistics of the distribution of data have been presented with regard to the particular types of convictions referring to the possibilities of controlling pain. However, in Table 2, the descriptive statistics of the distribution of this data have been formulated, but without taking account of the division on the basis of the criteria of the occurrence of pain of a neuropathic nature (as such data has been presented in Table 1. The values of the calculated correlation indicators between the particular types of convictions referring to the possibilities of controlling pain: conviction relying on one's own **i**nternal abilities (Internal); Conviction relying mainly on doctors' activity (Doctor's); Conviction about a decisive role of an incident (Incident) and the forms of expressing anger (its manifestation and suppression) have been presented in Table 3. In a 48 person group that was encompassed in the research, 18 patients experienced neuropathic pain according to the medical diagnosis (nerve damage was diagnosed as the basis of chronic pain). In the case of 19 people, it was emphasized in the diagnosis that there is a probability that nerve damage lies at the basis of pain, but was not diagnosed with total certainty. There was no basis for diagnosing pain of a neuropathic nature in 11 patients.

Table 1. Types of convictions concerning coping with pain (beliefs about controlling pain) in accordance with the criteria: 1 - neuropathic pain exists (n=18); 2 - no full confirmation of pain of a neuropathic nature (n=19); 3 - lack of neuropathic pain (n=11).

No.	Nature of pain	Internal		Doctor's		Incident	
		M	SD	M	SD	M	SD
1	Neuropathic pain. Confirmed nerve damage underlying chronic pain	16.17	2.31	12.72	2.91	13.17	3.50
2	Pain of mixed nature. Not fully confirmed (probable) nerve damage underlying chronic pain	20.79	2.35	12.74	4.53	13.58	3.12
3	Lack of pain of neuropathic nature (lack of confirmation of nerve damage)	24.91	3.75	12.91	6.47	14.36	3.98
	Total patients	20.00	4.31	12.77	4.45	13.60	3.43

M – mean; SD – standard deviation

Table 2. Descriptive statistics concerning the distribution of beliefs regarding the ability to cope with pain, without taking into account the criterion of the presence of neuropathic pain.

Types of convictions concerning copying with pain (beliefs about controlling pain)	M	SD	Min	Max
Conviction relying on one's own internal abilities, beliefs in the internal or personal control of pain (Internal)	20	4.31	12	30
Conviction relying mainly on doctors' activity (Doctor's) beliefs that powerful others, namely doctors, control pain	12.77	4.46	6	24
Conviction about a decisive role of an incident (Incident) beliefs that pain is controlled by chance events	13.6	3.42	8	24

M – mean; SD – standard deviation; Min – minimum, Max - maximum

Table 3. The value of the coefficient between type of convictions concerning the possibility of coping with pain (beliefs about controlling pain) and the forms of expressing anger $p < 0.05$.

Types of convictions concerning copying with pain (beliefs about controlling pain)	Form of expressing anger	
	Manifestation	Suppression
Conviction relying on one's own internal abilities, beliefs in the internal or personal control of pain (Internal)	-0.266	0.210
Conviction relying mainly on doctors' activity (Doctor's) beliefs that powerful others, namely doctors, control pain	0.204	0.110
Conviction about a decisive role of an incident (Incident) beliefs that pain is controlled by chance events	-0.031	0.060

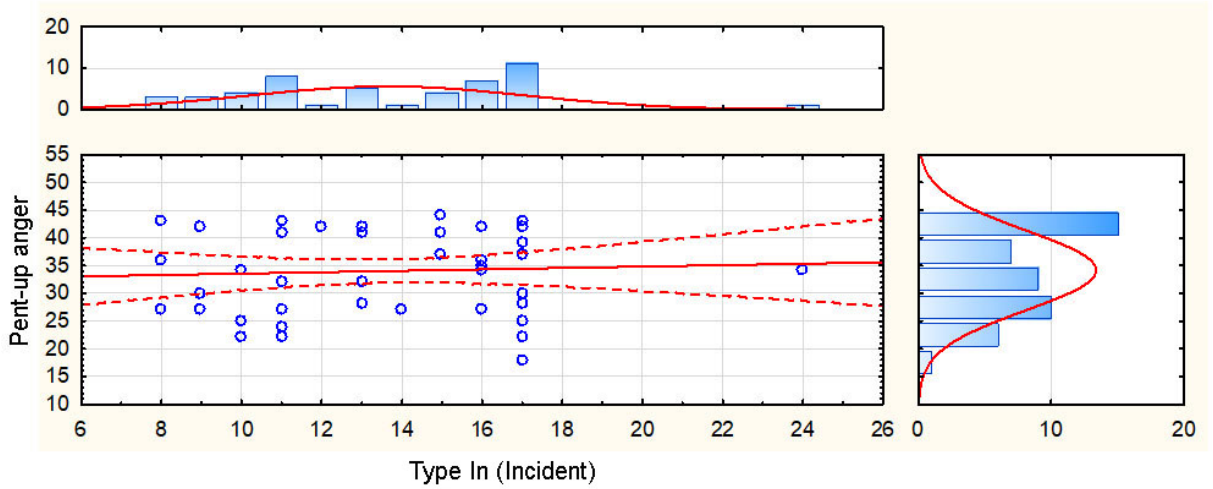

Figure 1. Relation between the level of suppressed anger and conviction about a decisive role of an incident of coping with pain (statistically insignificant).

DISCUSSION

Many studies have shown that the cognitive strategies used to cope with chronic pain play a very important role in the adjustment to emotional distress, and quality of life. he intricate relation between the cognitive factors and coping with pain should not be reduced to a very simple notion as the feeling of pain is associated with a complex of emotional results [2-3,5,8,17]. In the light of the research results attained, in the 48 patient group encompassed in the research, there is a prevalence of convictions attesting to the strong belief that it is possible to a large extent to restrict the intensity and frequency of the pain experienced (the value of the average indicator of conviction type "internal" amounted to 20± 4.31; range 12-30). The values of the indicators of the two remaining types of convictions analysed in the research: conviction relying mainly on doctors' activity (Doctor's) and conviction about a decisive role of an incident (Incident) are lower (Table 2). However, when the results attained are analysed with regard to the criteria of the presence of pain of a neuropathic nature, the view of the parameters of the distribution of the intensity of the conviction type one's own internal abilities changes (Internal/ beliefs in the internal or personal control of pain) . This was visible in the analysis of the variance $F(2,45)=36.85$; $p<0.001$ (Table 1). In turn, in the case of pain of a probable, or not fully confirmed neuropathic pain, the value of conviction type "one's own internal abilities to coping with pain" amounted to 20.73±2.35; while the average value of the intensity of the beliefs relying mainly on doctors' activity with coping with pain amounted to 12.72 ± 2.80. Type convictions about a decisive role of an incident with coping with pain was 13.17± 3.50 (beliefs that pain is controlled by chance events). In the case of a not fully confirmed (yet probable) existence of nerve damage, the average "Internal" (conviction type "one's own internal abilities to coping with pain) amounted to 20.73±2.35; In the case of a not probable existence of nerve damage, the average conviction type about mainly on doctors' activity with coping with pain amounted to 12.73 ± 4.53. In

terms of the lack of confirmation of pain of a neuropathic nature, it was noted that the value of the indicator "Internal" amounted to 24.90±3.75; „Doctor's" beliefs that powerful others, namely doctors, control pain - 12.90 ±6.47; P - 14.36 ±3.98 (Table 2).

Experiencing pain is the source of a multitude of negative emotions. Cope with chronic pain play a very important role in the adjustment to the pathology and to its effects [7-9,12,18,19]. Among these, much attention is aroused by frustration and anger [1-7,9]. In the analyzed group, the sum value of the indicator of the average level of anger (manifestation) amounted to 24.65 ± 6.63, while pent-up anger, namely suppressed anger (controlled, unrevealed) 34.02 ± 7.15 (on a scale of 10-50). On the basis of the research conducted, it is possible to state that in the group of hospitalized participants of defense action, the level of pent-up anger is significantly higher than the manifested anger, $p<0.001$. Among the 48 hospitalized people encompassed in the research, 7 patients take anti-depressant pills, which as we know are a very strong weapon in the fight against chronic pain. This relates to a great extent to the treatment of neuropathic pain in which this medicine constitutes a hugely significant element in anti-pain treatment [1-3,6,8]. With relation to the fact that the research presented in the herein paper is presented, this data could in the future serve more precise comparisons. The effectiveness of pharmacological treatment in this field consists of among others, interdisciplinary, multi-staged, comprehensive and long-lasting tests that reach into the interior of the mechanisms of formation, evolution and perpetuation of neuropathic pain (and honestly speaking, discoveries in the field of pharmacology). The constantly developing and expanding knowledge of pharmacology enhances the hopes of reducing the suffering of people with neuropathic pain [11]. In accordance with the standards of IASP with relation to pain which we attribute to a chronic nature, it is appropriate to use the definition of pain treatment alongside the definition of the treatment of the people with pain, which results from the adoption of the assumption that chronic pain is an illness that is capable of evoking further secondary disorders. These are indicated by references in subject-related literature, which state that together with the duration of pain, changes occur in the nociceptive system, which is responsible for the processing of pain stimuli. These changes relate to among others, the morphological structure of pain receptors, namely nociceptors, nerve fibers of a defined type, density of both the fibers in the peripheral nerves and the neurons of the central nervous system [8,11-12]. The negative impact of pain and chronic stress becomes apparent in among other areas, in the form of functional loss in terms of the activity of the nervous system, disorders of mental balance and difficulties in fulfilling social and occupational functions [17-19,22]. This may potentially constitute a factor in the further escalation of many negative strong emotions [26-29]. Others study show that comparisons could be made between pain and pain-free individuals, and between ill people with and without patient status and the healthy, so that the effects of pain, illness and health on responses could be separately assessed [30].

CONCLUSIONS

The results rather acquired did not confirm the covariance (correlation) between the type of convictions coping with pain and the expression of anger. Effective coping with pain and anger are of significance for our state of general health. On the basis of the research conducted, it was observed that in the group of hospitalized participants of territorial defense action there is a prevalence of convictions according to which, they can limit the ailments felt by them independently and successfully, while also significantly reduce pain. This signifies the prevailing belief that with the aid of certain personal mental resources, or available ways of coping (type of conviction relying on one's own internal abilities coping with pain) it is possible to improve feelings to a certain extent. In accordance with the conducted analysis, the occurrence of pain of a neuropathic nature in this case does not differentiate in terms of the power of conviction that medical care is the factor that to the greatest extent facilitates the control of unfortunate ailments. In terms of the people diagnosed with pain of a neuropathic nature, the level of trust in the effectiveness of medical action was not lower than in the case of people whom were not diagnosed with pain of a neuropathic nature. This would seem to be understandable in the context of the possibilities of reducing the intensity and frequency of pain felt with the aid of the appropriate medicine.

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