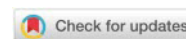


CHRONIC PAIN IN STUDENTS OF THE UNIVERSITY OF MONTENEGRO- ATTITUDES AND EXPECTATIONS

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Abstract: Chronic pain is a significant health problem for university students. However, research on the impact of chronic pain on students is lacking, as well as the support they need to overcome the consequences of chronic pain. The goals of this research were to examine chronic pain in students of natural and social sciences at the University of Montenegro, to determine personal emotions, attitudes and expectations towards pain. Methods. Cross-sectional research was conducted among students from the first to the fifth year of the Faculty of Philosophy in Nikšić (Psychology, Teacher Education), the Faculty of Science and Mathematics in Podgorica (Mathematics, Physics and Physiotherapy) and the Control Group (outside the University). A total of 1,500 students and the control group completed online questionnaire, of which 990 participants met the conditions). Statistical differences between groups, female and male individuals were tested using the chi-square test and t-test. (p-value of <0.05 was considered statistically significant). Results. In the observed groups of students of natural and social sciences there are differences in experiencing and describing pain. Social science students showed passivity in dealing with chronic pain. They prefer to leave the decision on the method of treatment to the doctor, and a third of them just take pills. Conclusions. By applying the obtained questionnaire, we can be determined different attitudes of students of natural and social sciences towards chronic pain, therapeutic approaches, as well as expectations. Students of natural sciences had more education about pain, so the emotion, attitude and approach to solving the problem was simpler.

Keywords: *chronic pain, University students, emotion, attitudes, expectation.*

Field: *Medical Science and Health*

Introduction

Pain is a complex experience, which includes sensory, motivational, and cognitive components, [1] and is now recognized as a problem for students as well [2]. Reported rates of pain prevalence in students individuals are highly (30.5% to 59.5%) with common foci for pain in the neck, shoulders, and lower back. (3-5). Chronic pain negatively affects the daily and academic obligations of the student population, as well as their decisions in life and work (6). Also, previous studies have found that students from different geographical and cultural backgrounds differ in their perception of chronic pain. Therefore, these differences may be related to the way chronic pain is perceived, but also to different approaches during education. (7) Chronic pain is affected by a number of psychological factors, including attention, emotions, and beliefs or expectations. (8) Expectations (treatments and environment) shape the processing of pain intensity in the central nervous system, with a strong influence on the nociceptive parts of the insula, cingulate, and thalamus. Also, the expectation of treatment effects affects pain through attention, daily activities, learning, anxiety, and negative emotions [9]. Gillie et al clarified to what extent psychological processes such as attention, anxiety, and emotions influence the choice of treatment and which communication messages can mediate the effects of these psychological processes. (10) In fact, chronic pain is a significant health problem for University students. However, research on the impact of chronic pain on students is lacking, as well as the support they need to overcome the consequences of chronic pain. (11) The goals of this research were to examine chronic pain in Montenegrin University students of natural and social sciences, in terms of determining differences in personal emotions, attitudes towards pain, and the choice of pain treatment methods.

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Participants and methods

The cross-sectional research was conducted in January 2022 among first- to fifth-year students at the Faculty of Philosophy in Niksic (Psychology, Teachers), Faculty of Natural Science in Podgorica (Mathematics, Physics, and Physiotherapy), and Control group (out of University) The study was approved by the Ethics Committee of the Medical Faculty of the University of Podgorica. A total of all 1500 students and the control group completed the online questionnaire, of which the results 990 participants were eligible. We classified chronic pain if it was present for more than 12 weeks/2.2 Questionnaire:Each student and control participant completed an anonymous questionnaire that included questions related to the following: demographic characteristics (age, gender, and place of residence), individual or teamwork, academic achievement, and a chronic pain questionnaire, by Gillie (10). Statistical differences between groups, female and male individuals were tested using the chi-square test and t test.(p-value of <0.05 was considered statistically significant).

Results

The mean age of study participants was 23.48 years ($SD \pm 0.95$), and two-thirds (64.0%) were female. (Figure 1)

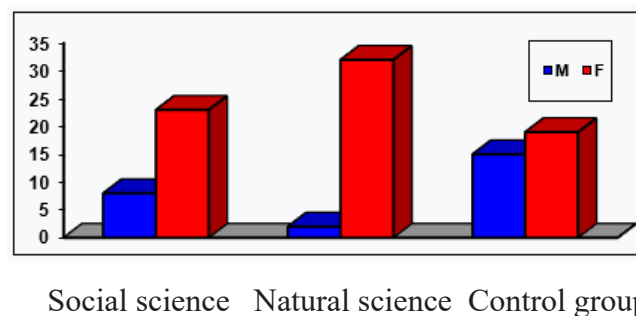


Figure 1. Group: Social, Natural, Control-related gender.

Of the 1500 individuals examined, chronic pain was reported 990(66 %),students social science 310(31%),natural science 340(34%),control group 340(34%).In the structure of answers to question A, statistical significance was shown by a group of science students (number of answers A2) compared to the other two groups. (Figure 2.)

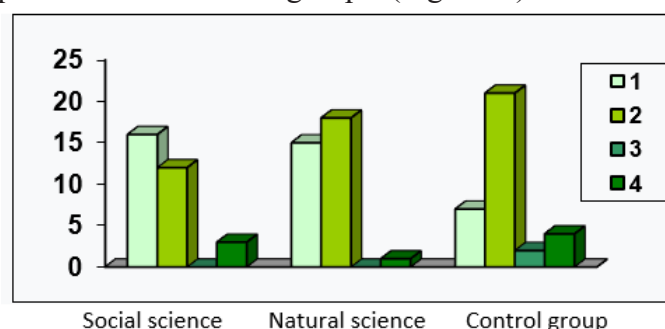


Figure 2. Group: Social, Natural, Control-related answers to question A

In the structure of answers to question B, statistical significance was shown by a group of social students (number of answers B1) compared to the other two groups. (Figure 3.)

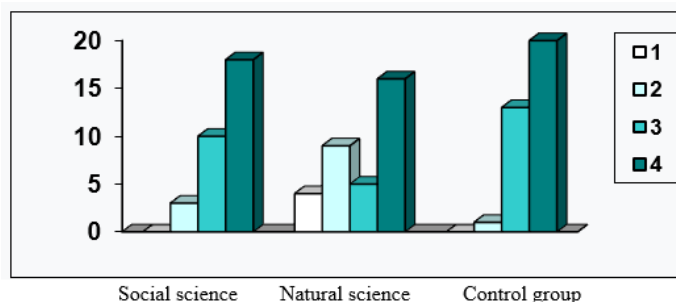


Figure 3. Group: Social, Natural, Control-related answers to question B

In the structure of answers to question C, there is no statistical significance between groups. (Figure 4.)

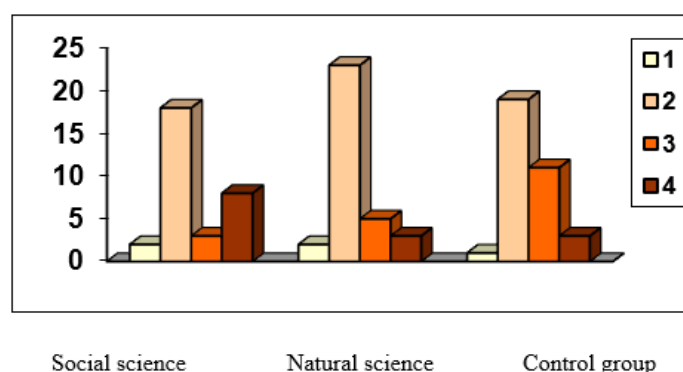


Figure 4. Group: Social, Natural, Control-related answers to question C

In the structure of answers to question D, statistical significance was shown by groups of social and natural students (all number of answers D) compared to the control group.

Discussion

In our study, we investigated the impact of communication messages on chronic pain in University students of social and natural sciences. Specifically, we tested students' emotional reactions and attitudes toward chronic pain using communication messages. Question A: "How would you describe the nature of the pain you feel" this allowed us to test students' emotions. In contrast, the Question describing the absence of emotion towards chronic pain was: B4 I just like to take a pill that deals with the pain". (9) In our research, statistical significance in the answer to question A was given by a group of natural sciences students A2 (56%): The pain is localized, but unbearable. Social science students and the control group answered A3 (58.5%): The pain is small, but it is frequent and unpleasant. Therefore, in the observed groups of students of natural and social sciences, there are differences in experiencing and describing pain. Gillie (10) found that for younger respondents, there are no strong elements that would suit them. The two elements that most describe them are those that suggest pain control: C2: I would like exercises and stretches that reduce pain D3. The two elements that least describe them are those that suggest passivity and no control over pain. B1: The doctor explains to me how to deal with the pain B4: I like to take a pill that deals with pain. In the answer to question B, students of natural sciences dominated in B2. In contrast, students of social sciences chose answer B1. They will feel more comfortable when the doctor explains to them how to deal with pain. Also, the offered answer B4 was chosen by 9.68% of social science students, and only 2.94% of natural science students. The answer that most defined the difference in attitudes among the students was C4 (25%, 8.8%): I would like a prescription for the medicines that are needed to make me

feel better. A prescription for drugs that will reduce pain was chosen by 28.8% of social students and 8.8% of natural students. In the answers offered for question D, the biggest difference was in D3. (22.58%; 14.71%): I would like regular therapy sessions to reduce pain.

Israel's scientists have confirmed that during the basic studies of physiotherapy, students change their attitudes towards the functioning of chronic pain and strategies for coping with chronic pain.(12) Our study confirmed that investigation. The University students of natural sciences had more education about pain and were able to overcome it more easily, than social students. A previous study found that students with chronic pain were unwilling to disclose their chronic pain condition to other colleagues. (13)Also, Furtado showed that there were no significant differences in emotional instability reported by students with or without nonspecific chronic low back pain. (14)

Our research determined different emotional attitudes towards chronic pain in the observed groups of University students. In fact, social students showed that chronic pain is a problem that they struggle to deal with. Also, they are passive in a way to overcome pain. They prefer to leave the decision on the method of treatment to the doctor, and a third of them just take pills.

We hope that our work will promote wider research into the development of chronic pain questionnaires in clinical practice and research studies. This type of chronic pain questionnaire could enable rapid screening of chronic pain in University students. Also, we believe that the education, detection, and treatment of chronic pain in University students requires teamwork and a multidisciplinary approach, where the cooperation of psychologists, psychiatrists, physiatrists, and physiotherapists is necessary to successfully solve this problem. In addition, communication between University professors and students about the problem of chronic pain is primary. She should be close, direct, and with a lot of trusts to find the best solution. The limitations of our study are: This study did not ask about students' psychiatric background, anxiety, and depressive syndrome, which may influence their attitudes and expectations regarding chronic pain management.

Conclusion

The pain questionnaire is a good indicator of chronic pain control in University students. By applying the obtained questionnaire, we can be determined different attitudes of students of natural and social sciences towards chronic pain, therapeutic approaches, as well as expectations. We have shown that chronic pain is a bigger problem for students of social sciences, and they are also passive in overcoming pain compared to students of natural sciences.

We believe that our work will stimulate further improvement of communication messages for chronic pain and create a modern approach to solving these problems in University students.

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