Selected Determinants of the Quality of Life of Patients with Degenerative Changes of the Spine

Wybrane determinanty jakości życia pacjentów ze zmianami zwyrodnieniowymi kręgosłupa

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Abstract

Introduction. Degenerative spinal disease is considered one of the most prevalent chronic diseases in Poland and worldwide. Sedentary lifestyle, lack of physical activity, and spinal overload contribute to this state of affairs. The chronic nature of the disease, along with pain and functional limitations of the musculoskeletal system, impact the quality of life.
Aim. To determine the level of life quality and factors influencing the quality of life in patients with degenerative spinal changes.
Material and Methods. The study involved 107 individuals aged between 55 and 65 years. Standardized research tools were utilized, including the Acceptance of Illness Scale (AIS), Oswestry Disability Index (ODI), Neck Disability Index (NDI), Activities of Daily Living scale (ADL), and the World Health Organization Quality of Life-Bref (WHOQoL-BREF) questionnaire.
Results. The level of illness acceptance in the study population was 26.52 points (SD=6.61). All respondents experienced pain symptoms, with an average pain intensity of 7.02 (SD=1.13). The average self-assessed quality of life among the participants was 3.5 points (SD=0.76), while the average self-assessed health rating was 2.54 points (SD=0.7). Spinal disability affected all patients in the lumbar region, whereas no disability was reported in the cervical region by 27.10% of the respondents.
Conclusions. Patients with degenerative spinal changes have a relatively good quality of life and a moderate level of illness acceptance. Age, marital status, occupational activity, body mass, pain intensity, and degree of disability all influence the quality of life. **(JNNN 2023;12(1):44–52)**
Key Words: degenerative spinal changes, pain symptoms, quality of life

Streszczenie

Wstęp. Choroba zwyrodnieniowa kręgosłupa uważana jest za jedną z najbardziej rozpowszechnionych chorób przewlekłych występujących w Polsce i świecie. Wpływ na taki stan rzeczy mają uwarunkowania cywilizacyjne siedzący tryb życia, mała ilość ruchu przeciążenia kręgosłupa. Przewlekły charakter choroby, dolegliwości bólowe i ograniczenia funkcjonalne narządu ruchu rzutują na jakość życia.
Cel. Określenie poziomu życia i czynników wpływających na jakość życia u chorych ze zmianami zwyrodnieniowymi kręgosłupa.
Materiał i metody. W badaniu uczestniczyło 107 osób w wieku 55 do 65 lat. W badaniach wykorzystano standaryzowane narzędzia badawcze: skale akceptacji choroby (AIS), kwestionariusz Oswestry (ODI), szyjny indeks niepełnosprawności (NDI), skalę podstawowych czynności życia codziennego (ADL) oraz ogólny kwestionariusz do oceny jakości życia WHOQoL-BREF.

Wyniki. Poziom akceptacji choroby dla badanej populacji wynosił 26,52 pkt (SD=6,61). Dolegliwości bólowe odczuwali wszyscy respondenci. Średnie nasilenie bólu wynosiło 7,02 (SD=1,13). Średnia ocena jakości życia dokonana przez ankietowanych wynosi 3,5 punktu (SD=0,76). Średnia ocena własnego zdrowia dokonana przez ankietowanych wynosi 2,54 punktu (SD=0,7). Wszystkich pacjentów dotyka niepełnosprawność kręgosłupa lędźwiowego w porównaniu z szyjnym gdzie brak niepełnosprawności deklarowało 27,10%.

Wnioski. Pacjenci ze zmianami zwyrodnieniowymi kręgosłupa mają dość dobrą jakość życia i w średnim stopniu akceptacją chorobę. Na jakość życia mają wpływ, wiek, stan cywilny, aktywność zawodowa, masa ciała, natężenie bólu oraz stopień niepełnosprawności. **(PNN 2023;12(1):44–52)**

Słowa kluczowe: zmiany zwyrodnieniowe kręgosłupa, dolegliwości bólowe, jakość życia

Introduction

Spinal pain primarily affects the population of industrialized countries. Approximately 80% of individuals in developed nations have experienced an episode of back pain at least once in their lives, with 25% to 60% reporting chronic pain [1]. Poland is no exception, as one in four women and one in five men suffer from low back pain, while neck pain ranks second in prevalence [2]. Due to the scale of the problem, it has social and economic implications, requiring significant financial investment in treatment and rehabilitation. In the long term, it leads to prolonged work absences, loss of work capacity, and even disability [3]. This results in limitations in social, professional, and personal life, ultimately reducing the quality of life [4]. Contributing factors to this situation are sedentary lifestyles and a lack of physical activity. The modern transformation of individuals, who spend a significant portion of their lives in a seated position, leads to spinal pain in various regions [3].

Recently, there has been a growing emphasis on the quality of life of patients in the treatment approach. Due to the prevalence, course, and consequences of degenerative spinal disease, it has become an area of interest for researchers and subject to numerous analyses and measurements. Quality of life is perceived as one form of life satisfaction assessment. A holistic approach is crucial, encompassing not only the analysis of physical problems, such as pain, but also psychological and social aspects. This provides a comprehensive evaluation of a patient's health status, which directly translates into their quality of life [5,6]. Chronic diseases, including degenerative spinal disease, are associated with both physical and psychological discomfort, significantly impairing human functioning. Pain in the course of degenerative spinal changes can trigger anxiety, depression, or nervous reactions. Pain symptoms result in considerable functional impairment and a decline in quality of life. The disease most often leads to decreased ability to perform activities of daily living. Dependence on others and difficulties in independently carrying out tasks have a negative impact on self-worth and self-esteem. Degenerative changes and resulting limitations hinder the patient's previous way of life, affecting social interactions, family life, and professional life. The disease leads to a decline in social status, often necessitating work interruptions and, consequently, a deterioration in the family's financial situation, significantly impacting quality of life. Therefore, the disease presents a challenging situation for patients and acts as a stress-inducing factor. Unfavorable emotions such as anxiety, worsening well-being, uneasiness, and depression contribute to increased perception of pain symptoms, creating a vicious cycle [7].

The aim was to determine the level of life quality and factors influencing the quality of life in patients with degenerative spinal changes.

Material and Methods

The study was conducted using a diagnostic survey method with the application of a questionnaire technique in a group of 107 individuals aged between 55 and 65 years. The participants were hospitalized in the Rehabilitation Department of the Provincial Specialist Hospital at 8 Poświęcka Street in Wrocław, as part of their rehabilitation stay, from July 2018 to November 2018. Prior to the study, permission was obtained from the head of the department and the Bioethics Committee at the Wrocław Medical University. Before the study, each participant was informed about the purpose of the research and their voluntary and anonymous participation.

A total of 107 individuals (99.07%) completed the questionnaire, including 52 women (48.60%) and 54 men (50.47%). One person did not respond to this question (0.93%). Individuals below the age of 60 constituted a minority, with 30 participants (28.04%), while the majority of respondents, 77 individuals (71.96%), were over 60 years old. The majority of respondents reside in urban areas, with 77 individuals (71.96%), while the remaining 29 individuals (27.10%) live in rural areas. One person (0.93%) did not respond to this question. Among the participants, the majority were in a relationship, with 63 individuals (58.88%), while 43 individuals (40.19%) reported being single. One person (0.93%) did not respond to this question. In the study group, 76 individuals (71.03%) were not

professionally active, while a minority of 29 individuals (27.10%) were employed. Two individuals (1.87%) did not respond to this question. Regarding the nature of work, over half of the respondents (55.17%) reported performing physical work, 10 individuals (34.48%) reported mental work, 1 person (3.45%) reported physical and mental work, and 2 individuals (6.90%) did not specify the nature of their work. The majority of respondents reported the presence of comorbidities, with 86 individuals (80.37%) indicating the presence

Table 1. Characteristics of the study group (N=107)

Variable	N	%
Gender		
Women	52	48.60
Men	54	50.47
No answer	1	0.93
Age		
Under 60 year	30	28.04
Over 60 years	77	71.96
Place of residence		
City	77	71.96
Country	29	27.10
No answer	1	0.93
Marital status		
Single	43	40.19
In partnership	63	58.88
No answer	1	0.93
Professional activity		
Employed	29	27.10
Unemployed	76	71.03
No answer	2	1.87
Type of work		
Physical	16	55.17
Mental	10	34.48
Physical-mental	1	3.45
No answer	2	6.90
Comorbidities		
Yes	86	80.37
No	19	17.76
No answer	2	1.87
Body weight		
Underweight	5	4.67
Normal weight	36	33.64
Overweight	61	57.01
Obesity	4	3.74
No answer	1	0.93

of other diseases, while 19 individuals (17.76%) reported no comorbidities. Two individuals did not respond to this question. Responses regarding the types of diseases were highly varied, with diabetes and hypertension being the most commonly mentioned. Regarding body weight, 5 individuals (4.67%) were underweight, 61 individuals (57.01%) were overweight, and 4 individuals (3.74%) were obese. One person (0.93%) did not respond to this question (Table 1).

Sociodemographic and clinical data were obtained from medical records and interviews conducted with the patients, who then independently completed the questionnaire. Six standardized tools were utilized in the study.

VAS (Visual Analogue Scale) — A visual analog scale used to assess pain intensity. The scale consists of a 10 cm line, ranging from 0 (no pain) to 10 (worst imaginable pain) [8].

ODI (Oswestry Disability Index) — A tool used to assess the level of disability in patients with thoracolumbar spine pain [9].

NDI (Neck Disability Index) — A scale specifically designed for assessing pain and functional limitations in the cervical spine region. It consists of 10 sections, 2 related to pain and 8 related to daily activities. Responses are classified from 0 to 5, and the total score is presented on a scale of 0–50 or as a percentage (0–100%) indicating the degree of disability [10].

AIS (Acceptance of Illness Scale) — Developed by B.J. Felton, T.A. Revenson, and G.A. Henrichsen, and adapted to the Polish language by Z. Juczyński, this scale measures the level of acceptance of illness. Greater acceptance of illness is associated with easier adaptation to the limitations associated with the disease. The total score ranges from 8 to 40, representing the degree of illness acceptance. The following scoring ranges are commonly used: low acceptance (scores below 19), moderate acceptance (scores from 20 to 29), and high acceptance (scores above 30) [11].

Katz Scale (ADL) — This scale assesses the patient's independence in performing activities of daily living, such as personal hygiene, dressing and undressing, eating, mobility, and control of basic physiological functions. The scoring ranges from 0 to 6, where a score of 5–6 indicates full functionality, 3–4 indicates moderate disability, and below 2 indicates significant disability [12].

WHOQoL-BREF (World Health Organization Quality of Life-Bref) questionnaire — This questionnaire consists of 26 questions and allows for the assessment of quality of life in four domains: physical, psychological, social, and environmental. The scale also includes questions for separate analysis, including individual and overall assessment of quality of life and self-rated health. Responses are scored from 1 to 5. A higher number of points indicates better quality of life [13].

The analysis of quantitative variables (expressed as numbers) was conducted by calculating the mean, standard deviation, median, quartiles, minimum, and maximum. The analysis of qualitative variables (not expressed as numbers) was conducted by calculating the count and percentage of occurrences for each value.

To compare the quality of life between two groups, the t-test was used when the distribution of quality of life scores in these groups was normal, while the Mann–Whitney U test was used in the case of non-normal distribution.

Correlations between quality of life and quantitative variables were analyzed using the Pearson correlation coefficient when both variables had a normal distribution, or the Spearman correlation coefficient in the case of non-normal distribution. The normality of variable distributions was assessed using the Shapiro–Wilk test. A significance level of 0.05 was adopted in the analysis. Therefore, all p-values below 0.05 were interpreted as indicating significant relationships. The analysis was performed using R software, version 3.5.1.

Results

The average pain intensity was 7.02±1.13 on a scale of 0–10, ranging from 5 to 9 points. For the AIS (Acceptance of Illness Scale) questionnaire, there are no established norms that define what scores indicate high or low levels of illness acceptance. The range of scores on the scale falls between 8 and 40 points, with higher scores indicating greater acceptance of one's own illness. However, the authors of the questionnaire have provided scores from their own research studies for various clinical groups. In their own studies, the average level of illness acceptance was found to be 26.52±6.61 points (Table 2).

Table 2. Pain intensity and the degree of acceptance of the disease

Statistical analysis							
N	$\bar{x}$	SD	Me	Min	Max	Q₁	Q₃
Pain intensity							
106*	7.02	1.13	7	5	9	6	8
AIS [points]							
107	26.52	6.61	26	8	39	22	32

*One respondent did not report pain intensity; N — number of observations; $\bar{x}$ — mean; SD — standard deviation; Me — median; Min — minimum value; Max — maximum value; Q₁ — lower quartile; Q₃ — upper quartile

Significant disability was reported by 2 respondents (1.87%), moderate disability by 5 respondents (4.67%), and full functionality by 100 individuals (93.46%) on the ADL (Activities of Daily Living) scale.

The impact of thoracolumbar spine pain on the functioning in daily life of the respondents, as assessed by the ODI (Oswestry Disability Index) questionnaire, is as follows: 14 individuals (13.08%) experience mild disability, 44 individuals (41.12%) experience moderate disability, 33 individuals (30.84%) experience severe disability, and 16 individuals (14.95%) experience extreme pain and disability. The impact of cervical spine pain on the functioning in daily life of the respondents, as assessed by the NDI (Neck Disability Index) questionnaire, is as follows: 29 individuals (27.10%) reported no disability, 30 individuals (28.04%) reported mild disability, 37 individuals (34.58%) reported moderate disability, 8 individuals (7.48%) reported severe disability, and 3 individuals (2.80%) reported extreme pain and disability (Table 3).

Table 3. ODI and NDI Disability Assessment

Points	Interpretation	N	%
ODI			
0–4	No disability	0	0.00
5–14	Mild disability	14	13.08
15–24	Moderate disability	44	41.12
25–34	Severe disability	33	30.84
35–50	Extreme suffering and disability	16	14.95
NDI			
0–4	No disability	29	27.10
5–14	Mild disability	30	28.04
15–24	Moderate disability	37	34.58
25–34	Severe disability	8	7.48
35–50	Extreme suffering and disability	3	2.80

N — number of observations

According to the responses to the questions regarding the perception of quality of life and health, the average rating of quality of life by the respondents is 3.5 points (SD=0.76), indicating that they assess their quality of life to be between good and average (neither good nor bad). The average rating of their own health by the respondents is 2.54 points (SD=0.78), indicating that they assess their health to be between unsatisfactory and average (neither satisfactory nor unsatisfactory). The respondents rated their quality of life highest in the social domain, slightly lower in the psychological domain, and lowest in the environmental and physical domains (Table 4).

Among the respondents, only the quality of life in the social domain was found to be dependent on age, as the p-value was less than 0.05. The quality of life in the social domain was significantly higher in individuals below the age of 60 (15.07±2.26) compared to those above the age of 60 (14.17±2.63). There were no significant

Table 4. Assessment of the quality of life in the study group (N=107)

WHOQoL-BREF	$\bar{x}$	SD	Me	Min	Max	Q₁	Q₃
Q₁ Overall quality of life	3.5	0.76	4	1	5	3	4
Q₂ Self-assessment of health condition	2.54	0.78	3	1	4	2	3
Domain 1: Physical health	11.24	2.51	11	5	18	10	13
Domain 2: Psychological	14.38	2.33	15	7	20	13	16
Domain 3: Social relationships	14.42	2.55	15	9	20	12	16
Domain 4: Environment	13.77	2.11	14	8	18	12	16

$\bar{x}$ — mean; SD — standard deviation; Me — median; Min — minimum value; Max — maximum value; Q₁ — lower quartile; Q₃ — upper quartile

relationships (all p>0.05) between gender and quality of life. There were no significant relationships between place of residence and quality of life (all p>0.05). Respondents in relationships had significantly better quality of life in the psychological domain (14.83±2.25 vs. 13.72±2.34) and environmental domain (14.14±2.14 vs. 13.23±1.99) compared to individuals who were single. The perception of quality of life and health (3.83±0.76 vs. 3.39±0.73), as well as the quality of life in the physical domain (12.52±2.49 vs. 10.75±2.4) and psychological domain (15.14±2.05 vs. 14.09±2.4), were significantly influenced by work activity, as the p-value was less than 0.05. Higher quality of life was observed in individuals who were actively employed. There were no significant relationships (all p>0.05) between the nature of work and comorbidities with the quality of life.

The quality of life in each domain was significantly influenced by body weight, as the p-value was less than 0.05. Individuals with normal weight and underweight had higher quality of life compared to those who were overweight and obese.

Analysis of the impact of the results of individual tools on the quality of life of the WHOQoL-BREF questionnaire

The perception of quality of life and health, as well as the quality of life in the physical, psychological, and environmental domains, are significantly and negatively correlated with the intensity of pain, as the p-value is less than 0.05. This means that as the intensity of pain increases, the quality of life in these domains decreases (Table 5).

The perception of quality of life and health, as well as the quality of life in the physical, psychological, and environmental domains, are significantly and negatively correlated with the ODI score and NDI score, as the p-value is less than 0.05. This means that as the ODI score (degree of disability) increases, the quality of life in these domains decreases (Table 5).

The perception of quality of life and health, as well as the quality of life in the physical, psychological, social, and environmental domains, are significantly and positively correlated with the AIS score, with a p-value less than 0.05. This means that as the level of acceptance of the disease (indicated by a higher AIS score) increases, the quality of life in these domains also increases. In other words, a higher level of acceptance of the disease is associated with a higher quality of life in these aspects (Table 5).

Perception of quality of life and quality of life in the physical, psychological, and environmental domains significantly and positively correlate with the result of activities of daily living (ADL) (as p<0.05). Therefore,

Table 5. Correlation of individual factors on the quality of life

WHOQoL-BREF	Correlation with pain intensity (VAS)			
	Correlation coefficient	p*	Dependency direction	The power of dependence
1	2	3	4	5
Q₁ Overall quality of life	−0.458	p<0.001 NP	Negative	Weak
Q₂ Self-assessment of health condition	−0.543	p<0.001 NP	Negative	Mean
Domain 1: Physical health	−0.626	p<0.001 NP	Negative	Mean
Domain 2: Psychological	−0.382	p<0.001 NP	Negative	Weak
Domain 3: Social relationships	−0.165	p=0.091 NP	–	–
Domain 4: Environment	−0.29	p=0.003 NP	Negative	Very weak

Table 5. Continued

1	2	3	4	5
Correlation with ODI				
Perception of quality of life	–0.652	p<0.001 NP	Negative	Mean
Perception of health	–0.545	p<0.001 NP	Negative	Mean
Physical field	–0.542	p<0.001 NP	Negative	Mean
Psychological field	–0.321	p<0.001 NP	Negative	Weak
Social Field	–0.155	p=0.131 NP	–	–
Correlation with NDI				
Perception of quality of life	–0.218	p=0.024 NP	Negative	Very weak
Perception of health	–0.243	p=0.012 NP	Negative	Very weak
Physical field	–0.24	p=0.013 NP	Negative	Very weak
Psychological field	–0.249	p=0.01 NP	Negative	Very weak
Social Field	–0.164	p=0.091 NP	–	–
Environmental field	–0.172	p=0.076 NP	–	–
Correlation with AIS				
Perception of quality of life	0.671	p<0.001 NP	Positive	Mean
Perception of health	0.588	p<0.001 NP	Positive	Mean
Physical field	0.731	p<0.001 NP	Positive	Strong
Psychological field	0.635	p<0.001 NP	Positive	Mean
Social Field	0.397	p<0.001 NP	Positive	Weak
Environmental field	0.55	p<0.001 NP	Positive	Mean
Correlation with ADL				
Perception of quality of life	0.323	p=0.001 NP	Positive	Weak
Perception of health	0.057	p=0.559 NP	–	–
Physical field	0.277	p=0.004 NP	Positive	Very weak
Psychological field	0.273	p=0.004 NP	Positive	Very weak
Social Field	0.07	p=0.474 NP	–	–
Environmental field	0.271	p=0.005 NP	Positive	Very weak

p* — normal distribution of both correlated variables, Pearson's correlation coefficient; NP — non-normal distribution of at least one of the correlated variables, Spearman's correlation coefficient

the higher the ADL score, indicating greater functionality, the higher the quality of life in these domains (Table 5).

Discussion

Degenerative changes in the spine are considered chronic diseases with a long-term course. The ongoing chronic disease process leads to negative emotions and physical discomfort. Untreated or late-stage treated changes contribute to complications, recurrent pain symptoms, and disability, ultimately reducing quality of life. Patients often underestimate the consequences of untreated conditions, mistakenly believing that the symptoms will resolve spontaneously [14]. The attitude adopted by the patient towards the disease directly affects their quality of life and depends on various factors such as personality, acceptance of the disease, coping mechanisms for stress, pain perception, and the support received from loved ones. Acceptance of the disease is crucial and is synonymous with adopting a positive attitude towards the situation, leading to an increased level of quality of life [15]. In our own research, the average score for disease acceptance (AIS) was 26.52 points on a scale of 8–40, indicating a moderate level of disease acceptance among patients treated for degenerative changes in the spine. This score was noticeably higher than in the groups examined by the authors of the AIS questionnaire.

The average score for patients with back pain in the studies conducted by the authors was 20.51 points. Similar results were obtained by Kupcewicz et al. when

examining patients with spinal discopathy. According to her, individuals with this condition face many problems and difficulties, and the way they cope with these challenges significantly impacts disease acceptance and quality of life [16]. In the study by Smoleń et al., patients undergoing oncological treatment had a lower level of disease acceptance compared to those suffering from degenerative changes in the spine, with a score of 22.84 points. This level of acceptance varied based on the type of cancer, treatment method, and patient's age [17].

The results obtained in our own research support the thesis of Kocjan, who suggests that despite functional limitations and their impact on various aspects of human existence, back pain provides ample opportunities for conservative treatment. The level of disease acceptance is higher in this condition due to a better prognosis compared to other chronic and incurable diseases [18,19].

Patients with degenerative changes in the spine struggle with pain, which evokes fear, terror, and a sense of helplessness, ultimately reducing their quality of life. They fear disability, dependence, and exclusion from life. In our own research, it was demonstrated that all participants reported pain symptoms, with the intensity ranging from 6–8 points on the VAS scale. Miller et al. found that pain symptoms associated with degenerative changes occurred daily or frequently, with a strong or moderate level of intensity [20]. Similarly, Gajewski et al. reported that participants experienced pain symptoms related to the musculoskeletal system with a moderate to strong intensity [21]. Similar results were observed by Kozłowski et al. in their study on individuals over 60 years of age, where higher values on the 10-point VAS pain scale were more frequently selected. Problems related to back pain worsen with age, and the prevalence among individuals above 55 years of age reaches 98% of the population. Globally, 75–85% of the population experiences back pain [22].

In addition to discomfort, pain symptoms also disrupt the functional ability of the respondents. The conducted research using the ODI and NDI questionnaires demonstrates that lower back pain is more common and creates greater functional problems, as it affects 100% of the participants. Similar results were obtained by Lorencowicz et al. According to their study, the lumbar spine is the most vulnerable to the harmful effects of civilization. Participants acknowledged that chronic back pain causes discomfort and hinders the performance of basic activities [23]. These studies confirm that pain is a constant element of degenerative spine disease, limiting functioning in daily life. It leads to increasing disability and becomes a factor that reduces the assessment of quality of life. According to numerous scientific reports, there is an inseparable relationship between the presence of pain symptoms, the emotional functioning of patients, and the perception of quality of life.

There is a correlation between personality traits, emotional functioning, and quality of life [24]. Sociodemographic factors such as age, place of residence, gender, marital status, and health status can also have a significant impact on quality of life. In our own research, respondents rated their quality of life lower than their health status. Respondents rated their quality of life highest in the social domain, slightly lower in the psychological domain, and lowest in the environmental and physical domains. Contrasting results were obtained by Talaga et al., who analyzed the overall assessment of quality of life in specific domains. Despite health issues, the physical domain was not rated low, while the psychological domain obtained the lowest score. This indicates a diverse selection of groups [25]. Our own research confirms that age and marital status had a significant impact on quality of life, especially in the psychological, social, and environmental domains. Occupational activity also proved to be significant. Individuals who were employed had a better perception of quality of life and health.

Similar results were obtained by Kozłowski in his study, where working individuals rated their quality of life higher in all domains compared to non-working individuals [22]. Patients who were overweight or obese rated their health and quality of life lower in all domains compared to those with normal body weight. No correlation was observed between quality of life and place of residence, gender, or coexisting diseases. The conducted research demonstrates that despite significant pain symptoms and functional disability, the respondents did not rate the quality of their life too negatively, as they described it as good or average. However, undoubtedly, the ability to independently perform daily activities affects the quality of life. Self-perception of health and a high sense of quality of life decrease with increasing disability. Therefore, promoting a healthy lifestyle, especially physical activity, among patients is crucial as it will have an impact on improving functionality and independence in daily activities, thus improving their quality of life.

Conclusions

Patients with degenerative changes in the spine have a relatively good quality of life and a moderate level of disease acceptance. All participants experience moderate intensity back pain symptoms. Age, marital status, occupational activity, body mass index, pain intensity, and degree of disability all have an impact on quality of life.

Implications for Nursing Practice

Individualized approach to treatment: Since patients with this condition have various factors influencing their quality of life, it is important to apply an individualized approach to treatment. This allows for planning a treatment that is tailored to their specific needs and preferences.

Pain management: Back pain is a common symptom in patients with degenerative changes in the spine. To improve their quality of life, appropriate pain management methods should be implemented to help reduce pain.

Rehabilitation and physical therapy: Physical activity can play a significant role in maintaining the quality of life for patients with degenerative changes in the spine. Rehabilitation programs and physical therapy can aid in increasing spinal stability, reducing pain, and improving mobility.

Patient education: It is important for patients to be well-informed about their condition, its impact on their quality of life, and available treatment options. Educating patients about healthy lifestyle practices, pain coping techniques, proper body posture, and risk factor reduction can help them better manage their condition.

Collaboration among specialists: Due to the diverse range of factors affecting the quality of life for patients with degenerative changes in the spine, it is crucial for specialists from various medical fields, such as doctors, physiotherapists, psychologists, to work together to provide comprehensive care. Collaboration among specialists can help ensure optimal treatment and support for patients.

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