

## DEPENDENCE OF QUALITY OF LIFE INDEX ON SOCIO-DEMOGRAPHIC VARIABLES IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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Submitted: 2009-12-16

Accepted: 2010-02-08

Published online: 2010-06-11

### Abstract

*Purpose* – To identify the Quality of Life (QoL) in subjects diagnosed with Ankylosing Spondylitis (AS) and find a possible association between the QoL index and selected socio-demographic variables (sex, age, marital status, degree of impairment with AS).

*Methods* – A sample of 181 patients with AS who underwent a complete spa treatment in Třeboň Spa in 2008. The SEIQoL tests were conducted and the data from the respondents' medical documentation analysed. The Spearman's rank correlation coefficients between the selected variables and the QoL index were surveyed. Our hypotheses suggested a statistically significant dependence of the QoL index and ranked variables.

*Results* – The average value of the QoL index found in the respondents was 61.0. The Spearman's correlation coefficients were not higher than 0.2 nor lower than  $-0.2$ . No statistically significant dependence of the QoL index on socio-demographic variables was found. The hypotheses have not been proved.

*Conclusions* – The findings were surprising. The respondents, in their subjective views, did not associate the quality of their life even with the degree of AS. It may result in the idea that the methodology of investigation, especially the HRQoL concept is based on the wrong assumptions. It claims that the determining correspondence between QoL and health is primarily the dependence of the QoL on the state of health.

**Key words:** *Quality of life (QoL) – SEIQoL concept – Ankylosing Spondylitis (AS) – subjective – correlation*

### INTRODUCTION

Hundreds of articles and scientific papers have currently been published on different aspects of QoL. QoL research is developing conceptual models, evaluations and assessment, yet it seems inaccurate when it aims at specifying the term itself. However, QoL is becoming a complex term; it covers life as a whole, and is used in a wide range of contexts. We can notice intense efforts to define its meaning.

Regretfully, medicine and medical care link QoL with psychosomatic and physical health. The most frequently applied

instrument is the HRQoL concept (Health Related Quality of Life). Standardised questionnaires concentrate on subjective, yet quantifiable measurements related partly to health perception, partly to life functions in physical, social, and emotional spheres.

Here the most appreciated seems to be a “golden standard” questionnaire SF-36, focused on general aspects, recommended to evaluate the impact of different medications on QoL of patients (Hnilicová 2005). The HRQoL has a monopoly in medical research, and its importance is sometimes overrated

uncritically. It claims that the QoL of an individual is determined by the person's state of health, which is a very narrow conception of subjective life satisfaction (Petr 2001). Psychological aspects play a key role here. The psychological conception of QoL focuses on global satisfaction and satisfaction within a number of key domains with special emphasis on individual well-being and satisfaction with one's own life (Křivohlavý 2004). The SEIQoL (The Schedule for the Evaluation of Individual Quality of Life) can serve as an example. It identifies QoL in accordance with the respondent's own perception.

Many doctors dealing with psychosomatic medicine point out that improving lifestyle, a proper diet, and solving personal problems would help patients more than traditional medical science. Our mind is always present, no matter whether we realise it or not.

This is the reason why we should be interested in the SEIQoL concept based on psychological grounds. Medical journals bring evidence that a traditional approach still prevails. This predominance can be a welcome invitation to new contributions to the discussion and theoretical broadening of knowledge in this area of study.

### **Objective**

The current study aims at identifying the QoL in patients diagnosed with AS and finding an association of the QoL index with selected socio-demographic variables. This study responds to general conclusions made by similar research writings that state lower values of QoL in elderly patients or those with a higher degree of AS.

### **Hypotheses**

- H1: Statistically significant association between QoL index and sex
- H2: Statistically significant association between QoL index and age
- H3: Statistically significant association between QoL index and marital status
- H4: Statistically significant association between QoL index and degrees of AS

## **MATERIAL AND METHODS**

The total number of patients diagnosed with AS who underwent a four-week spa treatment

in Třeboň in 2008 was 185. All of them were asked to participate in the research, four refused. The study worked with a sample of 181 subjects. The SEIQoL tests were carried out. Additionally, with the respondents' approval and on the condition of anonymity, some socio-demographic data from their medical documentation were collected for research purposes (sex, age, marital status, degree of AS).

The SEIQoL presents a method where all the indicators showing individual QoL are obtained in the interview. The authors suggest that the QoL of an individual person depends entirely on his/her own set of values, which this method fully respects. The respondents consider their hierarchy of needs, decide which aspects of life are relevant to them in the given period (Joyce et al. 2003). In this study they were asked to indicate the five most important goals in their present situation. Their task consisted of distributing 100% among their goals. The ratings reflect the degree of satisfaction within the framework of each item and the importance that the respondents attribute to each one (Ring et al. 2007). The results are analysed in percentage terms. The importance of each goal (expressed in %) is multiplied by the degree of satisfaction (expressed in %). The total sum made up of partial scores is divided by 100 to get a figure within the range of 0 (the lowest possible point) to 100 (the highest possible point), which is called the QoL index (Křivohlavý 2006). The QoL index measures both satisfaction and importance regarding various aspects of life.

It is essential to point out that no specific life goal has direct relevance to the degree of satisfaction with the aspects of life valued by the individual. In other words the QoL index may be higher for people who value more material factors such as beer, women, motorbikes etc., rather than spiritual ones as health, love, family, faith.

### **Statistical analyses**

The obtained data were categorised for further processing. The statistical analyses were performed with the assistance of SPSS (Statistical Package for the Social Sciences). Spearman's rank correlation coefficients were counted alongside the basic statistical descriptions.

## RESULTS

In the sample of 181 respondents were 59 females and 122 males. The average age of the respondents was 51.4 – (51.1 females, 51.5 males). The average QoL index was 61.0.

**Table 1 Outline of all variables, percentage distribution of respondents, QoL index and Spearman's correlation coefficients**

Variable	Percentage distribution	QoL index	Spearman's coefficient
Sex			<i>-0.052372</i>
Female	32.6	62.4	
Male	67.4	60.4	
Age (years)			<i>0.013548</i>
0–29	3.31	66.1	
30–39	14.92	60.0	
40–49	24.31	58.3	
50–59	33.15	63.1	
60 +	24.31	60.1	
Marital status			<i>0.060085</i>
Single	18.78	60.4	
Married	72.38	60.2	
Divorced	5.52	65.0	
Widow/er	3.31	67.9	
Degree of AS			<i>0.156937</i>
II.	27.07	58.5	
III.	29.28	59.8	
IV.	25.41	63.3	
V.	18.23	64.6	

Spearman's non-parametric correlation coefficient aims at assessing the statistical dependence between variables. In case the correlation coefficient is positive its value is near 1.0, in the opposite case its value is near -1.0. Values within the range 0.2 to -0.2 are thought as being almost statistically insignificant.

As the table shows no statistically significant correspondence between QoL and the ranked socio-demographic variables was found. The hypotheses H1–H4 have been disproved.

## DISCUSSION

The most interesting category among the variables where the association with the QoL index was tested was the degree of AS in respondents. Spearman's correlation coefficient has a very low value (0.157). Surprisingly, the dependence has an opposite direction, a high QoL index is directly proportional to the severity of AS.

The subjective perception of life and its quality has not been influenced, to a large extent, by impaired health, to reflect itself as

statistically significant. Such findings may lead to a rather controversial idea. There is some doubt whether the traditional methodology can bring any new relevant information. The HRQoL concept is based on an essential prerequisite that the QoL of a person is entirely associated with his/her health (Petr 2001). Does it mean that a disabled athlete participating in the Paralympics has a lower quality of life than a healthy one in the Olympic Games?

Naturally, the conception of health and QoL cannot be simplified in this manner. However, even non-professional observers have to recognise that health is not the only decisive factor determining our QoL. This is a narrow view with a total disregard for other aspects of life. My own experience demonstrates that the present situation calls for change. I have been suffering for years from severe migraines due to a chronic functional blockage in my upper neck/spine. Despite being handicapped in this way my perception of life and its quality stands in total contrast to the HRQoL concept and proves its assumptions false. I am happily married, have a challenging job in a Třeboň Spa as a physiotherapist and as a lecturer at the University of South Bohemia. I live a very happy life.

## CONCLUSIONS

This study was aimed at identifying the QoL in patients with Ankylosing Spondylitis using the SEIQoL concept. Several hypotheses suggested that there might be statistically significant correlations between their QoL and socio-demographic variables like sex, age, marital status and degree of AS. Based on the data evaluation, all the hypotheses have been disproved.

The study reports on basic conceptions of SEIQoL, i.e. individual attitude towards the subject with respect to a wide range of factors, apparently lacking any link with medicine. Holistic medicine brings evidence that QoL is strongly influenced by other factors besides health. The QoL should be considered in terms of psychology, sociology and medicine.

Such approaches taking this into consideration could reflect all the existing views and result in more complex and meaningful methods aimed at identifying the QoL of the individual.

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