

The Reaction of Patients to Back Pain

Reakcja pacjentów na dolegliwości bólowe kręgosłupa

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Abstract

Introduction. Back pain is an increasing health problem that significantly affects the feasibility of life goals of the individual. Back problems are the second most common cause of physical disability and absenteeism at work.

Aim. Analysis of the most common reaction to the appearance of chronic pain in the population diagnosed with back pain syndrome.

Material and Methods. The study included 187 patients diagnosed with back pain syndrome at the age from 20 to 83 years. The study was conducted in April and May 2013. A diagnostic survey method was used — the statistical analysis. The results were compared with studies nationwide that held a group of scientists under the direction of prof. J. Czapiński within the framework of the project “Social Diagnosis 2013 Conditions and Quality of Life Poles”.

Results. The study showed that the average duration of back pain in the study group was 14.93±9.11 years (from 1 to 40 years). Average time elapsed since diagnosis was 8.34±6.24 years (from 1 to 25 years). 80.75% of respondents received assistance from the family doctor, 80.21% conducted X-ray, 28.34% CT and MRI of the spine 29.5%, 40.73% were diagnosed with neurological consultation. 85.56% of respondents performed work increased back pain, 80.75% preferred the systematic physical activity, 19.25% rested passively more than two hours a day or more, 56.15% did not cope with stress, 24.06% was dependent on nicotine.

Conclusions. 1. Back pain occasionally prompts respondents to resort to professional help. 2. 22.9% of all households used hospital treatments, while among those diagnosed with spinal pain syndrome only 16.04% has decided on this form of therapy. 3. Back pain has prompted the majority (80.75%) of respondents to a systematic physical activity. 4. People diagnosed with spinal pain syndrome spend significantly less time on passive leisure than individuals from the general population. 5. The share of smokers in the group of patients diagnosed with spinal pain syndrome is 24.06%, which is comparable with the percentage of smokers in the general population of Poles (25.8%). (JNNN 2014;3(1):4–9)

Key Words: back pain syndrome, reaction to pain, physical activity

Streszczenie

Wprowadzenie. Zespoły bólowe kręgosłupa są coraz większym problemem zdrowotnym, który w istotny sposób wpływa na możliwości realizacji celów życiowych jednostki. Dolegliwości kręgosłupa stanowią drugą pod względem częstości przyczynę niesprawności fizycznej i absencji w pracy.

Cel. Analiza najczęstszych reakcji na pojawienie się przewlekłego bólu w populacji ze zdiagnozowanym zespołem bólowym kręgosłupa.

Materiał i metody. Badaniem objęto 187 pacjentów ze zdiagnozowanym zespołem bólowym kręgosłupa w wieku od 20 do 83 lat. Badania przeprowadzono w kwietniu i w maju 2013 r. Wykorzystano metodę sondażu diagnostycznego, przeprowadzono analizę statystyczną. Wyniki porównano z badaniami ogólnopolskimi, które przeprowadziła grupa naukowców pod kierunkiem prof. J. Czapińskiego w ramach projektu „Diagnoza Społeczna 2013 Warunki i Jakość Życia Polaków”.

Wyniki. Przeprowadzone badania wykazały, że średni czas występowania dolegliwości bólowych kręgosłupa w badanej grupie wynosił 14,93±9,11 lat (od 1 do 40 lat). Średni czas jaki upłynął od diagnozy wynosił 8,34±6,24 lata (od 1 do 25 lat). 80,75% ankietowanych korzystało z pomocy lekarza rodzinnego, 80,21% wykonało RTG, 28,34%

CT a 29,5% MRI kręgosłupa, 40,73% było na konsultacji neurologicznej. U 85,56% ankietowanych wykonywana praca nasila dolegliwości bólowe kręgosłupa; 80,75% preferowało systematyczną aktywność fizyczną; 19,25% wypoczywało biernie więcej niż 2 godziny dziennie lub dłużej; 56,15% nie radziło sobie ze stresem; 24,06% było uzależnione od nikotyny.

Wnioski. 1. Ból kręgosłupa sporadycznie skłania respondentów do sięgnięcia po fachową pomoc. 2. Z leczenia szpitalnego korzysta 22,9% ogółu gospodarstw domowych, natomiast wśród osób ze zdiagnozowanym zespołem bólowym kręgosłupa na tę formę terapii zdecydowało się zaledwie 16,04% respondentów. 3. Ból kręgosłupa skłonił większość (80,75%) badanych do systematycznej aktywności fizycznej. 4. Osoby ze zdiagnozowanym zespołem bólowym kręgosłupa znacznie mniej czasu poświęcały na wypoczynek bierny niż jednostki z ogólnej populacji. 5. Udział osób palących w grupie pacjentów, u których zdiagnozowano zespół bólowy kręgosłupa wynosi 24,06% i jest porównywalny z odsetkiem palaczy w ogólnej populacji Polaków (25,8%). (PNN 2014;3(1):4-9)

Słowa kluczowe: zespół bólowy kręgosłupa, reakcja na ból, aktywność fizyczna

Introduction

Pain is a subjective and multi-dimensional sensation, hence it is difficult for its direct and objective assessment [1]. International Association for the Study of Pain defines pain as an unpleasant sensory and emotional experience associated with the currently occurring or potential tissue damage or described in terms of such damage. We can distinguish several types of pain including: acute pain, which is most often associated with damage to a particular tissue, chronic pain lasting for years, accompanied by limitations of functioning, often depression and emotional disorders [2].

Pain is a process consisting of several stages linked together. The first stage is a sensual experience that evokes the feeling of unpleasantness (second stage). Step Three — suffering is a phenomenon consisting of sensory reactions, such as depression, anxiety and anger. They have a close relationship with the views of human pain, personality traits, ways of coping with a difficult situation. The fourth stage are pain behaviors, or behavioral expression of pain. It consists of not only a way of expressing feelings, but also what can be observed, which is what a man does and says, but also what he/she does not say, because he/she feels pain. People with greater restraint in expressing their feelings will not be too expressive in pain [3]. Psychological reaction to pain reaction is divided into levels of pain threshold and the reaction threshold of pain tolerance level [4]. The threshold of pain sensation is the smallest intensity of a stimulus causing the conscious perception of pain, as every man's level is stable and varies a little. The threshold of pain tolerance is the greatest pain intensity, the entity defines as "unbearable pain" — it is variable (can be lowered or raised) and depends on many factors. Pain threshold is lowered by insomnia, fatigue, experiencing anxiety, fear, the occurrence of negative emotions such as: anger, sadness, closing in, a sense of abandonment, internal insulation. In contrast, resting, empathy, kind surroundings, a sense of security and pain control, understanding and mitigation of somatic symptoms raises the pain threshold [5,6].

The aim of the study was to analyze the most common reaction to the appearance of chronic pain in the population diagnosed with back pain syndrome. The intention of the authors was to examine whether and to what extent spinal pain syndrome diagnosed is changing habits of Poles on the prevention of diseases of the spine and their leisure activities.

Material and Methods

The study included 187 patients diagnosed with back pain syndrome at the age from 20 to 83 years. These were people of both sexes, including 63.10% (n=118) female and 36.90% (n=69) men surveyed in 33.69% (n=63) had a high school education, while 32, 09% (n=60) of respondents had higher education, 30.48% (n=57) vocational education and 3.74% (n=7) primary education. Respondents in 47.59% (n=89) lived in the city, while 52.41% (n=98) of the surveyed population in the villages, almost two-thirds of the respondents (61.50%) are economically active individuals. The study was conducted in April and May 2013. They were held in a sanatorium in Horyniec Spring, Farmers Rehabilitation Center ASIF, the sanatorium spa in Kolobrzeg, Farmers Rehabilitation Center ASIF and rehabilitation centers in Lublin, and among others, at the Academic Centre of Physiotherapy at WSSP and Luxmed. The study was conducted after obtaining the approval of the Bioethics Committee at the Medical University of Lublin, no. KE-0254/72/2013 of 28 March 2013. Participation in the survey was voluntary. People taking part in it were informed of the purpose and nature of the study and signed a "model of informed consent for participation in the study". The patient may at any time withdraw from participation in it without any consequences. For the purposes of a smaller working method was used a diagnostic survey. The survey included questions that allowed us to gather demographic information about the study population. The questionnaire also included questions about the time of onset of back pain and diagnosed disease. Also asked respondents about the diagnostic

process, the type and form of the therapy and the ways to deal with the problem of back pain. The survey also asked respondents about physical activity, time spent on passive leisure, ways to cope with stress and smoking cigarettes. The results were statistically analyzed. The values of the measurable and analyzed parameters were shown by the mean, median and standard deviation and the immeasurable using the frequencies and percentage. Then, a comparative analysis of their own research studies nationwide was held by a group of scientists under the direction of prof. J. Czapiński within the framework of the project “Social Diagnosis 2013 Conditions and Quality of Life Poles”.

Results

The study showed that the average duration of back pain in the study group was 14.93 ± 9.11 years (from 1 to 40 years). Average time elapsed since diagnosis of spinal pain syndrome is 8.34 ± 6.24 years (from 1 to 25 years). In order to diagnose the problem of back pain respondents most commonly used medical support family (80.75%) and X-ray inspection done on all or part of the spine, (80.21%). Smaller group 40.73% of the respondents in the consultation has undergone neurological MRI (29.95%) and 28.34% of the respondents were diagnosed on the basis of CT. After diagnosing spinal pain syndrome the surveyed did not take regular treatment due to a lack of sufficient knowledge of the rules (Table 1).

Most respondents (85.56%) admitted that they performed work intensifies the pain of the spine.

Next, respondents were asked about the importance of healthy physical activity in their daily functioning and compared with the general population of Poles. The majority (80.75%) of respondents prefer, and almost half (49.73%) declared a systematic physical activity. The analysis results are depicted in Figures 1 and 2 and in Table 2.

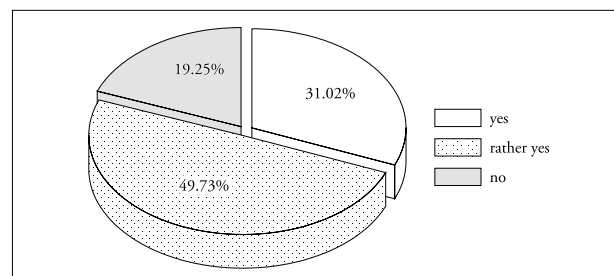


Fig. 1. The percentage of respondents with regard to the opinion, if they prefer physical activity

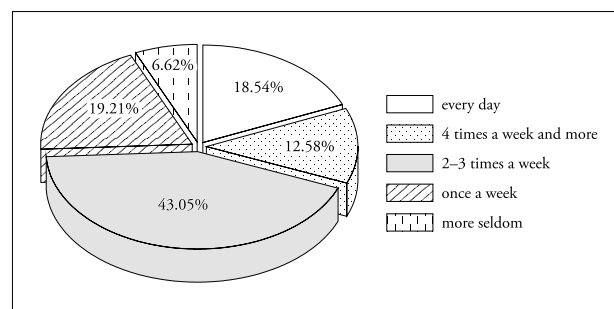


Fig. 2. The intensity of physical activity declared

Table 1. Forms of therapy enjoyed by the respondents in relation to the problems of back pain

Answers	N	%
Occasionally I use the help of the family doctor	61	32.62
I am under the care of a rehabilitation center	57	30.48
I am under the care of a family doctor	50	26.74
I am under the care of a neurologist	35	18.72
I used the hospital treatment	30	16.04
I used the rehabilitation stays for 1-2 weeks	76	40.64
I used the sanatorium treatment	90	48.13
I used the rehabilitation benefit (exemption from work longer than 3 months)	33	17.65
I use rehabilitation treatments	87	46.52
I reduce/eliminate pain using available painkillers	149	79.68
When I do not deal with the pain I apply recommendations from the GP/specialist	99	52.94
I wait until the pain disappears on its own, I do not use drugs	22	11.76
I use unconventional methods	16	8.56
I am familiar with techniques to relieve back pain and I have been trying to apply them	23	12.30
I have learnt how to properly take care of the spine, but I have not applied those methods	69	36.90
I have not learnt how to properly take care of the spine	95	50.80
No, I can cope with this problem	26	13.90

The value does not add up to 100% due to the possibility of multiple choice answers

Table 2. Forms of physical activity practiced by the respondents and the general population of Poles

Forms of activities	Own research	National Polish research
Do not do this kind of activity	19.25%	60.8%
Walking	61.50%	–
Swimming	4.81%	7.9%
Cycling	33.69%	20.9%
Jogging	6.95%	7.4%
Others	13.90%	32.4%

The value does not add up to 100% due to the possibility of multiple choice answers

Source: [13].

Next, the analysis of free time spending was carried out. The percentage of respondents resting passively for more than two hours a day or longer in the tested population is 19.25% (Table 3, Table 4).

Table 3. Taking the time to rest passively in the studied group

Answers	N	%
Almost never (5–15 minutes a day)	8	4.28
Rarely (3–4 hours a week)	39	20.86
From time to time (90 minutes 2–3 times a week)	47	25.13
Often (almost every day for 90 minutes)	57	30.48
Almost always (2–3 hours every day)	36	19.25
Together	187	100.00

Table 4. The percentage of Poles who devote different amounts of time on average per day resting passively in front of TV

They do not watch	Up to 2 hours	2–3 hours	3 hours and more
4.3%	36.5%	26.8%	32.4%

Source: [13].

Table 5. Ways to cope with stress by respondents

Ways to cope with stress	N	%
I avoid stress because it causes pain intensity	71	37.97
I use relaxation exercises	11	5.88
I cannot handle stress	105	56.15
Together	187	100.00

Respondents were also asked about ways to cope with stress. As many as 56.15% of the respondents admitted that they cannot cope with stress. The results are presented in Table 5.

Finally respondents were asked about their attitude to smoking tobacco. It was found that almost one quarter (24.06%) of those diagnosed with spinal pain syndrome is dependent on nicotine.

Discussion

Back pain is an increasing health problem that significantly affects the feasibility of life goals of the individual. It must therefore bother increasingly the percentage of people complaining of back pain. Back problems are the second most common cause of physical disability and absenteeism at work. The results indicate that as many as 80–100% of adults experience at least once in a lifetime an incident of pain of the spine. Back pain is primarily concerned in most moving sections, and therefore most vulnerable to degenerative changes and injuries [7,8,9].

Despite such widespread problem of back pain studies revealed, this problem is often downplayed in Polish society. Evidenced by the fact that in the general population of Poles they are much more likely to use the advice of your family doctor (92.4%) [10] than the person struggling with chronic back pain (Table 1). Respondents admitted that the problem with the spine occasionally led them to resort to professional help. Only less than a third of respondents (32.63%) went to the family doctor for advice. Just over one quarter (26.74%) of the respondents were under the care of a family doctor. Only 30.48% of respondents were under the care of a rehabilitation center, 18.72% of the respondents received assistance from a neurologist and 13.90% of the respondents admitted that they cope with the problem.

Underestimation of the problem of back pain is confirmed by further studies, which show that more than one quarter (28.34%) of respondents did not use any form of therapy in relation to the problems of back pain. With nationwide research it shows that the hospital treatment is used by 22.9% of all households [10], while among those diagnosed with spinal pain syndrome this form of therapy has been chosen by only 16.04% of respondents.

In order to cope with the increasing pain respondents usually reach for the — counter painkillers (79.68%). When painkillers did not produce the expected improvement in only about half of the respondents, they went to seek the advice of a doctor (52.94%) or benefited from rehabilitation (46.52%). A significant proportion of patients who downplayed the end of the disease of the spine wait until the pain goes spontaneously (11.76%), or use unconventional methods (8.56% (Table 1). Looking for reasons of such carefree approach to the problem of back pain respondents were asked about preventive measures aimed at protecting this important for health and quality of functioning organ of the body. According

to the authors disturbing is the fact that only 12.30% of respondents knew the techniques to relieve back pain and try to apply them in practice (Table 1).

According to the authors, the reason for so little concern for respondents with good condition of the musculoskeletal system is inadequate public health education which makes patients being late to seek the help of professionals. Confirmed is the opinion of other researchers, among others, A. Dziak and S. Tayara, who say that despite the numerous educational campaigns in society, there is still a lot of false ideas about dealing with the pain of the spine. As a result, in many cases, treatment is irrational and the practice of the type of quackery which brings devastating health effects and large economic and social costs [11].

Daily physical activity is the best form of prevention of degenerative diseases of the spine [12]. Therefore patients were asked about their relationship with healthy exercise. It turned out that the disease of the spine is a strong argument that leads to physical activity. For positive health behavior respondents should be recognized that the vast majority (80.75%) prefer (49.73%) or declared (31.02%) systematic physical activity (Fig. 1). It is more than two times greater proportion than in the national survey, in which physical activity declared only 39.2% of Poles [10].

However, this widely declared physical activity was limited mainly to walking (61.50%). If in our deliberations we ignore this form of movement, it turns out that physical activity among people diagnosed with spinal pain syndrome is only cycling (33.69%) which is more popular than in the general population of Poland (20.90%) [13]. Other forms of physical activity in the population coincide with the results of nationwide study (Table 2).

If respondents practiced a sport in prevailing majority (74.17%) they did so in a systematic way (2 times a week and more often) (Fig. 2), which is the most desirable in the prevention of diseases of the spine [14].

Since the main recommendation of the prevention of diseases of the spine is to replace passive recreation (eg, long hours spent in front of the TV) into active forms of leisure activities (eg, outdoor activities) [15,16], respondents were asked about the time spent on passive leisure. The conducted research has shown that people diagnosed with back pain syndrome spend significantly less time on passive leisure than individuals from the general population. A telling example of this is the fact that the percentage of respondents vacationing passively more than 2 hours a day or longer in the study population is 19.25%, while the national survey, people vacationing in front of the TV for more than two hours a day is up 59.2% [10] (Table 3, Table 4). This is proof of proper prevention in this field.

An important element of alleviating back pain is stress reduction [5,17]. The study showed that this element is often downplayed in therapy. The majority of respondents (56.15%) admitted that they do not cope with stress. Only 37.97% of respondents said they avoid stress because it causes increased pain. Only a few (5.88%) admitted that they use relaxation exercises to fight stress (music therapy, exercise, jogging), (Table 5).

Many authors indicate that cigarette smoking increases the risk of spinal pain syndrome [18,19]. It was therefore decided to check whether the disease of the spine helped to reduce the proportion of smokers. Unfortunately, it turned out that the proportion of smokers in the group of patients diagnosed with spinal pain syndrome is 24.06%, which is comparable with the percentage of smokers in the general population of Poles (25.8%) [11]. This result demonstrates the effectiveness of small health education in this field.

Conclusions

1. Back pain occasionally prompts respondents to resort to professional help, as evidenced by the small percentage (26.74%) of respondents who are covered by constant medical care in a family clinic.
2. Underestimation of back pain is confirmed by further studies, which show that the hospital treatment is used by 22.9% of all households, while among those diagnosed with spinal pain syndrome this form of therapy has been chosen by only 16.04% of respondents.
3. It should be regarded as positive that the pain of the spine bowed majority (80.75%) of respondents to a systematic physical activity. It is more than two times greater the proportion than in the national survey, in which physical activity declares only 39.2% of Poles.
4. People diagnosed with spinal pain syndrome spend significantly less time on passive leisure than individuals from the general population. It has been shown that the percentage of respondents vacationing passively more than two hours per day in the study population is 19.25%, while the national survey, people vacationing in front of the TV for more than two hours a day is up 59.2%.
5. The share of smokers in the group of patients diagnosed with spinal pain syndrome is 24.06%, which is comparable with the percentage of smokers in the general population of Poles (25.8%).

Implications for Nursing Practice

Conducted considerations indicate that in health education for pupils with the problem of back pain a nurse should in the first instance sensitize patients to the need for systematic use of the advice of professionals. Patient should be warned against the consequences of downplaying the problem. The patient should be made aware that the use of paramedical services in people without proper qualifications can cause many health problems, and in extreme cases can lead to permanent disability. Promotion of regular healthy exercise is valid for nursing practice to patients with back pain. Pointing to the need for regular physical activity is important for people struggling with chronic back pain should give her/him information about the places where one could get professional help in this regard. Risks of smoking habit and lack of ability to cope with stress should also be pointed out.

References

- [1] Felton B.J., Revenson T.A., Hionrichsen G.A. (adaptacja Juczyński Z.). Skala akceptacji choroby AIS. W: Juczyński Z. *Narzędzia pomiaru w promocji i psychoonkologii zdrowia*. Pracownia Testów Psychologicznych, Warszawa 2009:162–166.
- [2] Lorencowicz R., Stachyra U., Przychodzka E. et al. Natężenie bólu oraz strategie radzenia sobie z bólem w grupie pacjentów z dyskopatią. (The intensity of pain and pain coping strategies among patients with discopathy). W: Markocka-Mączka K. (Red.). *Środowiskowe uwarunkowania dobrostanu w chorobie i niepełnosprawności*. Wydaw. NeuroCentrum, Lublin 2010: 245–260, bibliogr. sum
- [3] Weisenberg M. Cognitive aspects of pain. In Textbook of Pain. Churchill-Livingstone. New Gareth T. Jones at all: Predictors of Low Back Pain in British Schoolchildren: A Population-Based Prospective Cohort Study. "Pediatrics" Vol. 111 No. 4 April 2003 York 2000: 331.344.
- [4] de Walden-Gałuszko K. Psychologiczne aspekty bólu. *Przewodnik Lekarski*. 2001;4:58–59.
- [5] Gurowiec P. Psychologiczne sposoby leczenia bólu. W: Psychologia radzenia sobie ze stresem. *Zeszyty Naukowe WSHE w Łodzi*. 2002;1:21.
- [6] Sedlak K. Czynniki psychologiczne a odczuwanie bólu. W: Dobrogowski J., Kuś M., Sedlak K., Wordliczek J. *Ból i jego leczenie*. Wydawnictwo Springer PWN, Warszawa 1996.
- [7] Crette S., Phil M., Fehlings M.G. Cervical Radiculopathy. *N Engl J Med*. 2005;353:392–399.
- [8] Morton M. Zespoły bólowe kręgosłupa. *Przewodnik Lekarza*. 2008;5:45–55.
- [9] Van Hooff M.L., van der Merwe J.D., O'Dowd J. et al. Daily functioning and self-management in patients with chronic low back pain after an intensive cognitive behavioral programme for pain management. *Eur Spine J*. 2010;19:1517–1526.
- [10] Czapiński J., Panek T. Warunki życia gospodarstw domowych. Opieka zdrowotna. Diagnostyka Społeczna 2013 Warunki i Jakość Życia Polaków — Raport. [Special issue]. *Contemporary Economics*. 2013;7:109–118 DOI: 10.5709/ce.1897-9254.103.
- [11] Dziak A., Tayara S. *Bóle krzyża*, Kraków 1997.
- [12] Stodolny J. *Choroba przeciążeniowa kręgosłupa*. *Epidemia naszych czasów*. Wyd. ZL Natura, Kielce 1999.
- [13] Czapiński J. Indywidualna jakość i styl życia. Diagnostyka Społeczna 2013 Warunki i Jakość Życia Polaków — Raport. [Special issue]. *Contemporary Economics*. 2013; 7:162–267 DOI: 10.5709/ce.1897-9254.107.
- [14] Bochniak A. Zachowania zdrowotne jako element zdrowego stylu życia. *Lekarz Wojskowy*. 2010;2:187–194.
- [15] Kolendowska J., Kolendowski J. *Ruch zapobiega bólowi kręgosłupa*. PZWL, Warszawa 1987.
- [16] Starosta W. Znaczenie aktywności ruchowej w zachowaniu i polepszeniu zdrowia człowieka. *Promocja Zdrowia Nauki Społeczne i Medycyna*. 1995;5–6.
- [17] Dobrogowski J., Wordliczek J. (Red.). *Medycyna Bólu*. Wydawnictwo Lekarskie PZWL, Warszawa 2004.
- [18] Bochniak A. Zachowania zdrowotne jako element zdrowego stylu życia. *Lekarz Wojskowy*. 2010;2:187–194.
- [19] Gawlikowski J. Zespoły bólowe okolicy kręgosłupa lędźwiowo-krzyżowego. *Kwartalnik Ortopedyczny*. 1992; 4:1–20.

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