The Analysis of the Quality of Life of Patients with Degenerative Changes in the Cervical Spine

Analiza jakości życia pacjentów ze zmianami zwyrodnieniowymi odcinka szyjnego kręgosłupa

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Abstract

Introduction. Degenerative diseases of the spine are a problem that threatens the modern population around the world. The World Health Organization (WHO) has recognized the degenerative changes of the spine as an epidemic of our times.

Aim. The aim of the study was to assess the quality of life of patients with degenerative changes in the cervical spine in the context of sociodemographic data including: gender, age, education, marital status, type of work, place of residence, health problems, coexisting diseases and place of services.

Material and Methods. 103 people were included in the study. Women constituted 60.2% of the respondents, while men 39.8%. The age of the respondents was between 25 and 76 years old. The tool used in this study was the WHOQoL-BREF questionnaire. The statistical analysis was performed based on the chi square test. The obtained results were analysed with the ×2 test for independent samples, the error rate of 5% was assumed.

Results. The analysis of data concerning the place of residence showed a division into the urban environment of 79.6% and the rural environment constituting 20.4%, there was no correlation between the place of residence of the respondents and their quality of life in the social field. The respondents represented a varied level of education, the most numerous group were patients with vocational education 32%, because the complaints are often related to the type of work performed, the most numerous group were the retired persons/pensioners — 40.8%. The analysis showed a significant relationship between the work performed and education.

Conclusions. Degenerative changes of the cervical spine and related ailments are among the most common health problems in people over 50 living in an urban environment. Women are statistically more likely to experience pain in the cervical spine due to the weaker muscle corset. The subjective assessment of the quality of life is positive. It was best assessed by people with higher education and respondents from the urban environment. **(JNNN 2021;10(4):175–179)**

Key Words: cervical spine, degenerative disease, quality of life

Streszczenie

Wstęp. Choroby zwyrodnieniowe kręgosłupa stanowią problem, który zagraża współczesnej populacji na całym świecie. Światowa Organizacja Zdrowia (WHO — World Health Organization) uznała za epidemię naszych czasów zmiany zwyrodnieniowe kręgosłupa.

Cel. Celem badań była ocena jakości życia pacjentów ze zmianami zwyrodnieniowymi kręgosłupa odcinka szyjnego w kontekście danych socjodemograficznych obejmujących: płeć, wiek, wykształcenie, stan cywilny, rodzaj wykonywanej pracy, miejsce zamieszkania, problemy zdrowotne, choroby współistniejące i miejsce świadczonych usług.

Materiał i metody. Badaniem objęto 103 osoby. Kobiety stanowiły 60,2% respondentów, natomiast mężczyźni 39,8%. Wiek ankietowanych zawierał się pomiędzy 25, a 76 rokiem życia. Narzędziem użytym w niniejszej był kwestionariusz ankiety WHOQoL-BREF Przeprowadzono analizę statystyczną w oparciu o test chi kwadrat. Uzyskane wyniki poddano analizie testem ×2 dla prób niezależnych, przyjęto 5% błędu.

Wyniki. Analiza danych dotycząca miejsca zamieszkania wykazała podział na środowisko miejskie 79,6% i wiejskie stanowiące 20,4%, nie wykazała zależności pomiędzy miejscem zamieszkania ankietowanych a ich jakością życia w dziedzinie socjalnej. Ankietowani reprezentowali zróżnicowany poziom wykształcenia, najliczniejszą grupę stanowili pacjenci z wykształceniem zawodowym 32%, ponieważ dolegliwości mają często związek z rodzajem wykonywanej pracy najliczniejszą grupę stanowili emeryci/renciści 40,8%. Analiza wykazała istotną zależność pomiędzy wykonywaną pracą i wykształceniem.

Wnioski. Zmiany zwyrodnieniowe kręgosłupa odcinka szyjnego oraz związane z nimi dolegliwości należą do najczęstszych problemów zdrowotnych u osób powyżej 50 roku życia zamieszkałych w środowisku miejskim. Kobiety statystycznie częściej odczuwają ból w odcinku szyjnym kręgosłupa ze względu na słabszy gorset mięśniowy. Subiektywna ocena jakości życia jest pozytywna. Najlepiej oceniali ją osoby z wyższym wykształceniem i ankietowani pochodzący ze środowiska miejskiego. **(PNN 2021;10(4):175–179)**

Słowa kluczowe: odcinek szyjny kręgosłupa, choroba zwyrodnieniowa, jakość życia

Introduction

Degenerative diseases of the spine are a problem that threatens the modern population around the world. The World Health Organization (WHO) has recognized the degenerative changes of the spine as an epidemic of our times. The most difficult part of the treatment is the cervical spine, which is very sensitive to injuries and pain. It requires specialized treatment due to the most delicate structure. It has a static, dynamic and protective function for the spinal cord, vessels, spinal nerve roots and vertebral arteries. Changes in the cervical spine and associated syndromes are not explained and constitute a serious diagnostic and therapeutic problem. The main symptoms of this disease were neck pain, difficulty turning the head, headache, shoulder pain, problems with sleeping and depressed mood [1–3].

In the literature on the subject, health and quality of life are used interchangeably, it began to appear in the 1960s and 1970s. It was synonymous with "good life". Over time, the concept of quality of life has evolved from objectivism to subjectivism.

The definition of health formulated by the World Health Organization defines quality of life as physical, mental and social well-being, assuming that the sense of health is a factor of good quality of life. Health-related quality of life assessment is an in-depth study of patients' well-being based on different standards, estimating the gains and losses resulting from the medical activities undertaken. These tests allow to assess the patient's health condition, taking into account mental, physical, social and environmental factors, and to assess the effectiveness of health care. The word "quality" in a medical perspective has a different meaning in relation to human life, which reflects human feelings and needs on a multi-level in terms of physiological, psychological and social factors influencing health. The assessment of the quality of life conducted in medicine allows for a holistic view of the patient's problems and serves to strengthen health in its broadest sense and understanding [4–7].

The aim of the study was to assess the quality of life of patients with degenerative changes in the cervical spine in the context of sociodemographic data including: gender, age, education, marital status, type of work, place of residence, health problems, coexisting diseases and place of services.

Material and Methods

The study was conducted among 103 residents of the Non-Public Nursing and Care Centre in Lipno. The diagnosis of discopathy among the respondents was made by doctors based on clinical studies.

The analysis of the conducted research shows that the largest group was constituted by respondents aged 55–65 (36.9% — 38 people). The respondents aged 66–75 were slightly smaller (25.2% — 26 people). In the 25–35 age group, the number of respondents was the least numerous (4.9% — 5 people).

The vast majority of the respondents were women (60.2% — 62 people), compared to men (39.8% — 41 people).

Most of the respondents were white-collar and blue-collar workers, which is a total of (56.4% — 58 people), compared to the remaining farmers (1.9% — 2 people), retirees and pensioners were (40.8% — 42 people) and others constituted (1% — 1 person).

The largest group were the respondents with basic vocational education (32% — 33 people). A smaller group (23.3% — 24 people) was composed of the respondents with secondary education compared to the respondents with higher education (19.4% — 20 people). The next group of people was the primary education (16.5% — 17 people).

According to the collected research, the largest group are the respondents living in a formal relationship — married (61.2% — 63 people), then widower/widow (16.5% — 17 people), the smallest group are those living in separation (1% — 1 person) comparable to the divorced people (1.9% — 2 people).

Analysing the given place of residence, most of the respondents live in the city, which is (79.6% — 82 people), while the inhabitants of the countryside are (20.4% — 21 people).

The studies show that the diagnosis was dominated by cervical spondylosis according to ICD 10 47.9 (unspecified spondylosis) (26.2% — 27 people), the mean result was cervical spondylosis and arterial hypertension (M47.9, I10) (10.7% — 11 people), then cervical spondylosis, arterial hypertension and prostate (M47.9, I10, N40) (5.8% — 6 people), cervical spondylosis (M47.8) (4.9% — 5 people) and cervical and prostate spondylosis (M50.0) (4.9% — 5 people) and cervical and prostate spondylosis (M47.9, N40) (2.9% — 3 people), and cervical disc disease with spinal cord injury, arterial hypertension, hypothyroidism (M50.0, I10, E03) (1.9% — 2 people), the lowest results are the remaining diagnoses constituting the ratio (1% — 1 person).

The collected material was entered on an ongoing basis into an Excel database specially developed for the needs of research. All calculations were performed with the SPSS Statistics 21.0 statistical package.

Results

The statistical analysis showed a significant relationship between the respondents' gender and whether they are satisfied with the quality of their lives. Men show a slightly better quality of life. The statistical analysis showed a significant relationship between the respondents' gender and their quality of life in the field of psychology (F=4.7, p=0.032). Men show a better quality of life in the psychological field. Which means that men got 21 compared to the women.

The statistical analysis showed a significant relationship between the age of the respondents and their quality of life in the somatic area. The younger the people, the better their quality of life in the somatic area (F=2.8, p=0.018). Which means that younger people obtained 26 compared to older people over 76 years of age. The statistical analysis showed a significant relationship between the age of the respondents and their quality of life in the field of psychology (F=2.7, p=0.021). The younger the people, the better their quality of life in the psychological field, obtaining 23 compared to the elderly, who received 20.1.

The statistical analysis showed a significant relationship between the respondents' work and their quality of life in the somatic area (F=9.0, p=0.00). Intellectual workers show a better quality of life in the somatic area. Which means white collar workers received 27.1 compared to the other groups. The statistical analysis showed a significant relationship between the respondents' work and their quality of life in the psychological field (F=3.08, p=0.019). White-collar workers show a better quality of life in the psychological field, who received 21 compared to pensioners receiving only 20.

The statistical analysis showed a significant relationship between the respondents' work and their quality of life in the social field (F=8.8, p=0.00). White-collar workers show a better quality of life in the social field. Which means they got 12.1 compared to manual workers. The statistical analysis showed a significant relationship between the respondents' work and their quality of life in the environmental field (F=6.2, p=0.00). White-collar workers show a better quality of life in the environmental field, scoring 30.7 compared to manual workers, who obtained 27.2. The statistical analysis showed a significant relationship between the respondents' work and their quality of life (F=4.5, p=0.002). Intellectual workers show a better quality of life. Which means that they received 4, and manual workers 3.6. The statistical analysis showed a significant correlation between the work performed by the respondents and their assessment of their health (F=9.5, p=0.00). Mentally working people show a better quality of health. Which means they got 4 compared to manual workers.

The statistical analysis showed a significant relationship between the education of the respondents and their quality of life in the somatic field (F=3.1, p=0.008). The better education the respondents have, the better their quality of life in the somatic field. This means that people with lower secondary education obtained 28, then those with a bachelor's degree — 26, and higher education — 25 as compared to primary education. The statistical analysis showed a significant relationship between the education of the respondents and their quality of life in the social field (F=5.2, p=0.00). The better education the respondents have, the better quality of life they show in the social field, obtaining 21 with higher education compared to primary education. The statistical analysis showed a significant relationship between the education of the respondents and their quality of life in the environmental field (F=2.4, p=0.029). The better education the respondents have, the better their quality of life in the environmental field. This means that people with higher education obtained 30 compared to primary, who received 27.

The statistical analysis showed a significant relationship between the marital status of the respondents and their quality of life in the social field (F=3.9, p=0.003). Married

people show a better quality of life in the social field, therefore, this means that they have achieved 11 compared to the divorced people.

The statistical analysis did not show a significant relationship between the place of residence of the respondents and their quality of life in the social field (F=1.1, p=0.282). This means that people living in the countryside obtained 10 compared to people living in the city.

Discussion

Degenerative changes of the cervical spine are becoming an increasingly common ailments that patients struggle with. They are a disease with which they report to the GP and specialist doctor's clinic. Back pain, overload and immobility adversely affect the articular cartilage, which causes damage to it, leading to degenerative changes. It is a serious health problem for our society.

In the analysed material, more than half of the respondents with degenerative changes in the spine were women 60.2%, compared to men 39.8%, which is comparable with the results of Kozłowski and Kożuch [7], a similar result was obtained. Women constituted 56.9%, and men 43.1%. In the analysed material, the results showed a relationship between the respondents' gender and whether they are satisfied with their quality of life (F=4.7, p=0.032). Men show a slightly better quality of their lives. Men show a better quality of life in the psychological field with an average score of 21 points. Comparing the results of Gajewski [4], which were presented in %, women were more critical in assessing the subjective assessment of the quality of life, only 50% stated that they were satisfied, and among men 57.7%, but no statistically significant differences were found.

The age of the respondents was between 18 and 75 years of age, the results in the analysed material are very similar. The age of the respondents ranges from 25 to 75 years of age. The largest group in Kozłowski and Kożuch [7] were people over 40, 74.8% of the respondents, the largest group in the material were those aged 55 to 65, which is 36.9%.

Most of the respondents, 39.2, live in a city with more than 200.000 inhabitants, while in the analysed material they are much higher than 79.6% without indicating how many inhabitants live in a given city. The statistical analysis showed no correlation between the place of residence and the quality of life in the social field (F=1.1, p=0.282). Comparing with the results of Gajewski [4], where the study obtained similar results — the majority were women 69.2%, 60% were married. Patients from large cities constituted 48.2%, and from

a rural environment — 51.8%. The differences in the assessment of the quality of life were not statistically significant.

32% of the respondents had vocational education, 23.3% stated secondary education, which is comparable to the results from the literature [7].

Most, 74.8% of patients were in formal relationships or not, the remaining 25.2% were people single by choice, divorced, or widowed. People who are in relationships show a better quality of life in the social field (F=3.9, p=0.003).

The statistical analysis of the material showed a significant relationship between the work performed and their quality of life. Intellectual workers show a better quality of life in each of the following domains: somatic (27), (p=0.000), psychological (21), (p=0.019), social (12), (0.000), environmental (30), (p=0.000). In the literature [4], the level of satisfaction increased with the level of education. The relationships were statistically significant (p=0.036).

Conclusions

Degenerative changes of the cervical spine and related ailments are among the most common health problems in people over 50 living in an urban environment.

Statistically, women experience pain in the cervical spine more often due to the weaker muscle corset.

The subjective assessment of the quality of life is positive. It was best assessed by people with higher education and respondents from the urban environment.

Implications for Nursing Practice

Quality of life studies provide a lot of data on the patient's situation, allow them to see the problems they experience, and to take actions aimed at solving them. They can be determinants for the planning and implementation of nursing care and prepare the patient for self-care, and can contribute to improving the quality of care for the patient.

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A — Concept and design of research, B — Collection and/or compilation of data, C — Analysis and interpretation of data, D — Statistical analysis, E — Writing an article, F — Search of the literature, G — Critical article analysis, H — Approval of the final version of the article