

Education and Rehabilitation of Adult Persons with Disabilities

Thematic Collection of International Importance

Foča, 2014

Education and Rehabilitation of Adult Persons with Disabilities
Thematic Collection of International Importance

Publishers

University of East Sarajevo, Faculty of Medicine Foča, Bosnia and Herzegovina

University of Belgrade – Faculty of Special Education and Rehabilitation – Publishing Centre of the Faculty (ICF), Serbia

For publishers

PhD Milan Kulić, Dean

PhD Jasmina Kovačević, Dean

Editors

PhD Milan Kulić, Associate Professor

PhD Danijela Ilić–Stošović, Associate Professor

Reviewers

PhD Goran Nedović, Professor, University of Belgrade – Faculty of Special Education and Rehabilitation, Serbia

PhD Hana Valkova, Professor, Masaryk University, Faculty of Sport Studies, Brno, Czech Republic

PhD Keith Storey, Professor, Touro University, Vallejo, California, United States of America

Processing and printing

Planeta print, Belgrade

Cover design

Milena Milićević

Boris Petrović, MA

Technical Editor

Biljana Krsić

Circulation 100

ISBN 978-99955-733-9-3

By decision no. 01-3-169, from September, 16th 2014. The Teaching and Research Council of the Faculty of Medicine of the University of Foča in Eastern Sarajevo has given approval for the printing of Thematic Collection of international importance „Education and Rehabilitation of Adult Persons with Disabilities“.

By decision no. 3/9 from March, 8th 2008. The Teaching and Research Council of the University of Belgrade – Faculty of Special Education and Rehabilitation initiated Edition: Monographs and papers.

THE IMPACT OF EDUCATION AND GENDER ON THE QUALITY OF LIFE IN PERSONS WITH CEREBRAL PALSY

Ivana Sretenović^{1,2} & Jelena Radulović³

²Association for Cerebral and Child Palsy of Serbia, Belgrade, Serbia

³Association for Cerebral and Child Palsy of Belgrade, Belgrade, Serbia

SUMMARY

The concept of quality of life for people with disabilities includes all aspects of life, intrapersonal, interpersonal and extrapersonal, which are related very closely. Estimation of quality of life of persons with disabilities is a prerequisite and first step in the strategy of improving the quality of life for this population.

The aim of this study is to assess the quality of life in persons with cerebral palsy in relation to gender and educational structure. The study sample consisted of 100 people with cerebral palsy, of both sexes, aged 23 to 64 year. The questionnaire WHOQOL – BREF was used for the study.

The results show that people with cerebral palsy evaluate highly their quality of life. However, the results also show that there is statistically significant difference between male and female in the two studied variables ($p = 0,036$, $p = 0,003$) in favor of the male respondents, while in the group of respondents in relation to the level of education recorded a statistically significant difference in the three variables ($p = 0,011$, $p = 0,009$, $p = 0,042$) in favor of those with higher education.

It is possible that these results are in favor of subjectivity, experience and aspirations of the respondents, but also because of the restrictions in this study.

Key words: adults; education; gender; persons with disabilities; satisfaction with life

INTRODUCTION

Quality of life is a very complex term that includes a significant number of subjective and objective factors meeting the needs and self-perception of the individual. The concept of quality of life was first mentioned in 1920 (Coimbra, 1972, according to Torres et al., 2013), while the first documented use of the term in the medical literature we encounter 40 years ago in the field of transplantation medicine (Trgovčević, 2013). Depending on the needs of the profession, but also by the author, the concept of quality of life is defined in different ways. WHO (The World Health Organization – WHO) by Gojčeta et al., (2008) in the „*Quality of Life / Quality of Life assessment (WHOQOL): position paper from the World Health Organization*“ in 1995, defines quality of life as well as the perception of the life of every individual in the context of culture and value structure to which it belongs in relation to personal goals, expectations and standards. Later, the current definitions are supplemented by a new defined quality of life as a state of complete physical, mental and social well-being, which is a multidimensional

concept and includes all of the physical and psychosocial aspects (WHO, 1998). Also, World Health Organization, dependence in daily activities, restriction of social participation and quality of life is seen as multidimensional concepts that influence each other (Karaduman et al., 2010). Bowling (1994) suggests that quality of life is defined as the optimal level of mental, physical, occupational and social functioning, including relationships with the environment, and the relationship with the perception of their own health, physical fitness, life satisfaction and well-being.

Some authors believe that the quality of life cannot be precisely defined, and generally choose studying different aspects and dimensions of quality of life.

Quality of life can be seen in two aspects, the subjective and objective aspects of quality of life. Today, there is some consensus about to combine objective and subjective aspects of quality of life, based on knowledge of the benefits and quality of each of them (Delhey et al., 2001). The subjective quality of life, where personal experience or perception of one's own life is still the main criteria is the most valid for most researchers of quality of life (Cummins, 1998). Quality of life is based on several indicators:

1. Medical indicators (state of organs and organ systems, functional disorders, the ability to work),
2. Psychological indicators (emotional status in terms of attitude to life, personal and general feelings and attitude towards ourselves and others),
3. Social indicators (financial status in general, employment, working conditions, living conditions, opportunities adequate nutrition, medical treatment, education, cultural needs and values) (Heller, 1978; according to Macanović, 2010).

Most people are watching the quality of life through health and over time there was a need to define the quality of life related to health. The concept of quality of life including those related to health (Health-Related Quality of Life – HRQoL), and subjective well-being (SWB-subjective well-being). HRQoL describes some difficulties due to poor health in relation to physical and mental functioning, participation in areas of life, but also the „health status“. SWB includes total life satisfaction, satisfaction with life achievements, as well as the positive and negative impact on quality of life. It is believed that life satisfaction is in relation to the subjective perspective, and that quality of life should be viewed through a personal assessment of the individual and in relation to the personal aspirations and achievements (Trgovčević et al., 2011).

HRQoL is a multidimensional concept, which should include four basic dimensions:

1. Physical functioning, which includes the individual: self-care (feeding, dressing), physical activity (walking, running, climbing stairs), social activities (work, home work, education),
2. Physical symptom associated with disease or treatment (pain, physiological needs),
3. Psychological functioning which includes emotional state and cognitive functioning,
4. Social functioning related to activities and socializing with friends, relatives and others (Testa & Simonson, 1996).

The concept of quality of life for people with disabilities includes all aspects of life, intrapersonal, interpersonal and extrapersonal, which are related very closely (Cella, 1992; by Nedovic et al., 2013). According to Jovanović (2011) the presence of physical

disability at a person can significantly affect its psychological, physical and social development. Assessing the impact of physical disability on daily life reflects what is functioning and well-being of the person from day to day and in different walks of life, which is actually a quality of life assessment. Estimate a quality of life by persons with disabilities is a prerequisite and first step in the strategy of improving the quality of life for this population.

There are those aspects of quality of life that we call universal and they are common to all people, in the sense of being, belonging and the development of a particular population. It is characteristic, that the conditions, for quality of life, are similar or even identical in humans worldwide (Power, 1999). Specific aspects related to the grade of membership and development in the domains specific to disability, or aspects that people with disabilities are considered important: a subjective well-being, satisfaction, and functioning in daily life, including self-help and social roles, external resources (material and social support), physical condition, psychological state, preserving the ability of social interaction and somatic condition (pleasure without pain, without disturbance) (Schipper, 1985). Jovanović (2011) said that the essence of the concept of quality of life for people with disabilities improve and enhance the overall life of the people, which is implemented through three levels: The first level involves the realization of basic human needs, the second level refers to the experience of satisfaction in aspects that are important for another person, and the third level is the achievement of higher levels of personal enjoyment and fulfillment.

The aim of this study is to assess the quality of life in persons with cerebral palsy, and what kind of the experience of quality of life have this person in relation to the gender structure and level of education.

METHODS

Sample

The study sample was formed by 100 people with cerebral palsy of both sexes, aged 23 to 64 years ($M = 20,62$, $SD = 10,236$). Criteria for selection of subjects were: a diagnosis of cerebral palsy (a neurological diagnosis), age over 18 years, preserved intellectual skills (finding a psychologist) and membership in the Association for Cerebral and Child Palsy in Belgrade.

Table 1 Distribution of participants by gender and level of education

| | | N | % |
|--------------------|---------------------|----------|----------|
| Gender | Male | 46 | 46 |
| | Female | 54 | 54 |
| | Total | 100 | 100 |
| Level of education | Primary school | 15 | 15 |
| | Secondary school | 77 | 77 |
| | High school/College | 8 | 8 |
| Total | | 100 | 100 |

Legend: N = number of participants, % = percentage

Table 1 shows the distribution of participants by gender and level of education. 46% of our sample was male and 54% female. Of all participants, 77% have completed secondary school. At the same time 15% had primary education and 8% of participants have higher education.

Location and Time of Research

The research was conducted during 2013, May and June in the Association for Cerebral and Child Palsy in Belgrade.

Assessment Instrument

For the study we used a brief questionnaire about the quality of life of the World Health Organization (World Health Organization Quality of Life WHOQOL – BREF) (WHO, 1996). This questionnaire is a generic questionnaire, and it is used for self-assessment of the quality of life of adults. The questionnaire was based on a theoretical model that emphasizes the importance of individual perceptions of quality of life that a person has in relation to the culture and value system in which it is located, in relation to its goals, expectations, standards and concerns. WHOQOL-BREF contains 26 questions (two general questions of quality of life) and the rest are distributed among the domains of quality of life – Physical domain (7 questions), Psychological domain (6 questions), Social domain (3 questions), and Domain of environments (8 questions). Answers to the questions are arranged in Likert scale with a range of 1 to 5, where 1 means strongly disagree and 5 is strongly agree with a particular statement. The exception of this are question number 3, 4 and 26, where 1 means strongly agree and 5 strongly disagree with a given statement. All questions from the questionnaire are related to the state of patients for the last four weeks of the date of examination. WHOQOL is psychometrically valid and reliable questionnaire which was translated into Serbian.

Statistical Analysis

For statistical analysis of the data collected, in accordance with the aim of this study, we used method of parametric and non-parametric statistics: measures of frequency and percentages, measures of central tendency (mean and standard deviation), method for determining the statistical significance between the arithmetic means for independent samples and univariate analysis of variance (ANOVA). In order to verify the reliability of the test used in this study, it was determined Coefficient of reliability Cronbach $\alpha = 0,874$. The value of $p < 0,05$ was considered statistically significant. For the purpose of data analysis it was used SPSS 21.0 for Windows.

RESULTS

Table 2 The achieved scores according to the participants' gender

| Variables | Gender | | | | | | sig |
|---|--------|------|-------|--------|------|-------|--------------|
| | Male | | | Female | | | |
| | N | M | SD | N | M | SD | |
| V1 How would you rate your quality of life? | 46 | 3,89 | ,640 | 54 | 3,63 | ,784 | ,074 |
| V2 How satisfied are you with your health? | 46 | 3,93 | ,574 | 54 | 3,81 | ,729 | ,369 |
| V3 How much do you feel that pain prevents you from doing what you need to do? | 46 | 4,00 | ,869 | 54 | 3,69 | ,865 | ,073 |
| V4 How much do you need medical treatment to function in your daily life? | 46 | 3,50 | 1,243 | 54 | 3,15 | 1,071 | ,132 |
| V5 How much do you enjoy life? | 46 | 3,98 | ,954 | 54 | 3,72 | ,998 | ,195 |
| V6 To what extent do you feel life to be meaningful? | 46 | 4,72 | ,502 | 54 | 4,57 | ,792 | ,292 |
| V7 How well are you able to concentrate? | 46 | 3,67 | ,967 | 54 | 3,65 | ,872 | ,889 |
| V8 How safe do you feel in your daily life? | 46 | 3,87 | ,980 | 54 | 3,80 | 1,035 | ,718 |
| V9 How healthy is your physical environment? | 46 | 3,57 | 1,128 | 54 | 3,91 | 1,051 | ,120 |
| V10 Do you have enough energy for everyday life? | 46 | 4,09 | ,812 | 54 | 3,96 | ,868 | ,465 |
| V11 Are you able to accept your bodily appearance? | 46 | 4,48 | ,836 | 54 | 4,41 | ,836 | ,674 |
| V12 To what extent do you have enough money to meet your needs? | 46 | 3,20 | ,980 | 54 | 3,06 | 1,280 | ,546 |
| V13 How available to you is the information that you need in your day-to-day life? | 46 | 4,00 | ,843 | 54 | 3,89 | ,965 | ,545 |
| V14 To what extent do you have the opportunity for leisure activities? | 46 | 3,70 | ,916 | 54 | 3,94 | 1,017 | ,205 |
| V15 How well are you able to get around? | 46 | 3,48 | 1,169 | 54 | 3,06 | 1,295 | ,092 |
| V16 How satisfied are you with your sleep? | 46 | 4,02 | ,954 | 54 | 3,72 | ,940 | ,118 |
| V17 How satisfied are you with your ability to perform daily living activities? | 46 | 3,83 | ,769 | 54 | 3,65 | ,935 | ,306 |
| V18 How satisfied are you with your capacity for work? | 46 | 3,83 | ,677 | 54 | 3,65 | ,828 | ,247 |
| V19 How satisfied are you with yourself? | 46 | 4,04 | ,759 | 54 | 3,87 | ,702 | ,239 |
| V20 How satisfied are you with your personal relationships? | 46 | 4,50 | ,658 | 54 | 4,19 | ,803 | ,036* |
| V21 How satisfied are you with your sex life? | 46 | 3,50 | 1,111 | 54 | 2,80 | 1,203 | ,003* |
| V22 How satisfied are you with the support you get from your friends? | 46 | 4,37 | ,826 | 54 | 4,33 | ,752 | ,819 |
| V23 How satisfied are you with the conditions of your living place? | 46 | 3,78 | ,987 | 54 | 3,65 | ,872 | ,471 |
| V24 How satisfied are you with your access to health services? | 46 | 3,52 | ,983 | 54 | 3,24 | 1,027 | ,167 |
| V25 How satisfied are you with your transport? | 46 | 3,46 | 1,242 | 54 | 3,33 | 1,149 | ,608 |
| V26 How often do you have negative feelings, such as blue mood, despair, anxiety, depression? | 46 | 4,07 | ,742 | 54 | 3,89 | ,816 | ,265 |

Legend: N=number of participants, M=arithmetic mean, SD=standard deviation, sig=significance, V=variable (code)

Table 2 gives an overview of the achievements of the participants on the studied variables in relation to gender. The results indicate that in both groups saw a drop in the achievement of the maximum possible score. On two of the 26 variables, received a statistically significant difference in favor of male subjects, $p < 0,05$ ($p = 0,36$ and $p = 0,03$).

Table 3 Distribution of participants according to the level of education and variables in physical domain

| Variables-physical domain score | Level of education | | | | | | Total | | M | SD | |
|---------------------------------|--------------------|---|------|----|------|---|-------|----|----|------|-------|
| | PS | | SS | | HS | | N | % | | | |
| | N | % | N | % | N | % | | | | | |
| V3 | 2 | 1 | 6,7 | 4 | 5,2 | 0 | 0 | 5 | 5 | 3,83 | ,877 |
| | 3 | 4 | 26,7 | 25 | 32,5 | 4 | 50 | 33 | 33 | | |
| | 4 | 3 | 20 | 30 | 39 | 3 | 37,5 | 36 | 36 | | |
| | 5 | 7 | 46,7 | 18 | 23,4 | 1 | 12,5 | 26 | 26 | | |
| V4 | 1 | 4 | 26,7 | 5 | 6,5 | 0 | 0 | 9 | 9 | 3,31 | 1,161 |
| | 2 | 1 | 6,7 | 10 | 13 | 0 | 0 | 11 | 11 | | |
| | 3 | 7 | 46,7 | 27 | 35,1 | 4 | 50 | 38 | 38 | | |
| | 4 | 1 | 6,7 | 20 | 26 | 3 | 37,5 | 24 | 24 | | |
| V10 | 5 | 2 | 13,3 | 15 | 19,5 | 1 | 12,5 | 18 | 18 | 4,02 | ,841 |
| | 1 | 0 | 0 | 1 | 1,3 | 0 | 0 | 1 | 1 | | |
| | 2 | 0 | 0 | 3 | 3,9 | 0 | 0 | 3 | 3 | | |
| | 3 | 1 | 6,7 | 17 | 22,1 | 1 | 12,5 | 19 | 19 | | |
| | 4 | 6 | 40 | 36 | 46,8 | 5 | 62,5 | 47 | 47 | | |
| V15 | 5 | 8 | 53,3 | 20 | 26 | 2 | 25 | 30 | 30 | 3,25 | 1,250 |
| | 1 | 1 | 6,7 | 9 | 11,7 | 0 | 0 | 10 | 10 | | |
| | 2 | 2 | 13,3 | 14 | 18,2 | 1 | 12,5 | 17 | 17 | | |
| | 3 | 5 | 33,3 | 25 | 32,5 | 2 | 25 | 32 | 32 | | |
| | 4 | 4 | 26,7 | 12 | 15,6 | 4 | 50 | 20 | 20 | | |
| V16 | 5 | 3 | 20 | 17 | 22,1 | 1 | 12,5 | 21 | 21 | 3,86 | ,954 |
| | 1 | 1 | 6,7 | 1 | 1,3 | 0 | 0 | 2 | 2 | | |
| | 2 | 1 | 6,7 | 3 | 3,9 | 1 | 12,5 | 5 | 5 | | |
| | 3 | 4 | 26,7 | 21 | 27,3 | 1 | 12,5 | 26 | 26 | | |
| | 4 | 5 | 33,3 | 34 | 44,2 | 0 | 0 | 39 | 39 | | |
| V17 | 5 | 4 | 26,7 | 18 | 23,4 | 6 | 75 | 28 | 28 | 3,73 | ,863 |
| | 1 | 1 | 6,7 | 0 | 0 | 0 | 0 | 1 | 1 | | |
| | 2 | 0 | 0 | 10 | 13 | 0 | 0 | 10 | 10 | | |
| | 3 | 2 | 13,3 | 14 | 18,2 | 2 | 25 | 18 | 18 | | |
| | 4 | 9 | 60 | 43 | 55,8 | 5 | 62,5 | 57 | 57 | | |
| V18 | 5 | 3 | 20 | 10 | 13 | 1 | 12,5 | 14 | 14 | 3,73 | ,763 |
| | 2 | 1 | 6,7 | 5 | 6,5 | 0 | 0 | 6 | 6 | | |
| | 3 | 6 | 40 | 21 | 27,3 | 1 | 12,5 | 28 | 28 | | |
| | 4 | 5 | 33,3 | 41 | 53,2 | 7 | 87,5 | 53 | 53 | | |
| Total | 5 | 3 | 20 | 10 | 13 | 0 | 0 | 13 | 13 | 3,67 | ,958 |

Legend: N=number of participants, %=percentage, M=arithmetic mean, SD=standard deviation, V=variable (code), PS=primary school, SS=secondary school, HS=high school

Table 3 presents the results of the participants in relation to the level of education and variables in the physical domain. Based on the results, it can be said that the average of the results for the variable V10, V16, V17 and V18 are about 4, which corresponds to the statement „a lot“. The average value of the variable V4 and V15 is around 3 („neither good nor bad“). At the same time, the average value of V3 corresponds to the statement „a little“.

Table 4 Distribution of participants according to the level of education and variables in psychological domain

| Variables- psychological domain score | Level of education | | | | | | Total | | M | SD | |
|--|--------------------|-----|------|-----|------|-----|-------|-----|------|------|------|
| | PS | | SS | | HS | | N | % | | | |
| | N | % | N | % | N | % | | | | | |
| V5 | 1 | 0 | 0 | 1 | 1,3 | 0 | 0 | 1 | 1 | 3,84 | ,982 |
| | 2 | 1 | 6,7 | 6 | 7,8 | 0 | 0 | 7 | 7 | | |
| | 3 | 3 | 20 | 25 | 32,5 | 2 | 25 | 30 | 30 | | |
| | 4 | 3 | 20 | 26 | 33,8 | 2 | 25 | 31 | 31 | | |
| | 5 | 8 | 53,3 | 19 | 24,7 | 4 | 50 | 31 | 31 | | |
| V6 | 2 | 0 | 0 | 2 | 2,6 | 0 | 0 | 2 | 2 | 4,64 | ,674 |
| | 3 | 1 | 6,7 | 4 | 5,2 | 0 | 0 | 5 | 5 | | |
| | 4 | 3 | 20 | 16 | 20,8 | 1 | 12,5 | 20 | 20 | | |
| | 5 | 11 | 73,3 | 55 | 71,4 | 7 | 87,5 | 73 | 73 | | |
| V7 | 1 | 0 | 0 | 1 | 1,3 | 0 | 0 | 1 | 1 | 3,66 | ,913 |
| | 2 | 0 | 0 | 6 | 7,8 | 0 | 0 | 6 | 6 | | |
| | 3 | 6 | 40 | 34 | 44,2 | 0 | 0 | 40 | 40 | | |
| | 4 | 3 | 20 | 24 | 31,2 | 5 | 62,5 | 32 | 32 | | |
| V11 | 5 | 6 | 40 | 12 | 15,6 | 3 | 37,5 | 21 | 21 | 4,44 | ,833 |
| | 1 | 1 | 6,7 | 1 | 1,3 | 0 | 0 | 2 | 2 | | |
| | 2 | 0 | 0 | 1 | 1,3 | 0 | 0 | 1 | 1 | | |
| | 3 | 2 | 13,3 | 5 | 6,5 | 0 | 0 | 7 | 7 | | |
| | 4 | 4 | 26,7 | 24 | 31,2 | 3 | 37,5 | 31 | 31 | | |
| V19 | 5 | 8 | 53,3 | 46 | 59,7 | 5 | 62,5 | 59 | 59 | 3,95 | ,730 |
| | 2 | 0 | 0 | 3 | 3,9 | 0 | 0 | 3 | 3 | | |
| | 3 | 3 | 20 | 17 | 22,1 | 0 | 0 | 20 | 20 | | |
| | 4 | 6 | 40 | 42 | 54,5 | 8 | 100 | 56 | 56 | | |
| | 5 | 6 | 40 | 15 | 19,5 | 0 | 0 | 21 | 21 | | |
| V26 | 1 | 1 | 6,7 | 1 | 1,3 | 0 | 0 | 2 | 2 | 3,97 | ,784 |
| | 2 | 0 | 0 | 3 | 3,9 | 0 | 0 | 3 | 3 | | |
| | 3 | 2 | 13,3 | 9 | 11,7 | 0 | 0 | 11 | 11 | | |
| | 4 | 8 | 53,3 | 51 | 66,2 | 5 | 62,5 | 64 | 64 | | |
| | 5 | 4 | 26,7 | 13 | 16,9 | 3 | 37,5 | 20 | 20 | | |
| Total | 15 | 100 | 77 | 100 | 8 | 100 | 100 | 100 | 4,08 | ,819 | |

Legend: N=number of participants, %=percentage, M=arithmetic mean, SD=standard deviation, V=variable (code), PS=primary school, SS=secondary school, HS=high school

Table 4 presents the results of the participants in relation to the level of education and variables in the psychological domain. Based on the results, recorded a very high overall average value of the variable psychological domain (M = 4,08, SD = 0,819), and this value is

in the level of claims „a lot / good“. Particularly noteworthy is the variable „To what extent do you feel life to be meaningful?“ in which 73% of participants saying „a lot“.

Table 5 Distribution of participants according to the level of education and the variables in domain of environment

| Variables- environment domain score | Level of education | | | | | | Total | | M | SD | |
|--|--------------------|----|------|----|------|---|-------|----|----|------|-------|
| | PS | | SS | | HS | | N | % | | | |
| | N | % | N | % | N | % | | | | | |
| V8 | 1 | 1 | 6,7 | 0 | 0 | 0 | 0 | 1 | 1 | 3,83 | 1,006 |
| | 2 | 2 | 13,3 | 9 | 11,7 | 0 | 0 | 11 | 11 | | |
| | 3 | 2 | 13,3 | 18 | 23,4 | 1 | 12,5 | 21 | 21 | | |
| | 4 | 3 | 20 | 30 | 39 | 5 | 62,5 | 38 | 38 | | |
| | 5 | 7 | 46,7 | 20 | 26 | 2 | 25 | 29 | 29 | | |
| V9 | 1 | 1 | 6,7 | 2 | 2,6 | 0 | 0 | 3 | 3 | 3,75 | 1,095 |
| | 2 | 1 | 6,7 | 9 | 11,7 | 0 | 0 | 10 | 10 | | |
| | 3 | 5 | 33,3 | 20 | 26 | 2 | 25 | 27 | 27 | | |
| | 4 | 3 | 20 | 23 | 29,9 | 3 | 37,5 | 29 | 29 | | |
| | 5 | 5 | 33,3 | 23 | 29,9 | 3 | 37,5 | 31 | 31 | | |
| V12 | 1 | 2 | 13,3 | 9 | 11,7 | 0 | 0 | 11 | 11 | 3,12 | 1,148 |
| | 2 | 1 | 6,7 | 18 | 23,4 | 0 | 0 | 19 | 19 | | |
| | 3 | 1 | 6,7 | 18 | 23,4 | 6 | 75 | 25 | 25 | | |
| | 4 | 10 | 66,7 | 25 | 32,5 | 2 | 25 | 37 | 37 | | |
| | 5 | 1 | 6,7 | 7 | 9,1 | 0 | 0 | 8 | 8 | | |
| V13 | 1 | 0 | 0 | 2 | 2,6 | 0 | 0 | 2 | 2 | 3,94 | ,908 |
| | 2 | 3 | 20 | 1 | 1,3 | 0 | 0 | 4 | 4 | | |
| | 3 | 1 | 6,7 | 16 | 20,8 | 3 | 37,5 | 20 | 20 | | |
| | 4 | 6 | 40 | 37 | 48,1 | 3 | 37,5 | 46 | 46 | | |
| | 5 | 5 | 33,3 | 21 | 27,3 | 2 | 25 | 28 | 28 | | |
| V14 | 1 | 0 | 0 | 1 | 1,3 | 0 | 0 | 1 | 1 | 3,83 | ,975 |
| | 2 | 0 | 0 | 8 | 10,4 | 1 | 12,5 | 9 | 9 | | |
| | 3 | 0 | 0 | 21 | 27,3 | 3 | 37,5 | 24 | 24 | | |
| | 4 | 7 | 46,7 | 29 | 37,7 | 2 | 25 | 38 | 38 | | |
| | 5 | 8 | 53,3 | 18 | 23,4 | 2 | 25 | 28 | 28 | | |
| V23 | 1 | 0 | 0 | 1 | 1,3 | 1 | 12,5 | 2 | 2 | 3,71 | ,924 |
| | 2 | 1 | 6,7 | 3 | 3,9 | 1 | 12,5 | 5 | 5 | | |
| | 3 | 7 | 46,7 | 24 | 31,2 | 3 | 37,5 | 34 | 34 | | |
| | 4 | 3 | 20 | 33 | 42,9 | 2 | 25 | 38 | 38 | | |
| | 5 | 4 | 26,7 | 16 | 20,8 | 1 | 12,5 | 21 | 21 | | |
| V24 | 1 | 3 | 20 | 3 | 3,9 | 0 | 0 | 6 | 6 | 3,37 | 1,012 |
| | 2 | 3 | 20 | 9 | 11,7 | 0 | 0 | 12 | 12 | | |
| | 3 | 4 | 26,7 | 23 | 29,9 | 3 | 37,5 | 30 | 30 | | |
| | 4 | 4 | 26,7 | 35 | 45,5 | 4 | 50 | 43 | 43 | | |
| | 5 | 1 | 6,7 | 7 | 9,1 | 1 | 12,5 | 9 | 9 | | |

| Variables- environment domain score | Level of education | | | | | | Total | | M | SD |
|--|--------------------|------|----|------|----|------|-------|-----|------|-------|
| | PS | | SS | | HS | | N | % | | |
| | N | % | N | % | N | % | | | | |
| 1 | 1 | 6,7 | 8 | 10,4 | 1 | 12,5 | 10 | 10 | 3,39 | 1,188 |
| 2 | 0 | 0 | 10 | 13 | 1 | 12,5 | 11 | 11 | | |
| V25 3 | 5 | 33,3 | 18 | 23,4 | 3 | 37,5 | 26 | 26 | | |
| 4 | 3 | 20 | 30 | 39 | 3 | 37,5 | 36 | 36 | | |
| 5 | 6 | 40 | 11 | 14,3 | 0 | 0 | 17 | 17 | | |
| Total | 15 | 100 | 77 | 100 | 8 | 100 | 100 | 100 | 3,62 | 1,032 |

Legend: N=number of participants, %=percentage, M=arithmetic mean, SD=standard deviation, V=variable (code), PS=primary school, SS=secondary school, HS=high school

Table 5 shows the results of the participants in relation to the level of education and the variables in the domain of environment. The average values for the variables in this field range from M = 3,12 (SD = 1,148) to M = 3,94 (SD = 0,908), and they are located between the claims „neither good nor bad“ and „good“.

Table 6 Distribution of participants according to the level of education and the variables in social domain

| Variables-social domain score | Level of education | | | | | | Total | | M | SD |
|-------------------------------------|--------------------|------|----|------|----|------|-------|-----|------|-------|
| | PS | | SS | | HS | | N | % | | |
| | N | % | N | % | N | % | | | | |
| 1 | 0 | 0 | 1 | 1,3 | 0 | 0 | 1 | 1 | 3,75 | ,730 |
| 2 | 0 | 0 | 6 | 7,8 | 0 | 0 | 6 | 6 | | |
| V1 3 | 1 | 6,7 | 16 | 20,8 | 1 | 12,5 | 18 | 18 | | |
| 4 | 11 | 73,3 | 49 | 63,6 | 7 | 87,5 | 67 | 67 | | |
| 5 | 3 | 20 | 5 | 6,5 | 0 | 0 | 8 | 8 | | |
| 2 | 2 | 13,3 | 2 | 2,6 | 0 | 0 | 4 | 4 | 3,87 | ,661 |
| V2 3 | 3 | 20 | 12 | 15,6 | 2 | 25 | 17 | 17 | | |
| 4 | 6 | 40 | 56 | 72,7 | 5 | 62,5 | 67 | 67 | | |
| 5 | 4 | 26,7 | 7 | 9,1 | 1 | 12,5 | 12 | 12 | 4,33 | ,753 |
| V20 2 | 0 | 0 | 2 | 2,6 | 0 | 0 | 2 | 2 | | |
| 3 | 2 | 13,3 | 9 | 11,7 | 0 | 0 | 11 | 11 | | |
| 4 | 7 | 46,7 | 30 | 39 | 2 | 25 | 39 | 39 | 3,12 | 1,208 |
| 5 | 6 | 40 | 36 | 46,8 | 6 | 75 | 48 | 48 | | |
| V21 1 | 5 | 33,3 | 10 | 13 | 0 | 0 | 15 | 15 | | |
| 2 | 1 | 6,7 | 10 | 13 | 1 | 12,5 | 12 | 12 | | |
| 3 | 6 | 40 | 19 | 24,7 | 4 | 50 | 29 | 29 | | |
| 4 | 3 | 20 | 28 | 36,4 | 3 | 37,5 | 34 | 34 | 4,35 | ,783 |
| 5 | 0 | 0 | 10 | 13 | 0 | 0 | 10 | 10 | | |
| V22 2 | 1 | 6,7 | 3 | 3,9 | 0 | 0 | 4 | 4 | | |
| 3 | 1 | 6,7 | 6 | 7,8 | 0 | 0 | 7 | 7 | 4,35 | ,783 |
| 4 | 7 | 46,7 | 30 | 39 | 2 | 25 | 39 | 39 | | |
| 5 | 6 | 40 | 38 | 49,4 | 6 | 75 | 50 | 50 | | |
| Total | 15 | 100 | 77 | 100 | 8 | 100 | 100 | 100 | 3,88 | ,827 |

Legend: N=number of participants, %=percentage, M=arithmetic mean, SD=standard deviation, V=variable (code), PS=primary school, SS=secondary school, HS=high school

The results of the participants in relation to their level of education and variables in the social domain are shown in Table 6. Results show that the average values are between claims „neither good nor bad“ and „a lot“, or from $M = 3,12$ ($SD = 1,208$) to $M = 4,35$ ($SD = 0,783$). Variable „How would you rate the quality of your life?“ stands out, because 73,3% of participants with primary school education, 63,6% of secondary education and even 87,5% of highly educated participants saying „good“.

Table 7 Relationship between groups-ANOVA

| Variable | ANOVA | | |
|----------|-------|----|--------------|
| | F | df | sig |
| V1 | 2,843 | 2 | ,063 |
| V2 | ,098 | 2 | ,907 |
| V3 | ,793 | 2 | ,456 |
| V4 | 2,392 | 2 | ,097 |
| V5 | 2,270 | 2 | ,109 |
| V6 | ,566 | 2 | ,569 |
| V7 | 4,743 | 2 | ,011* |
| V8 | ,404 | 2 | ,669 |
| V9 | ,524 | 2 | ,594 |
| V10 | 2,801 | 2 | ,066 |
| V11 | ,860 | 2 | ,426 |
| V12 | ,925 | 2 | ,400 |
| V13 | ,088 | 2 | ,915 |
| V14 | 4,995 | 2 | ,009* |
| V15 | ,577 | 2 | ,563 |
| V16 | 1,500 | 2 | ,228 |
| V17 | ,386 | 2 | ,681 |
| V18 | ,193 | 2 | ,825 |
| V19 | 1,111 | 2 | ,333 |
| V20 | 1,375 | 2 | ,258 |
| V21 | 2,667 | 2 | ,075 |
| V22 | 1,337 | 2 | ,268 |
| V23 | 1,867 | 2 | ,160 |
| V24 | 3,283 | 2 | ,042* |
| V25 | 1,738 | 2 | ,181 |
| V26 | 1,163 | 2 | ,317 |

ANOVA analysis of the level of education and the studied variables recorded a statistically significant difference in the three studied variables (Table 7): „How well are you able to concentrate?“ ($F=4,743$, $df=2$, $p=0,11$); „To what extent do you have the opportunity for leisure activities?“ ($F=4,995$, $df=2$, $p=0,009$); „How satisfied are you with your access to health services?“ ($F=3,283$, $df=2$, $p=0,42$), while in the other variables level of education is not shown as a statistically significant factor.

Table 8 Difference between groups

| | | | | | |
|-----|-------|-------|-----|-------|-------|
| | PS-SS | ,066 | | PS-SS | 1,000 |
| V1 | PS-HS | 1,000 | V15 | PS-HS | 1,000 |
| | SS-HS | 1,000 | | SS-HS | 1,000 |
| | PS-SS | 1,000 | | PS-SS | 1,000 |
| V2 | PS-HS | 1,000 | V16 | PS-HS | ,274 |
| | SS-HS | 1,000 | | SS-HS | ,406 |
| | PS-SS | ,883 | | PS-SS | 1,000 |
| V3 | PS-HS | ,761 | V17 | PS-HS | 1,000 |
| | SS-HS | 1,000 | | SS-HS | 1,000 |
| | PS-SS | ,135 | | PS-SS | 1,000 |
| V4 | PS-HS | ,235 | V18 | PS-HS | 1,000 |
| | SS-HS | 1,000 | | SS-HS | 1,000 |
| | PS-SS | ,262 | | PS-SS | ,429 |
| V5 | PS-HS | 1,000 | V19 | PS-HS | 1,000 |
| | SS-HS | ,450 | | SS-HS | 1,000 |
| | PS-SS | 1,000 | | PS-SS | 1,000 |
| V6 | PS-HS | 1,000 | V20 | PS-HS | ,433 |
| | SS-HS | ,887 | | SS-HS | ,326 |
| | PS-SS | ,168 | | PS-SS | ,073 |
| V7 | PS-HS | ,998 | V21 | PS-HS | ,406 |
| | SS-HS | ,031 | | SS-HS | 1,000 |
| | PS-SS | 1,000 | | PS-SS | 1,000 |
| V8 | PS-HS | 1,000 | V22 | PS-HS | ,332 |
| | SS-HS | 1,000 | | SS-HS | ,475 |
| | PS-SS | 1,000 | | PS-SS | 1,000 |
| V9 | PS-HS | 1,000 | V23 | PS-HS | ,540 |
| | SS-HS | ,999 | | SS-HS | ,173 |
| | PS-SS | ,065 | | PS-SS | ,071 |
| V10 | PS-HS | 1,000 | V24 | PS-HS | ,092 |
| | SS-HS | 1,000 | | SS-HS | 1,000 |
| | PS-SS | ,775 | | PS-SS | ,346 |
| V11 | PS-HS | ,742 | V25 | PS-HS | ,290 |
| | SS-HS | 1,000 | | SS-HS | 1,000 |
| | PS-SS | ,571 | | PS-SS | 1,000 |
| V12 | PS-HS | 1,000 | V26 | PS-HS | ,602 |
| | SS-HS | 1,000 | | SS-HS | ,401 |
| | PS-SS | 1,000 | | | |
| V13 | PS-HS | 1,000 | | | |
| | SS-HS | 1,000 | | | |
| | PS-SS | ,008 | | | |
| V14 | PS-HS | ,088 | | | |
| | SS-HS | 1,000 | | | |

Legend: PS=primary school, SS=secondary school, HS=high school

Bonferroni post-hoc test was applied to examine between which groups the difference was statistically significant (Table 8). The results show a statistically significant difference between the groups of secondary and higher education ($p = 0,31$) in the variable „*How well are you able to concentrate?*“ and between groups of primary and secondary schools in the variable „*To what extent do you have the opportunity for leisure activities?*“ ($p = 0,008$).

DISCUSSION

In recent years, assessment of the quality of life of persons with disabilities became very important research problem. Accordingly, there are numerous studies dealing with quality of life of people with disabilities, but there are a few with focus of their research on adults with cerebral palsy. People with cerebral palsy are heterogeneous group in terms of their motor, cognitive, social, educational and other characteristics. In regard with this they have to deal with many physical, social and psychological consequences related to their condition (Berrin et al., 2007, according to Gojčeta, 2008). In relation to the aforementioned effects, by identifying the predictors of the quality of life of people with cerebral palsy it is possible to create a treatment in order to improve the functioning of these persons (Renk & Wiley, 2007) and to improve the conditions of daily life (Odović et al., 2012).

Cerebral palsy is not only a medical problem but also it is a social and economic, and as such it, affects the overall quality of life for these people and their environment (Križ & Prpic, 2005; according to Odović et al., 2012).

Most researches of the quality of life of people with cerebral palsy usually include a small sample of children, but not a sample based on the population, either their study was based on parental attitudes, and on their perception of quality of life (Davis et al., 2010; Fatudimu et al., 2013; Khayatzadeh 2009; Viehweger, 2008), while on the other hand they used instruments that were focused on the functions and activities, therapeutic consequences and impact on parents.

In our research, the analysis of the results enabled us to determine what the experience of quality of life is for people with cerebral palsy in relation to their level of education and in relation to gender. It was found that the male participants had higher scores on almost all variables. Between male and female, of our sample, there is a difference in perception of quality of life of the studied variables, but there are not statistically significant except for the two variables, in favor of male respondents. Male participants their relationship with other people evaluate the claim that ranges from „good“ to „very good“ ($M=4,50$, $SD=0,658$), while female participants generally define this relationship by saying „good“ ($M=4,19$, $SD=0,803$) ($p=0,036$). When it comes to satisfaction with sex life, the experience of „good or bad“ to „good“ are characteristics of the male participants ($M=3,5$, $SD=1,111$), while female participants satisfaction with their sex life as „a not good or bad“ ($M=2,80$, $SD=1,203$) ($p=0,003$).

Jovanović (2011) is using the WHOQOL – BREF conducted a survey of the quality of life in 390 persons with disabilities (people with cerebral palsy, muscular dystrophy, multiple sclerosis, and paraplegia) and 105 persons without disabilities. The average

value of the age of those with disabilities was 41,86, and the highest number of respondents (60,5%) had completed high school. The results (Jovanović, 2011) were correlated with the results of the research of others, showing that people with disabilities have lower levels of subjective quality of life compared to people in the general population. However, as reported by Jovanović (2011), there are differences between people with disabilities in relation to their diagnosis. Thus, in the area of physical functioning, people with cerebral palsy evaluated its functioning like people without disabilities, as they relate to others and the support they receive from others rated significantly lower grades. The results of our study indicate that between male and female, when it comes to relations with others, there is a statistically significant difference ($p=0,036$) in favor of the male participants, while the support of other people did not find as statistically significant variable between the gender ($p=0,819$). Further analysis revealed that among the participants in relation to the level of education there is no statistically significant difference when it comes to relationships and support they receive from others, but the difference in relation to the level of education recorded in one variable of psychological domain ($F=4,743$, $df=2$, $p=0,011$), and in the two variables in domain of the environment ($F=4,995$, $df=2$, $p=0,009$), ($F=3,283$, $df=2$, $p=0,042$).

In a survey conducted by Jovanović (2011) it's observed a statistically significant difference in the domain of environment, but also in the social and physical domain. Participants with higher education, in the aforementioned study, had significantly higher scores in these areas compared to those with primary and secondary schools. Our findings are consistent with the results of that research, and shows that people with higher education have higher achievement on the variables in almost all domains compared to those with primary and secondary education. The difference which is recorded between the groups of those with primary schools, secondary schools and higher education levels are in statistically significant differences in the two variables. Among the group of secondary and higher education was obtained difference ($p=0,31$) in the variables „How well are you able to concentrate?“ and between groups of ones with primary and secondary schools in the variables „To what extent do you have the opportunity for leisure activities?“ ($p=0,008$). Persons with disabilities who have higher education have significantly better physical and social functioning and occupy a better position in their environment than people with disabilities who have lower levels of education, according to Jovanović (2011). Our results may be related to this paragraph.

The highest score on the WHOQOL-BREF is in the social domain, which refers to the overall social function and role, and the lowest in the field of environment (Jovanović, 2011), while our results, also, low achievement of participants in relation to level of education recorded in domain of environment ($M=3,62$, $SD=1,032$), but the highest attainment is recorded in the psychological domain ($M=4,08$, $SD=0,819$).

Results of research conducted by Sretenović et al., (2013), on the sample consisted of people with CP showed that respondents of both genders satisfied with the quality of their life when it comes to the social domain of quality of life.

Odović et al., (2013) conducted a study on a sample of 51 people with cerebral palsy and it was noted that the level of education of respondents represents a statistically significant factor in the field of interpersonal relationships and responsibility.

In the work of Colver (2012), we found research on outcomes for people with cerebral palsy: the expectations and quality of life. In all tested areas: standard of living, subjective well-being, participation, mental health, physical health, including pain, adults with cerebral palsy have achieved lower results compared to the representatives of the general population. These results, Colver (2012) associated with inappropriate interventions in early childhood. In addition, states that adults with cerebral palsy does not get enough attention in the research, as well as the outcomes of social participation are not properly considered in adulthood.

Trgovčević, Nedović and Kljajić (2012) investigated the determinants of quality of life and their correlation with the degree of disability. In a sample of 53 people with an injury of the cervical spinal cord, they noticed a paradox, where 54,6% of participants said that they have an excellent or good quality of life. The authors draw the conclusion that people who have suffered spinal cord injury and a high degree of disability did not possess the knowledge, the resources and the social contacts that help them to build balance and well-being. Our results showed that 75% of participants rate their quality of life as good or very good.

CONCLUSION

Our study was conducted to determine impact of level of education and gender on quality of life of people with cerebral palsy. It is notable that people with cerebral palsy have a high level of subjective quality of life, because the quality of life refers to a personal assessment of the individual in relation to his aspirations and achievements, and the essence of life satisfaction was related to the subjective perspective (Trgovčević et al., 2012). Even though quality of life is highly rated among participants with regard to gender and in relation to the level of education, and there are still a differences. The question that arise to us is: does people with cerebral palsy in addition to their limits, both personal and environmental, really believe that they have a high level of satisfaction with the quality of life? It could be argued that subjectivity, experience and aspirations of the participants have a significant stake in these results. We believe that studies which are aimed at measuring the quality of life of people with cerebral palsy is a basis for improving the quality of life of these people.

There are some limitations to this study, which may lead to difficulties in interpreting the results. The first limitation is a sample of study. The study sample is not small, but we can considered it is small without problems, if we take into account that people with cerebral palsy are very heterogeneous group of people with disabilities in relation to their motor and cognitive skills, social functioning, psychological functions, and more. The division of the sample in sub-samples, likely would give us different results. Furthermore, the lack of information on the social, financial, family status of participants, may also cause difficulties in interpreting the results. The following restriction is reflected in the absence of control group.

WHOQOL-BREF is not the only instrument that is used to assess the quality of life of people with disabilities, but given the fact that it was sufficient in empirical studies that have used this instrument to assess the quality of life of people with cerebral palsy, we believe that this design will contribute and serve as a basis for future research.

REFERENCES

1. Bowling, A. (1994). The concept of quality of life in relation to health. *Medicine of the 21st Century*, 7(3), 633-645.
2. Cella, F.D. (1992). Quality of life: the concept. *Journal Palliat Care*, 8(3), 8-13.
3. Colver, A. (2012). Outcomes for people with cerebral palsy: life expectancy and quality of life. *Paediatrics and Child Health*, 22(9), 384-387.
4. Cummins, R.A. (1998). The second approximation to an international standard for life satisfaction. *Social Indicators Research*, 43(3), 307-334.
5. Davis, E., Shelly, A., Waters, E., Boyd, R., Cook, K., & Davern, M. (2010). The impact of caring for a child with cerebral palsy: quality of life for mothers and fathers. *Child: care, health and development*, 36(1), 63-73.
6. Delhey, J., Bohnke, P., Habich, R., & Zapf, W. (2002). Quality of life in a European Perspective: The EUROMODULE as a New Instrument for Comparative Welfare Research. *Social Indicators Research*, 58(1), 161-175.
7. Fatudimu, M.B., Hamzat, T.K., & Akinyinka, O.O. (2013). Comparative quality of life of Nigerian caregivers of children with cerebral palsy. *International Journal of Therapy and Rehabilitation*, 20(3), 131-135.
8. Gojčeta, M., Oreb-Joković, I., & injatela, R. (2008). Neki aspekti kvalitete života adolescenata sa i bez cerebralne paralize. *Hrvatska revija za rehabilitacijska istraživanja*, 44(1), 39-47.
9. Jovanović, M. (2011). Invalidnost i kvalitet života. *Socijalna misao*, 18(2), 151-160.
10. Karaduman, A., Yilmaz, O., Tuzun, E., KeremGunel, M., Aras, B., Mutlu, A., Tarsuslu, T., & Aras, O. (2010). A comparasion of quality of life in children with cerebral palsy and neuromuscular diseases. *Fizyoterapi Rehabilitasyon*, 21(1), 3-10.
11. Khayatzadeh, M. (2009). A comparative study about quality of life in mothers of children with cerebral palsy, mental retardation and mothers of normal children. *Daneshvar Medicine*, 16(83), 214-232.
12. Macanović, G. (2010). Procena kvaliteta života školske dece merena medicinskim, kulturnim i socijalnim pokazateljima. *PONS – medicinski časopis*, 7(2), 60-63.
13. Недовић, Г., Сретеновић, И., Станисављевић, Ј. (2013). Психолошки домен квалитета живота особа са церебралном парализом. *Београдска дефектолошка школа*, вол. 19(3), бр. 57, стр. 485-496.
14. Odović, G., Sretenović, I., Stanisavljević, J. (2012). Ostvarivanje životnih navika osoba sa motoričkim poremećajima. *VI Međunarodni naučni skup „Specijalna edukacija i rehabilitacija danas“*, Zbornik radova, str. 258-265. Univerzitet u Beogradu, Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, ISBN: 978-86-6203-037-5.
15. Odović, G., Rapaić, D., Stanisavljević, J., Sretenović, I. (2012). Life habits accomplishment level of persons with cerebral palsy. *II International Scientific Conference „Special Education and Rehabilitation – Cerebral Palsy“*, Book of Proceedings and Summaries, pp. 86-96, Novi Sad, Serbia.
16. Odović, G., Stanisavljević, J., Sretenović, I. (2013). Ostvarivanje socijalnih uloga osoba sa cerebralnom paralizom. *VII Međunarodni naučni skup „Specijalna edukacija i rehabilitacija Danas“*, Zbornik radova, str. 277-287. Univerzitet u Beogradu, Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, ISBN 978-86-6203-045-0
17. Power, M., Harper, A., & Bullinger, M. (1999). The World Health Organization WHOQOL-100: Test of the University of Quality of Life in 15 Different Cultural Groups Worldwide. *Health Psychology*, 18, 495-505.
18. Schipper, H., & Levitt, M. (1985). Measuring quality of life. Risk and benefits. *Cancer Treat Rep*, 69, 1115-1123.

19. Sretenović, I., Stanisavljević, J., Milivojević, M., Šarac-Marić, G., & Kovačić, A. (2013). Socijalni domen kvaliteta života osoba sa cerebralnom paralizom. *II stručno naučni skup sa međunarodnim učešćem „Aktuelnosti u edukaciji i rehabilitaciji osoba sa smetnjama u razvoju“*, Zbornik rezimea, str. 89, Šabac.
20. Testa, M.A., & Simonson, M.D. (1996). Assessment of Quality-of-Life Outcomes. *The New England Journal of medicine*, 334, 835-840.
21. Torres, V.M.F., Marinho, C.L.A., Oliveira, C.G.G., & Vieira, S.C.M. (2013). Quality of life in adolescents with hearing deficiencies and visual impairments. *Int. Arch. Otorhinolaryngol*, 17(2), 139-146.
22. Trgovčević, S., Kljajić, D., & Nedović, G. (2011). Socijalna integracija kao determinant kvaliteta života osoba sa traumatskom paraplegijom. *Godišnjak Fakulteta političkih nauka*, 5(6), 491-505.
23. Trgovčević, S., Nedović G., & Kljajić, D. (2012). Paradoks invaliditeta: visok kvalitet života uprkos svemu. U N. Dimić (Ed.), *Stručno-naučni seminar sa međunarodnim učešćem „Dani defektologa Srbije“* (p.69). Zlatibor: Društvo defektologa Srbije.
24. Trgovčević, S. (2013). *Kvalitet života osoba sa povredom kičmene moždine. (Doctoral dissertation)*. Beograd: Fakultet za specijalnu edukaciju i rehabilitaciju.
25. The World Health Organization Quality of Life assessment (WHOQOL). (1998). Development and general psychometric properties. *SocSci Med*, 46, 1569-1585.
26. Viehweger, E., Robitail, S., Rohon, M.A., Jacquemier, M., Jouve, J.L., Bollini, G., & Simeoni, M. C. (2008). Measuring quality of life in cerebral palsy children. *Annales de réadaptation et de médecine physique*, 51(2), 129-137.
27. Wiley, R., & Renk, K. (2007). Psychological correlates of quality of life in children with cerebral palsy. *Journal of Developmental and Physical Disabilities*, 19(5), 427-447.