



## RESEARCH ARTICLE

### PERCEPTION OF QUALITY OF LIFE AT PATIENTS AFTER SURGERY OF DISC HERNIATION

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#### ABSTRACT

**Objective:** Disc herniation affects the life of person in all parts of life, physically, mentally and socially. From performing activities of daily living, movement is limited, patients are often dependent on the help of others, the thinking and behavior of the patient are changing. The overall assessment of the perception of quality of life is change at least one year after surgery of intervertebral discs.

**Design:** to ascertain the perception of quality in the daily activities of life after the surgery of disc herniation in area of the bio - psycho - social needs.

**Results:** For diagnostic purpose of the quality of life is also patients after surgery of disc herniation we used the questionnaire SF 36 (36-Item Health Survey Short Form 36 Health Subject Questionnaire). Group of respondents were patients after surgery of disc herniation n = 86 from neurosurgery clinics in Slovakia, n = 86.

**Conclusions:** We can state that the quality of life at patients after surgery of disc herniation only slightly improved and persist restricted movement in the damaged area, problems with lifting the heavy items and back pain. In our case of n = 86 respondents showed even 84% of respondents that their normal daily activities are causing problems despite of the successful surgery of the disc herniation. 95% report that they still experience difficulties in carrying out daily activities and even 33% at patients still suffer from severe pain, preventing them from normal activities. We found that 68% of respondents indicate that their normal daily activities cause problems because of lingering emotional condition, which is affected by fear, anxiety, depression and other conditions. Negative feelings such as anxiety, depression, sadness, exhaustion, fatigue, confirmed even the 52% at patients. 48% experience a positive emotional condition. From the respondents view the social support and social contacts are after spine surgery rated in the intensity and frequency as relatively restrictive. The biggest social support, respondents receive from the family, that often insure the rehabilitation and other available services.

#### INTRODUCTION

In the last two decades, the quality of life is considered as a concept that applies on the individual, not on economic or social conditions and of the major became the research of the quality of life, associated with healthy subjects (HRQOL = Health-Related-Quality of Life) (Chisholm, Healey, Knapp, 1997; Draper, 2005). Quality of life subject to health - Health Related Quality of Life - HRQOL, thus the quality of life that is affected by health involves subjective perception of health by individual, but also the perception of vital functions in health, physical and emotional sphere (Vurm 2007 Lebow *et al.*, 2012). This concept can be characterized as subjective wellbeing associated with the disease, treatment and side effects of therapy (Payne, 2005).

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That mean, when initiating therapy, we monitor desirable and adverse clinical indicators, as well as objective and subjective feelings of physical and mental state of the patient, that is e.g. fatigue, pain, emotions, self-care (Payne, 2005). One's perception of quality of life in daily activities is very broad concept, multifactorial affected with physical health of individual, psychological state, personal beliefs, social relations and relations to key areas of the environment (Vaďurová, Mühlbacher, 2005). WHO defines health as a state of complete physical, mental and social well-being, not only the absence of disease. This definition implies that the measurement of health status and effects of the provision of health care must include not only the severity of the disease, but also estimate of well-being. And it relates to assessment of measuring quality of life. According to the WHO the quality is considered to be a situation that is perceived certain individually by certain culture, the system of value in relation to expectations, interests, and evaluation criteria.

Also it influenced by individual mental health, social relationships, physical health and degree of independence (Džuka, 2004). Gurková, 2011 defines that this is primarily a subjective feeling of well-being that include physical, mental, social and spiritual dimension:

Quality of life was measured in the following domains:

- Physical health - fatigue, sleep, rest, discomfort, energy.
- Psychological area - thinking, memory, concentration, learning, positive and negative feelings, body image.
- Independence - the ability to work, mobility, daily activities, dependence on medicines.
- Social relationships - personal relationships, support, sexual activity.
- Environment - finance, home environment, freedom, security, relax, leisure time, activity, availability and quality of health and social care.
- Religion - faith, personal beliefs, spirituality (WHO, 1999).

Degeneration of intervertebral discs is associated with a sedentary work, total physical activity, turning, lifting, stretching, vibration while driving, improper posture and bad formula at work. So poor work factors increase the burden and stress that is placed on the back (Häkkinen *et al.*, 2005 Kagaya *et.al* 2005 Heider *et.al*. 2007). Information on working conditions report that 30% of employed workers in Europe suffer from back pain, which belong to the top of the list of work-related disability. Other studies report increase in a variety of injuries, including back injuries related with manual work and lifting heavy loads. Trouble-free life, no restrictions are causing a sudden moment of discomfort, the feeling of strong pain. It starts with the cycle of neurology, neurosurgery, rehabilitation, examinations. Difficulties in walking, dependency on others. Frustration occurs, chaos in the head, fear and anxiety restriction of daily activities of living.

**Design:** to survey the perception of quality of life in the daily activities at patients life after surgery of disc herniation in physical, mental and in the social sphere, through the questionnaire SF 36 (Short Form 36 Health Subject Questionnaire).

**Results:** In research participate  $n = 86$  respondents (38% women and 62% men). The age limit of the respondents ranged from 18 to 61 and above. The largest sample consisted of respondents aged 31-50 years which was 64%. The research sample consisted at patients after surgery of disc herniation at least one year after surgery on intervertebral discs followed in neurosurgery clinic in Slovakia from the Hospital.

**Methodics:** For diagnosis mapping quality of life after surgery of disc herniation we used questionnaire SF 36 (Short Form 36 Health Subject Questionnaire) questionnaire Short Form 36 (SF-36) by authors Ware and Sherbourne (1992) is the most widely used questionnaire to assess the quality of life and the parametric values surveyed cross-culturally belong to the so-called. Gold standard tool for measuring the quality of life associated with health - subjective determinants of health. The questionnaire contains 36 questions focused on the last four weeks, divided into 8 dimensions. For each dimension can be determined T - score between 0-100, which expresses the

ingredient of health and affection of the normal activities of the patient, where zero corresponds to a lower health status and 100 to the best health status. Dimensions are: objective physical functions (PF), social functions (SF), limitations in physical roles (RP), the limitations in emotional roles (RE), managing emotions and subjective well-being (MH), vitality (VT), pain (BP), subjective assessment of the health (GH), perceived health change (CH). In addition to basic dimensions questionnaire allows the evaluation of summary dimensions: perceived physical health (SPH), perceived mental health (SMH), perceived health status (PHS).

Quality of Life Questionnaire of the WHO: quality of life questionnaire of the World Health Organization (Health Organization Quality of Life Assessment WHOQOL) was created by representatives of 15 research centers in two versions: WHOQOL-100 and abbreviate version WHOQOL-BREF with 26 items, there are also models for specific diseases. The author of Czech version is the workplace Laboratory of Social Psychiatry Prague (Dragomirecká *et Bartoňová*, 2006). Serve to assessing QoL groups or population until 65 years. Does not provide score or index of quality of life, but the result is a profile domains of quality of life. They are standardized for Czech population with the test reliability and validity. Sickness Impact Profile (SIP): questionnaire contains 136 items presenting daily activities (sleep, relaxation, emotional life, body care, physical activity, taking care of household, mobility, social interaction, communication, work, leisure activities, nutrition). Ranges are fill by patient or certified person. Turnaround time is 30 minutes. There is a shorter version of 68 questions (Burks *et Johnson*, 2000). It was created for the purpose of widespread use, regardless of the type and severity of the disease, demographic and cultural aspects. The comparison of qualitative variables finding out the frequency of occurrence, we used Chi-square test.

## RESULTS

Based on statistical analysis, we present the data obtained in the individual components of the SF 36, comparison by gender to physical activity, mental and social activity.

**Table 1. Health status restricts the activities of the day**

	Yes, quite limited	Yes, it limited a little	No, not limited at all
Men	245	207	111
Women	167	101	29
	412	308	140
The expected frequency	269,71628	201,63256	91,6511628
	142,28372	106,36744	48,3488372
Result of chi-square test	8,271E-05		

Achieved result  $p = 8.271 \cdot 10^{-5}$  is significantly smaller than the level of 0.05, which means in general health of the patients during the day negatively affect normal daily activities. When compared to women, even though not an equal number of respondents women- men, we found that men suffer more with physical limitations than women. The achieved level of statistical significance is less than 0.05, as the results show that men in the last four weeks had at least one of the named problems (e.g. reduce the time to work or take other action, reduce certain types of tasks or activities, expending more efforts to carry out the work or activities) compared with women who have these common activities better managed.

**Table 2. The health issues over last four weeks because of health status**

	Yes	No
Men	196	16
Women	130	2
	326	18
The expected frequency	200,90698	11,093023
	125,09302	6,9069767
Result of chi-square test	0,0145593	

The achieved level of statistical significance is greater than 0.05. On the basis of statistical indicators, we concluded, to improve the quality of life for women after surgery of disc herniation physically and they are able to perform activities of daily living better than men after surgery of disc herniation. Reached the level of statistical significance is greater than 0.05 - confirms our assumption and therefore that men of their pain after surgery prevented quite a lot of routine work compared to women.

The achieved level of statistical significance is greater than 0.05, this means that the men greatly hinder their emotional health problems in social life. Women after surgery of disc herniation did not have to restrict of meetings with friends and restrictions on the conduct social activities.

**DISCUSSION**

Laxton W. and G. Perrin R., (2003), D. Heider (2007) reported in his research that the pain and mobility problems associated with the disease reduces the ability to work at home and at work. Generally, the patient's condition during the day negatively affect normal daily activities. I agree with the authors due to post-surgery mode and the results obtained show us that the majority of patients after surgery depends on the others, respectively on the family members. They need help in activities that have manage in the full health without help. Whether wearing the purchase, dressing, bathing and other daily living activities.

**Table 3. How much pain you have had in the last four weeks**

	None	Very mild	Mild	Medium	Strong	Very strong
Men	0	0	10	26	14	3
Women	0	0	7	15	11	0
	0	0	17	41	25	3
The expected frequency	0	0	10,4767442	25,2674419	15,40698	1,848837
	0	0	6,52325581	15,7325581	9,593023	1,151163
Result chi-square test	0,5097197					

**Table 4. How much the pain was defend the normal business activities**

	Not at all	A little	Moderate	Quite a lot	Very strongly	Not at all
Men	0	0	7	43	3	0
Women	0	0	6	25	2	0
	0	0	13	68	5	0
The expected frequency	0	0	8,01162791	41,9069767	3,081395	0
	0	0	4,98837209	26,0930233	1,918605	0
Result chi-square test	0,8135112					

**Table 5. How did you feel during the last four weeks**

	All the time	Mostly	Quit often	Sometimes	Rarely	Never
Men	5	24	88	85	36	27
Women	11	30	66	46	9	3
	16	54	154	131	45	30
The expected frequency	9,8604651	33,27907	94,9069767	80,7325581	27,73256	18,48837
	6,1395349	20,72093	59,0930233	50,2674419	17,26744	11,51163
Result chi-square test	7,397E-06					

**Table 6. How often do you hold back your health or emotional problems in social life (visiting friends, neighbors, relatives, ...)?**

	All the time	Most of the time	Sometimes	Rarely	Never
Men	16	15	11	5	6
Women	15	12	4	2	0
	31	27	15	7	6
The expected frequency	19,104651	16,639535	9,24418605	4,31395349	3,697674
	11,895349	10,360465	5,75581395	2,68604651	2,302326
Result chi-square test	0,1570757				

Achievement  $p = 7.39 \times 10^{-6}$  is significantly smaller than the level of 0.05, which means that the women did not feel the last four weeks of negative emotional expressions ( anxiety, depression, sadness, tiredness and fatigue) as much as it was for men. On the basis of statistical indicators, we concluded that women emotionally after surgery of disc herniation feel less of nervousness, sadness, tension than men.

Pain up to 71% at patients limited moderate activities, 50% wear purchase, 64% need help with bathing and dressing, also walking up the stairs, which makes the problem for the majority of respondents. In our survey, we found that most at patients report, an extension of time to carry out normal activities and expending more effort and energy to work. Several authors (Häkkinen *et al*, 2005 Schneider, *et.al*, 2007)

indicate in their studies persistence of pain after surgery even 12 months with what we have also identified. When comparing between men and women, we found the perception of quality of life for women has improved after the surgery of disc herniation and they are physically able to perform activities of daily living better than men after surgery of disc herniation. Evaluating the results of the psychological field 4 weeks after surgery 52% of respondents complained of fatigue, 40% for depression and sadness and 58% at patients experienced often enough nervousness. Compared with research, authored by Lebow (2012), which compares the negative emotional states after surgery he found that with decreasing pain intensity decreased feelings of anxiety and depression. To fully improve mental status occurred after rehabilitation and the disappearance of pain. Also, the research, conducted by Heider (2007) it is concluded that in most of the patients their emotional feelings are related to the intensity of pain. The researchers found an increased incidence of depression, anxiety, dissatisfaction with financial situation, reflected on family relationships. Laxton and Perrin (2003) found in his research that patients suffering from anxiety have a reduced incentive to rehabilitation and post-surgery results are worse. On the other hand, the psychological aspect is closely linked with the social and physical zone, so if patients will feel less pain and cope with every day care for themselves better and they social sites will not be limiting, than their mental area will be every day on the better way to get rid of unpleasant emotional feelings. Our research tells us that the pain of men after surgery prevented them quite a lot of routine work compared to women. Women did not feel with comparison with men the problems in their emotional state in normal daily activities, as well as women did not feel in the last four weeks of negative emotional expressions (related to anxiety, depression, sadness, exhaustion and fatigue) as much as it was for men. Women emotionally after surgery of disc herniation are feel nervousness, sadness, tension less than men. Social support and social contacts are after spine surgery from the perspective of the respondents rated the intensity and frequency as relatively restrictive.

The biggest social support respondents receive from the family, which is often also bucked the rehabilitation and other available services. Compared with the research sample in Germany (Heider, 2007), which divided the patients on the group of single and group in a partnership, they found that the group of single in social relations need increased support and they have more difficulties to deal with diseases, such as patients who have the support of people close by. The other research (Laxton and Perrin, 2003) showed that after spinal surgery in the disc herniation was the lack of social support due to the inconvenience as well as increased nervousness and family relationships than in patients who didn't have post-surgery complications. They predicted that with increased of social support to them will facilitate the quality of life after of spinal surgery. To some extent, it also confirmed, especially among people who had the their loved one close. In our survey women, despite health and emotional problems after surgery of disc herniation, manage their condition better and it does not prevent them in building social contacts and social life than men. We can say that the quality of life at patients after surgery of disc herniation only slightly improved and remains restricted movement in the damaged area, problems with lifting, and back pain.

Which it is also in accordance with previous research in this area present in patients of either gender. Therefore it would be appropriate to focus future research on the possibilities of preventive measures in relation to the prevention of the disc herniation.

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