



# CORRELATION OF PHYSICAL AND MENTAL COMPONENTS OF HEALTH-RELATED QUALITY OF LIFE, FUNCTION AND PAIN IN PATIENTS WITH CHRONIC NONSPECIFIC LOW BACK PAIN

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**SUMMARY** – Health-related quality of life (HRQoL) is significantly reduced in patients with chronic nonspecific low back pain. In these patients, the relationship between physical and mental health with quality of life has not been adequately studied, nor has the relationship between functional disability and pain intensity. The aim of this study was to evaluate the relationship between the physical and mental components of HRQoL and their association with pain intensity and functional disability in patients with better and worse physical and mental health. In addition to sociodemographic and baseline data, disease-specific measures were obtained using standard questionnaires, i.e., the visual analog scale for pain, the Roland-Morris Disability Questionnaire for functional capacity in patients with chronic low back pain, and the Brief Health-Related Quality of Life Questionnaire (SF-36). Statistical significance was determined at  $p < 0.05$ . The study involved 129 consecutive patients (33 men and 96 women) with chronic low back pain. A significant positive association was found between overall HRQoL, height, and body weight in relation to physical and mental health, but not with body weight in relation to physical health. A negative association was found with age, intensity of movement pain, and functional disability in relation to physical and mental health. An improvement in mental health was found compared to an increase in physical health. Better physical and mental health scores were associated with lower levels of functional disability. In conclusion, the results of this real-life study demonstrated the importance of improving the physical components of HRQoL as it affects assessment of the mental component in patients with chronic low back pain. Moreover, patients with better quality of life rated functional disability lower.

**Key words:** *Back pain, low, chronic; Mental health; Health-related quality of life*

## Introduction

Low back pain is usually defined as pain and discomfort localized below the costal margin and above the inferior gluteal folds, with or without leg pain<sup>1</sup>. The prevalence of low back pain is steadily increasing,

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it is the second leading cause of work absenteeism, and it represents a significant health, social, and economic burden due to its high direct and indirect costs<sup>2</sup>. The complexity in diagnosing and treating patients with low back pain arises from its heterogeneity and from the fact that, despite development of sophisticated diagnostic imaging techniques, it is not possible to determine the exact cause in many patients with low back pain. The situation becomes even more complex considering that the risk of low back pain occurrence and prognosis includes not only somatic but also various psychosocial factors<sup>3,4</sup>. However, for practical reasons (treatment planning, management, and prognosis), it is desirable to classify patients early on the basis of clinical signs, i.e., causes and pathophysiological basis as nonspecific low back pain, low back pain associated with radiculopathy, and low back pain associated with suspected or confirmed serious causes ('red flags')<sup>5</sup>.

In clinical practice, chronic nonspecific low back pain is the greatest challenge both diagnostically and therapeutically. It limits performance of daily activities for a long time, leading to patient disability, often resulting in inability to work due to physical difficulties, but also causing numerous psychological disorders, noting that these relationships are bidirectional<sup>6-8</sup>. It is known that timely access, inclusion in the psychosocial field makes significant contribution to the treatment of patients with chronic low back pain<sup>9</sup>. The quality of life of patients with low back pain depends to a considerable extent not only on the intensity of the pain condition but also on the self-assessment and self-perception, and can be observed in relation to the general attitude towards one's life and its aspects<sup>10</sup>. It should be remembered that mental factors play a very important role in self-assessment of health-related quality of life (HRQoL)<sup>11</sup>. Therefore, it is important to determine to what extent a better or worse assessment of physical health influences the experience of mental health.

The aim of this study was to investigate correlations between the physical and psychological components of HRQoL in patients with chronic nonspecific low back pain. It was hypothesized that patients with better self-rated physical health would also have better self-rated mental health.

## Patients and Methods

The study included 129 patients with a referral diagnosis of chronic nonspecific low back pain who met both the inclusion and exclusion criteria. It was a cross-sectional study conducted from April 18, 2018 to October 30, 2019. The location of the study was Department of Physiotherapy, Zagreb County Health Center, Samobor Branch, Croatia. Inclusion criteria were chronic nonspecific low back pain (for at least three months), pain intensity of at least 4 measured on the visual analog scale (VAS) (0-10), degree of functional disability of at least 5 measured with the Roland-Morris Disability Questionnaire (RMDQ), and age between 40 and 60 years. Exclusion criteria were physical therapy in the past three months, symptoms and signs of radiculopathy (pain, tingling, or muscle weakness distal to the knee, inability to stand and walk on toes-heels), traumatic spinal injury in the past twelve months, urinary and fecal incontinence, acute infections, malignant process in the past five years, pregnancy, severe osteoporosis, inflammatory rheumatic disease, neurologic disease, patients diagnosed with depression and taking antidepressants, diabetes, moderate to severe cardiorespiratory insufficiency, and significant internal medicine comorbidities. The number of enrolled patients complied with the number defined by an appropriate power analysis. The patients who met the inclusion and exclusion criteria initially were given full information about the study and signed an informed consent form.

In addition to a structured questionnaire on general sociodemographic data and a history of low back pain, patient physical and mental status was assessed with standardized instruments for variables of interest selected for this study and previously used in similar studies<sup>8-11</sup>.

The intensity of pain at rest and on movement was measured using the VAS, which is a 10-cm horizontal line with markings at the left end "no pain" and at the extreme right end "most severe pain"<sup>12</sup>. The subject marks his/her assessment of pain intensity with a vertical line along the line, and the result was obtained by measuring distance between this mark and the left end of the line. Functional disability was assessed using the RMDQ, a standard questionnaire used to assess disability in patients with chronic low back pain.

The questionnaire consists of 24 statements describing possible functional disability. Each statement is scored one point, with a total score of 0 representing a condition without any disability and 24 representing the highest possible disability<sup>13</sup>. To determine the level of functional abilities and HRQoL, the Croatian version of the Short Form-36 (SF-36) questionnaire was used, with a score range from 0 to 100 points, where 0 represents poor quality of life and 100 represents excellent quality of life<sup>14,15</sup>. The SF-36 consists of 36 questions divided into eight subscales, which were finally divided into two domains, physical and mental. The classification into better and worse physical and mental health within the quality of life was based on the values of the arithmetic mean of the scores in our subjects. Patients who scored more than 44.61 points in the physical health category of the SF-36 questionnaire were classified as having better physical health. Patients who scored more than 53.95 on the SF-36 questionnaire in the mental health category were classified as having better mental health. Patients did not receive any other form of physical therapy during the study and could take systemic analgesics, except for strong opioid analgesics, which were not changed daily during the study. The study was conducted according to the principles of the 1964 Declaration of Helsinki and its subsequent amendments. Prior to the study, approval was obtained from the Ethics Committee of the Zagreb County Health Center (Class: 510-14/18-01/1046, Reg. No. 238-106-18-1046-4, Samobor, April 18, 2018).

### **Statistical analysis**

Descriptive indicators used to describe the sample were the number of subjects (n), proportion of subjects (%), arithmetic mean, and standard deviation (SD). Pearson's correlation coefficient (R) was used to determine the correlation between pain intensity, functional disability, and HRQoL. Kruskal-Wallis test was used to determine statistical significance of differences between the groups, with post hoc Bonferroni correction for multiple comparisons. Regression analysis was used to determine the relationship between physical and mental health, as well as to determine the extent to which a change in physical health affected mental health. Arithmetic mean was used to divide patients into those with better and worse physical and mental health. The level of statistical significance was

established at  $p < 0.05$ . The IBM Statistica 24 computer program was used on statistical analysis.

## **Results**

Of the total of 129 patients enrolled in the study, there were 96 (74.42%) women and 33 (25.58%) men, mean age  $49.30 \pm 5.47$  years. The sociodemographic and anthropological characteristics showed no significant differences between men and women with better and those with worse physical health according to age, body weight, body height, body mass index, and seniority (Table 1).

No significant differences were found between men and women with better physical health and those with worse physical health considering total duration of low back pain, time of sick leave, intensity of pain at rest and with exercise. When comparing physical health in terms of quality of life and functional capacity, men with better physical health had higher levels of HRQoL ( $p = 0.000$ ) and lower levels of functional limitations ( $p = 0.002$ ) compared to men with worse physical health (Table 2). Women with better physical health also had higher levels of HRQoL ( $p = 0.000$ ) and lower levels of functional disability ( $p = 0.006$ ) compared to women with worse physical health (Table 2).

Differences were found between men and women in self-assessment of mental health. However, there was no significant difference between men and women with better and worse mental health (Table 3).

As for the level of mental health and its association with quality of life and functional disability, men with better mental health had higher levels of HRQoL ( $p = 0.000$ ) and lower levels of functional disability ( $p = 0.000$ ) compared to men with worse mental health (Table 4). Women with better mental health had higher levels of HRQoL ( $p = 0.000$ ) compared to women with worse mental health, while there was no significant difference between women with better and worse mental health in the functional disability study ( $p = 0.238$ ) (Table 4).

The correlation between physical and mental components of HRQoL is shown in Figure 1. A significant positive correlation was found between the physical health quality of life and mental health quality of life. Regression analysis showed that each point of

*Table 1. Sociodemographic and anthropologic characteristics in men and women with above- and below-average physical health*

Variable	Male			Female		
	Above-average physical health (n=22)	Below-average physical health (n=11)	P* value	Above-average physical health (n=7)	Below-average physical health (n=49)	P* value
Age (years)	47±5	46±4	1.000	49±5	52±6	0.131
Work experience (years)	25±6	24±5	0.198	25±7	28±8	0.198
Weight (kg)	94.45±12.48	88.00±12.76	1.000	72.04±11.82	74.65±12.32	1.000
Height (cm)	181.45±7.65	175.18±5.51	1.000	167.28±6.36	166.43±5.55	1.000
Body mass index (kg/m <sup>2</sup> )	28.50±2.78	28.56±3.39	1.000	25.66±3.49	27.02±4.62	0.877

\*Kruskal-Wallis test with post-hoc Bonferroni correction

*Table 2. Clinical characteristics, health-related quality of life, and functional disability in men and women with above- and below-average physical health status*

Variable	Male			Female		
	Above-average physical health (n=22)	Below-average physical health (n=11)	P* value	Above-average physical health (n=47)	Below-average physical health (n=49)	P* value
Low back pain duration (months)	116±118	100±88	0.752	109±97	121±94	0.752
Low back pain sick leave (days)	15±34	22±53	0.522	5±0	12±29	0.522
Pain in movement (points)	47.14±9.00	52.73±9.87	0.067	47.36±8.31	51.39±9.83	0.067
Pain at rest (points)	43.09±3.88	46.09±4.39	0.151	48.04±9.00	48.49±9.50	0.151
HRQoL (points)	65.86±10.65	37.16±8.90	<b>0.000</b>	55.54±9.81	36.08±8.38	<b>0.000</b>
Functional disability (points)	8.14±2.66	13.00±4.10	<b>0.002</b>	9.17±3.16	11.20±2.81	<b>0.006</b>

HRQoL = health-related quality of life; \*Kruskal-Wallis test with post-hoc Bonferroni correction

*Table 3. Sociodemographic and anthropologic characteristics in men and women with above- and below-average mental health*

Variable	Male			Female		
	Above-average mental health (n=24)	Below-average mental health (n=9)	P* value	Above-average mental health (n=37)	Below-average mental health (n=59)	P* value
Age (years)	46±5	47±3	1.000	51±5	50±6	1.000
Work experience (years)	24±6	25±3	0.415	27±8	26±7	0.415
Weight (kg)	95.46±11.22	83.89±13.37	0.479	74.16±11.54	72.88±12.49	1.000
Height (cm)	181.08±7.53	174.78±5.63	1.000	166.76±6.61	166.90±5.55	1.000
Body mass index (kg/m <sup>2</sup> )	28.94±2.58	27.40±3.68	1.000	26.66±3.74	26.16±4.40	1.000

\*Kruskal-Wallis test with post-hoc Bonferroni correction

Table 4. Clinical characteristics, health-related quality of life and functional disability in men and women with above- and below-average mental health

Variable	Male			Female		
	Above-average mental health (n=24)	Below-average mental health (n=9)	P* value	Above-average mental health (n=37)	Below-average mental health (n=59)	P* value
Low back pain duration (months)	105±115	124±89	0.535	122±111	111±84	0.535
Low back pain sick leave (days)	11±31	34±58	0.151	6±14	11±26	0.720
Pain in movement (points)	46.79±9.42	54.89±7.37	0.074	47.24±7.98	50.78±9.86	0.365
Pain at rest (points)	43.25±4.06	46.33±4.09	0.143	48.30±9.07	48.25±9.37	0.143
HRQoL (points)	63.97±12.14	35.83±8.97	<b>0.000</b>	57.75±9.46	38.00±9.09	<b>0.000</b>
Functional disability (points)	8.00±2.34	14.44±3.40	<b>0.000</b>	9.43±3.47	10.69±2.84	0.238

HRQoL = health-related quality of life; \*Kruskal-Wallis test with post-hoc Bonferroni correction

improvement in physical health improved the mental health quality of life by a mean of 0.7383 points.

There was a significant positive correlation between the physical health quality of life and general quality of life in terms of health ( $R=+0.928$ ,  $p=0.000$ ) and body height ( $R=+0.272$ ,  $p=0.002$ ), while a significant negative correlation was found between physical health

quality of life and age ( $R=-0.238$ ,  $p=0.007$ ), intensity of movement pain ( $R=-0.292$ ,  $p=0.001$ ), and functional disability ( $R=-0.468$ ,  $p=0.000$ ) (Table 5). In addition, a significant positive correlation was found between mental health quality of life and general quality of life in terms of health ( $R=+0.877$ ,  $p=0.000$ ), body weight ( $R=+0.268$ ,  $p=0.002$ ), and height ( $R=+0.283$ ,  $p=0.001$ ),

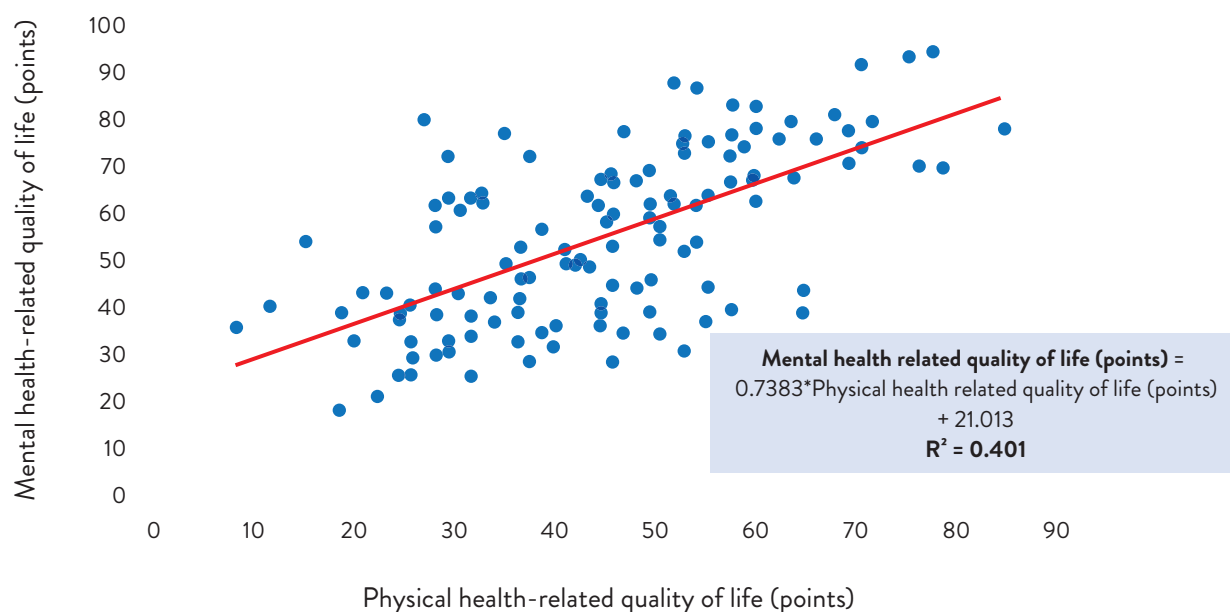


Fig. 1. Correlation between physical and mental health-related quality of life.

Table 5. Sociodemographic, anthropologic and clinical correlates of physical and mental health-related quality of life

Correlation (Pearson's r)	Physical HRQoL (points)	p value	Mental HRQoL (points)	p value
HRQoL (points)	<b>+0.928</b>	<b>0.000</b>	<b>+0.877</b>	<b>0.000</b>
Height (cm)	<b>+0.272</b>	<b>0.002</b>	<b>+0.283</b>	<b>0.001</b>
Weight (kg)	+0.141	0.111	<b>+0.268</b>	<b>0.002</b>
Body mass index (kg/m <sup>2</sup> )	-0.029	0.748	+0.158	0.073
Low back pain duration (months)	-0.048	0.588	-0.006	0.943
Low back pain sick leave (days)	-0.060	0.497	-0.056	0.525
Work experience (years)	-0.083	0.351	-0.060	0.497
Pain at rest (points)	-0.173	0.050	-0.104	0.242
Age (years)	<b>-0.238</b>	<b>0.007</b>	<b>-0.189</b>	<b>0.011</b>
Pain in movement (points)	<b>-0.292</b>	<b>0.001</b>	<b>-0.223</b>	<b>0.032</b>
Functional disability (points)	<b>-0.468</b>	<b>0.000</b>	<b>-0.589</b>	<b>0.000</b>

HRQoL = health-related quality of life

and a significant negative correlation between psychological quality of life and age ( $R=-0.189$ ,  $p=0.011$ ), intensity of movement pain ( $R=-0.223$ ,  $p=0.032$ ), and functional disability ( $R=-0.589$ ,  $p=0.000$ ) (Table 5).

## Discussion

In this study of patients with chronic low back pain, a significant difference was found between men and women with better physical health and those with poorer quality of life and functional limitations. Selection of the age range of 40–60 years was based on previous experience from clinical practice where patients with chronic low back pain most often presented to physical therapy in this age group.

Looking at the distribution in the groups with better and worse physical health, we found that women were evenly distributed, whereas there were twice as many men belonging to the group with better physical health. Distribution regarding the level of mental health showed no difference in men, but in women there was a significantly higher proportion of those with worse mental health. The possible explanation is that our subjects were a working age group, and according to the distribution of jobs, men were performing more physically demanding tasks than

women, which may have resulted in a better physical component. On the other hand, our study women were in the age of menopause, and this could be one of the factors associated with poorer mental health. Given the psychosocial and possibly physical differences among particular populations, it is interesting to compare our results with those of other studies. In a study conducted on a French population ( $N=17249$ ), with a female proportion of 56.7% and mean age of 46.39 (range, 18–98) years), Husky *et al.* found that low back pain was more common in the elderly, in women (41.3%) than in men (34.3%), and in people who performed more physical work; they also showed a stronger association with mental health compared with physical and occupational choice<sup>16</sup>. Chronic low back pain was associated with lower scores on all SF-36 averages and physical disability, and was also a factor associated with physical and mental health<sup>16</sup>. Compared with this population, our subjects were on average a little older, which might be the reason why significant differences were found between men and women with better physical and mental health compared with those with worse in terms of HRQoL and functional disability.

Evaluating mental health of men and women in our study, men with better mental health were found to have higher levels of quality of life and lower levels



of functional disability compared to men with worse mental health. Women with better mental health had significantly higher quality of life, but there was no significant difference in the level of functional disability in women with better compared to women with worse mental health. This could be explained by the degree of functional disability, as both groups self-assessed their disability to be low to moderate.

No significant difference was found in clinical characteristics, i.e., duration of low back pain, days of illness, pain on movement, and pain at rest between men and women with better and those with worse mental health. In a sample of adult patients with musculoskeletal low back, hip, or knee pain, 55% of whom were women, with possible mental health comorbidities, mean age 59 years, Bair *et al.* found that mental health factors were associated with negative main and interaction effects on the number of days of work disability in the past 3 months and several HRQoL domains<sup>17</sup>. Psychological comorbidity was strongly associated with days of functional disability in the past 3 months, and a similar significant pattern of lower quality of life was found among subjects with pain, depression, and anxiety. Additional comorbidity was strongly associated with more severe pain, greater functional disability, and worse quality of life<sup>17</sup>. Our study found that women with better mental health had higher levels of HRQoL, although there was no significant difference in functional disability between women with better mental health and women with worse mental health, and number of sick-leave days. One of the reasons for these findings could be greater and more varied physical activity among women related to family responsibilities and hobbies (gardening, floristry, caring for grandchildren, pets, etc.), so that they perceive functional disability as less of a problem within their chronic pain. Netto *et al.* evaluated 32 patients, mean age 50.97 years, of whom 65.5% were women, who underwent spondylodesis for degenerative changes in the lumbar spine in a prospective cohort study, with data collected before and four months after surgery<sup>18</sup>. Postoperative assessment demonstrated an improvement in all SF-36 studied parameters, but confirmed a significant difference in the following parameters: limitation of physical aspects, pain intensity, degree of functional disability, vitality, emotional and social aspects. The results showed that pain reduction

had a significant impact on the quality of life improvement, and the relationship between quality of life and functional disability was proven<sup>18</sup>. These results are in line with our results. In our study, the anthropologic and clinical correlation of the components of physical and mental health showed a significant positive correlation of total quality of life, height, and body weight in relation to physical and mental health, but not of body weight in relation to physical health. A negative correlation was found with age, intensity of pain on movement, and functional disability from the point of view of physical and mental health. Concerning association of the physical and mental components of the quality of life, there was no correlation with total duration of low back pain, length of sick leave, pain at rest, and body mass index. Regarding these findings, Rodrigues-De-Souza *et al.* in a study of 30 Spanish and 30 Brazilian patients with chronic low back pain comparable in age and sex report that Spanish patients had lower quality of life than Brazilian patients, whereas female patients in Spain had lower mental component of the quality of life as compared with other patients<sup>19</sup>. They found a significant positive association between age and body mass index, functional disability, pain, pain rating index, and moderate pain intensity in Brazilian but not in Spanish patients<sup>19</sup>. Also, age was negatively related to the total physical domain of the quality of life in Brazilian but not in Spanish patients, and the older the patients were, the lower was the physical domain of the quality of life. As for the quality of life, significant differences were found among countries for the physical but not for the psychological domain of the SF-36 questionnaire, with Spanish patients having a lower physical domain of the quality of life than Brazilian patients. Spanish women had a lower overall physical domain compared with Spanish men, Brazilian men, and Brazilian women<sup>19</sup>. Compared with this study, in our study men scored higher mean physical and mental health totals than women, and our results were consistent for physical but not mental health. Indeed, men with better mental health scored higher on the quality of life, but women with worse mental health scored higher than men with worse mental health. A possible explanation for these results could be that our patients were less functionally impaired than men with worse mental health and scored higher on the quality of life. Overall, these results

showed that there were differences among various populations, and point to the complexity of the subject.

Evaluating quality of life in patients with chronic nonspecific low back pain in a study conducted in Hungary, which included 1155 patients, mean age  $45.25 \pm 16.90$  years, 38% of women, Járomi *et al.* found a significant effect of chronic pain duration on the quality of life<sup>20</sup>. Women demonstrated less favorable scores in SF-36 questionnaire compared with men in terms of physical pain, social functioning, emotional role, and physical function, allowing to infer that the diseases represented a greater burden for them. Spinal functional disability score measured by the RMDQ was  $4.81 \pm 4.59$  on<sup>20</sup>. This was a significantly lower value compared with the results in our study. One possible explanation for this difference is that Járomi *et al.* included patients who participated in physical therapy, whereas we used a sample of consecutive patients who did not participate in physical therapy at the time of the study and three months preceding the study.

According to study by Bartley and Fillingim, women are more likely to suffer from chronic pain than men regardless of age<sup>21</sup>, and according to Meucci *et al.*, this risk increases with age, rising linearly from the third decade of life to age 60<sup>22</sup>. Other studies have shown that women had better overall quality of life than men<sup>23</sup>.

In a study by Stefane *et al.*, the relationship between functional disability and physical component of the quality of life was found to be a factor in reducing quality of life<sup>24</sup>. Our research showed better mental health in accordance with better physical health, which speaks in favor of the importance of their interaction. According to Bair *et al.*, decreased quality of life and increased functional disability may be due to increased pain intensity and psychological and somatic comorbidities<sup>17</sup>.

In general, functional disability in patients with nonspecific chronic low back pain is predicted by pain duration, whereas HRQoL is predicted by functional disability<sup>25</sup>. Functional status of patients with nonspecific chronic low back pain and psychological factors determine HRQoL<sup>26</sup> and somatic comorbidities, both in female patients and in patients with higher pain intensity<sup>27</sup>. Our study confirmed a significant

difference between men and women with better rated physical and mental health compared and those with poorer quality of life and functional disability, which is consistent with the work by Klemenc-Ketiš<sup>27</sup>. There was a negative correlation of age, intensity of pain on movement, and functional disability in relation to the physical and mental domains of quality of life, and positive correlation of total quality of life, height, and body weight in relation to the physical and mental domains of the quality of life, but not of body weight in relation to the physical domain.

Rest pain, sick leave, total duration of low back pain, and body mass index were not significantly related to physical and mental health, and this result could possibly be explained by the fact that these factors were less detrimental to the assessment of pain in our patients.

While in patients with acute nonspecific low back pain, pain intensity itself is the predominant problem, in patients with chronic nonspecific low back pain we attribute importance to individual, psychosocial, and work-related factors<sup>28,29</sup>. Studies using new imaging techniques confirm that pain conditions and possible comorbidities with other mental disorders can lead to neurophysiological and structural changes<sup>30-33</sup>.

This research has contributed to better understanding of the physical and mental health aspects of the quality of life *via* functional disability, pain intensity at rest and in movement. The main strengths of the study were clearly defined inclusion and exclusion criteria in a sample of subjects with chronic nonspecific low back pain that reflected clinical practice, the use of standard instruments to measure individual parameters of interest, and the inclusion of multiple health elements in these patients. A limitation of this study was the age range of the respondents between 40 and 60 years, so the conclusions derived from the results could apply primarily to this population, with the additional note that they were predominantly women. The cross-sectional design of the study itself had certain inherent limitations, as the goal of the study was not to determine the effects of interventions on the relationship between the physical and mental components of health. In addition, the inclusion of patients from only one physical therapy unit may have implied a selection bias.



## Conclusion

In our real-life study of patients with chronic nonspecific low back pain, those with better physical health rated his/her mental health better, suggesting its important impact on the physical components of health for prevention and improved perception of the assessed psychological component to ultimately improve the overall quality of life associated with health. These associations verify that chronic nonspecific low back pain is a very complex and serious pain syndrome. Identifying specific aspects of physical and mental health will allow health professionals to more effectively plan and deliver physical therapy, as well as other therapeutic interventions in patients with chronic nonspecific low back pain.

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## Sažetak

POVEZANOST FIZIČKIH I MENTALNIH KOMPONENATA KVALITETE ŽIVOTA  
POVEZANE SA ZDRAVLJEM, FUNKCIONALNE ONESPOSOBLJENOSTI I BOLI  
U BOLESNIKA S KRONIČNOM NESPECIFIČNOM KRIŽOBOLJOM*M. Berković-Šubić, S. Grazio, G. Hofmann i Z. Zoričić*

Kvaliteta života povezana sa zdravljem (*health-related quality of life*, HRQoL) znatno je umanjena u bolesnika s kroničnom nespecifičnom križoboljom. U tih bolesnika nije dovoljno istražen međuodnos fizičkog i mentalnog zdravlja u okviru kvalitete života, kao ni njihova povezanost između funkcionalne onesposobljenosti i intenziteta boli. Cilj ovog rada bio je ocijeniti povezanost fizičke i mentalne komponente HRQoL, kao i njihovu povezanost s intenzitetom boli i funkcionalnom onesposobljenosti u bolesnika s boljim i lošijim fizičkim i mentalnim zdravljem. Uz sociodemografske podatke i osnovne podatke o bolesti specifična mjerenja provedena su upotrebom standardnih upitnika: za bol vizualna analogna ljestvica, za funkcionalnu sposobnost bolesnika s kroničnom križoboljom Roland-Morrisov upitnik, a za kvalitetu života povezanu sa zdravljem upitnik *Short Form-36*. Statistička značajnost je određena na  $p < 0.05$ . U istraživanju je sudjelovalo 129 uzastopnih bolesnika (33 muškarca i 96 žena) s kroničnom križoboljom. Nađena je značajna pozitivna povezanost između ukupnog HRQoL, tjelesne visine i tjelesne mase gledano na fizičko i mentalno zdravlje, a ne i tjelesne mase gledano sa stajališta fizičkog zdravlja. Negativna povezanost utvrđena je s dobi, intenzitetom boli u pokretu i funkcionalnom onesposobljenosti u odnosu na fizičko i mentalno zdravlje. Utvrđeno je poboljšanje mentalnog zdravlja u odnosu na porast fizičkog zdravlja. Bolja procijenjenost fizičkog i mentalnog zdravlja povezana je s manjom razinom funkcionalne onesposobljenosti. Zaključno, rezultati ovog istraživanja pokazuju važnost utjecaja na poboljšanje fizičkih komponenata kvalitete života povezane sa zdravljem, jer ona ima reperkusije na procjenu mentalne komponente u bolesnika s kroničnom križoboljom. Bolesnici s boljom kvalitetom života procjenjuju manju funkcionalnu onesposobljenost.

Ključne riječi: *Kronična nespecifična križobolja; Mentalni čimbenici; Kvaliteta života povezana sa zdravljem*