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QUALITY OF LIFE OF PERSONS SUFFERING FROM SCHIZOPHRENIA, PSORIASIS AND PHYSICAL DISABILITIES

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SUMMARY

Background: *Studies have addressed the impact of chronic diseases and their treatment on quality of life (Qol), but the relative impact of different chronic conditions on patients' level of subjective functioning is mostly unknown. Stigma is associated with poor Qol in various chronic diseases. The aim of this study was to compare the quality of life of people suffering from schizophrenia with the quality of life of patients with psoriasis and physical disabilities.*

Subjects and methods: *Study was conducted on a sample of 88 persons suffering from schizophrenia, 60 persons with physical disabilities and 57 persons with psoriasis. All three groups completed The Scale of Life-Quality assessment.*

Results: *Persons suffering from schizophrenia were less satisfied with their education level and social life. They were less satisfied with life if continued the same as present than persons with physical disabilities and people suffering from psoriasis. However, persons suffering from schizophrenia have higher expectations for the future than persons with physical disabilities and people suffering from psoriasis.*

Conclusions: *Our results show lower quality of life in the group of patients with schizophrenia in comparisons with group with physical disabilities and psoriasis, which indicates that it is necessary, not only to make the treatment of schizophrenia more successful, but also to improve the process of rehabilitation and social reintegration in order to increase the quality of life of people with schizophrenia.*

Key words: *quality of life – schizophrenia - physical disability - psoriasis*

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INTRODUCTION

The World Health Organization Quality of Life assessment group has defined quality of life (QoL) as individuals' perception of their position in life in the context of the culture and the value system in which they live and in relation to their goals, expectations, standards and concerns' (Kyuiken et al. 1995). This definition of QoL focuses attention on the patient's perspective on QoL and assumes an evaluation of several life domains by the patient. While numerous studies have addressed the impact of chronic diseases and their treatment on QoL, the relative impact of different chronic conditions on patients' level of subjective functioning is mostly unknown (Sprangers et al. 2000).

The quality of life of people suffering from schizophrenia is significantly lower than in the general population (Medici et al. 2016). Over the past decade, QoL research of people suffering from schizophrenia has been revealed as a predictor of treatment outcomes and de-institutionalization (Karow et al. 2014, Awad 2014, Awad 2011, Eack & Newhill 2007). The QoL is also influenced by the intensity of the psychiatric symptoms, duration of disease, age, medication side effects and other stressful events (Cichocki et al. 2015, Ucok et al. 2013, Ojeda et al. 2012, Priebe et al. 2011, Galuppi et al. 2010, Karow et al. 2007). In addition, the patients' estimation of their QoL may differ significantly from the objective assessment (Hayhurst et al. 2014) and is strongly related to stigma (Ye et al. 2016).

Studies have shown that psychological reactions to the somatic illness, as depression and anxiety, depend on the type of somatic illness, and their visibility (Tadinac et al. 2006). Thus, "visible" illnesses can give rise to negative reactions and avoidance of such patients by social environment that ultimately affects the mental state of the patient. Psoriasis is a common skin disease affecting approximately 2% of the population in Western countries. More than 40% of sufferers experience the onset of psoriasis before they turn 30 years of age. This can have serious consequences for an individual's psychosocial development (Russo et al. 2004). It has a visible aspect which can significantly influence social interactions and QoL (Žarković Palijan et al. 2011). In the study of health-related quality of life in 317 patients, it was found that psoriasis interfered with physical, psychological and social functioning to a degree comparable to that of

cancer, arthritis, hypertension, heart disease, diabetes or depression. The degree of psychosocial disability tended to be disproportionate with the degree of physical disability resulting from psoriasis (Rapp et al. 1999). These results can be explained in the context of the considerable experience of stigmatization that comes along with psoriasis.

Stigma is described as strong predictor of mental health in schizophrenia, but also in chronic somatic illnesses (Ginsburg & Link 1993). Stigma is strongly associated with quality of life in the various patients' populations (Link & Hatzenbuehler 2016). Psoriasis patients experience higher levels of stigmatization than other dermatological patients (Vardy et al. 2002).

However, it is not clear if the quality of life of those with severe mental illness and schizophrenia and visible somatic illnesses (e.g. psoriasis and physical disabilities) differ in general and if there are differences in particular domains of quality of life (Bakula et al. 2011). Comorbidity between schizophrenia and psoriasis is increased and there are evidence of possible common genetic susceptibility (Chen et al. 2012).

The aim of our study was to assess the differences in the quality of life of those three groups of patients.

SUBJECTS AND METHODS

The source population consisted of three groups. The group of patients with diagnosis of schizophrenia were assessed over the course of three months during outpatient check-up in Neuropsychiatric hospital "Dr. Ivan Barbot". The group included 88 subjects with the diagnosis of schizophrenia established with International Classification of Diseases version 10. Exclusion criteria were severe dermatological disease and physical disability as well as inability to comprehend the questionnaire.

Patients with diagnosis of psoriasis were assessed during check-up in specialised hospital Naftalan in department for skin disease. The patients were included over the course of three months and fifty-seven patients were included. Exclusion criteria were severe mental illness and physical disability and inability to comprehend the questionnaire. Group of patients with physical disabilities were members of non-government organisations of disabled people. Disability was defined as any restriction or lack of the ability (resulting from an impairment) to perform certain actions in the range considered usual for human of certain age (Fried et al. 2004). Sixty patients were included. According to the type of physical disability, 36.7% of the physical disability sample had multiple sclerosis, 33.3% had muscular dystrophy, 16.7% had paraplegia or tetraplegia and 11.7% had cerebral palsy. In 1.6% of cases, participants did not provide data about the type of physical disability.

All patients were informed about the aim and purpose of the study and signed informed consent.

Instruments

All three groups completed Scale of Life-quality assessment (Krizmanić & Kolesarić 1992). The Scale is a self-report instrument that consists of 21 items. The items evaluated patients' satisfaction with friends, family and emotional relationships, education, employment and material status, to housing, health, religion, leisure and general life satisfaction and expectations for the future. Respondents chose among the offered levels of satisfaction or dissatisfaction on a 5-point Likert scale.

Statistical Analyses

We used t-tests for independent samples with 5% significance level ($p \leq 0.05$) to examine differences in the quality of life between three groups of participants.

RESULTS

From Table 1. we can see that persons suffering from schizophrenia are the least satisfied with the life if continued the same as present - education, material status, life in the past year and health status. Persons suffering from psoriasis are the least satisfied with the health status, life in the past year, social environment, material status and life in comparison with other people. Persons with physical disability are less satisfied with the material status, health, life in comparison with other two groups, and life in the past year and expectation to achieve formerly not achieved. Persons suffering from schizophrenia are the most satisfied with the religion, expectation to achieve formerly not achieved, family of origin, social contacts and children. Persons suffering from psoriasis are the most satisfied with the family of origin, children, housing, marriage and social status. Persons with physical disability are the most satisfied with the children, family of origin, religion, social contacts and marriage.

Persons suffering from schizophrenia are less satisfied with the education, social status and would be less satisfied with life if continued the same as present than persons suffering from psoriasis. However, persons suffering from schizophrenia have higher expectations to achieve in the future formerly not achieved than persons with psoriasis (Table 2).

Persons suffering from schizophrenia are less satisfied with the education and would be less satisfied with life if continued the same as present than persons with physical disability. However, persons suffering from schizophrenia have higher expectations to achieve in the future formerly not achieved than persons with physical disability (Table 3).

As seen from Table 4. persons with physical disability are less satisfied with the social status, material status and housing than persons suffering from psoriasis. There were not any significant differences in other Qol aspects.

Table 1. Arithmetic means of satisfaction with particular aspects of life-quality in three groups of participants

Life-quality aspect	Schizophrenia		Psoriasis		Physical disability	
	N	M	N	M	N	M
Family of origin	88	4.16	57	4.33	59	4.29
Romantic/emotional relationship	59	3.75	57	3.51	52	3.85
Sexual life	71	3.20	57	3.67	51	3.18
Social contacts	87	4.13	57	4.00	60	3.90
Education	88	2.93	57	3.91	60	3.55
Job/study	55	3.42	57	3.76	30	3.43
Social status	86	3.44	57	4.02	57	3.51
Social environment, democratic rights and freedom	84	3.08	57	3.02	58	3.24
Religion	87	4.34	57	3.98	57	4.25
Health	88	3.03	57	2.69	60	2.78
Free time	88	3.81	57	3.95	60	3.80
Material status	88	2.94	57	3.23	60	2.68
Housing	88	3.80	57	4.09	60	3.53
Marriage	55	3.69	57	4.07	50	3.88
Children	26	3.92	57	4.11	29	4.59
General satisfaction with past life	86	3.70	57	3.90	59	3.86
Satisfaction with life in the past year	86	3.01	57	3.01	59	3.17
Satisfaction with past achievements	86	3.10	57	3.42	59	3.22
Expectation to achieve formerly not achieved	86	4.40	57	3.40	59	3.17
Satisfaction with life if continued the same as present	86	2.70	57	3.63	58	3.40
Satisfaction with life in comparison with other people	86	3.20	57	3.35	58	2.97

Table 2. Statistically significant differences in the satisfaction with particular life-quality aspects between persons suffering from schizophrenia and those suffering from psoriasis

Life-quality aspect	Schizophrenia			Psoriasis			T-test		
	M	S.d.	N	M	S.d.	N	t value	p	d.f.
Education	2.93	1.492	88	3.91	1.137	57	-4.474	0.001	139.16
Social status	3.44	1.351	86	4.02	1.009	57	-2.934	0.004	138.92
Expectation to achieve formerly not achieved	4.24	1.017	86	3.40	1.387	57	3.926	0.001	95.07
Satisfaction with life if continued the same as present	2.70	1.595	86	3.63	1.189	57	-3.988	0.001	138.99

Table 3. Statistically significant differences in the satisfaction with particular life-quality aspects between persons suffering from schizophrenia and persons with physical disability

Life-quality aspect	Schizophrenia			Physical disability			T-test		
	M	S.d.	N	M	S.d.	N	t value	p	d.f.
Education	2.93	1.492	88	3.55	1.320	60	-2.652	0.009	136.349
Expectation to achieve formerly not achieved	4.24	1.017	86	3.17	1.392	59	5.075	0.001	99.190
Satisfaction with life if continued the same as present	2.70	1.595	86	3.40	1.337	58	-2.844	0.005	135.317

Table 4. Statistically significant differences in the satisfaction with particular life-quality aspects between persons suffering from psoriasis and physically disabled

Life-quality aspect	Schizophrenia			Psoriasis			T-test		
	M	S.d.	N	M	S.d.	N	t value	p	d.f.
Social status	3.51	1.19	57	4.02	1.00	57	-2.459	0.015	112
Material status	2.68	1.35	60	3.23	1.31	57	-2.227	0.028	115
Housing	3.53	1.37	60	4.09	1.27	57	-2.287	0.024	115

DISCUSSION

Our results show that health and material status are the source of greatest dissatisfaction among all three groups. In addition, life satisfaction within the past year as one of the most proximate measures of current life satisfaction and is among the lowest rated in all three groups. Low rated, as well, is satisfaction with life in comparison with other people while comparison group for our participants are most probably persons without

impairment either physical or psychological. Participants of all three groups are the most satisfied with the life aspects linked to the family, children and social contacts.

It seems that most of the found differences between three groups are related to the socioeconomic conditions. Therefore, persons with psoriasis are more satisfied with the material conditions and housing than physically disabled and more satisfied with education than patients with schizophrenia. Material status and education are, next to occupation, often the most important criteria for assessing one's own socioeconomic status. MacArthur considers the socioeconomic status as a relevant determinant of subjective social status (Adler & Stewart 2007). While the satisfaction with the material status is among the lowest rated life-quality aspect in all three groups, obviously this dissatisfaction is the most prominent among physically disabled.

People with schizophrenia are less satisfied with their education than people who have a physical disability or those suffering from psoriasis. Schizophrenia can have an early onset, i.e. during high school or university, therefore it's possible that it can impact negatively on educational achievement or lead to quitting further education because of feeling of stigmatization or avoidance of additional sources of stress. Besides, some researches show that premorbid functioning of persons later diagnosed with schizophrenia is inferior to the functioning of persons without schizophrenia. Deficits in intelligence quotient and motor skills (Dickson et al. 2012) are found before age of 16 in children who will later develop schizophrenia as well as weaker academic achievements (Bilder et al. 2006), as early as first grade, compared to children that don't develop schizophrenia. Some authors found that even offsprings of patients with schizophrenia have weaker school achievements compared to offsprings of persons without schizophrenia (Jundong et al. 2012). These studies point to the likelihood of neurodevelopmental anomalies in the areas of cognition, motor functions and affective domain that occur even before first symptoms of schizophrenia. Such deficits can lead to weaker educational achievements and at the end to the lower satisfaction with education of persons with schizophrenia.

Higher satisfaction with the material status and education are determinants of socioeconomic status. Therefore subjective experience of social status probably contributes to the higher satisfaction with social position in persons with psoriasis in comparison to persons with schizophrenia and physically disabled.

Assessment of social status is, besides socioeconomic factors, influenced by the individual's perceptions of the standing, fitting and appreciation in the immediate community he lives in (Adler & Stewart 2007). Stigma related to the mental illness can have an impact on the perception of acceptance in the community and therefore on the perceptions of social status. Persons with mental disorders that see themselves as stigmatized asses their life-quality as lower, experience greater constraints in their working roles and social contacts in comparison to the persons with mental disorders that don't feel like being stigmatized (Karow et al. 2014, Ucok et al. 2013, Tang & Wu 2012, Switaj et al. 2009, Alonso et al. 2009). Authors demonstrate that stigma has stronger influence and is more frequent among persons with mental disorders compared to persons with somatic diseases (Alonso et al. 2008). A particularity of stigma related to mental disorders is viewing mentally ill as unpredictable and dangerous with accompanying fear (Angermeyer & Matschinger 2003). Fear can be powerful motive for avoidance and discrimination. Hence, differences in satisfaction with social status between patients with schizophrenia and patients suffering from psoriasis are to some extent attributable to the sense of stigmatization due to the mental disease.

That persons suffering from schizophrenia are to great extent dissatisfied with life-quality is evidenced from differences in general satisfaction with past life between patients with schizophrenia and psoriasis and persons with disabilities. Patients suffering from schizophrenia are less satisfied with life if continued the same as present, but at the same time more optimistic regarding expectations of future achievements. This high confidence in better future life-quality is probably resulting of several factors. Poor quality of past life, many unaccomplished goals can result in placing big hopes on future. Lack of self-criticism and rationality as typical deficits of schizophrenia had likely lead to so optimistic expectations of future achievements. The results of this study may also suggest the lack of insight into one's own illness because research of Margariti et al. (2015) indicates that the insight into the disease is inversely associated with QoL.

CONCLUSIONS

Our results suggest a lower quality of life for people with schizophrenia compared to people with physical disabilities and people with psoriasis, which indicates that it is necessary not only to make the treatment of schizophrenia more successful, but also to improve the process of rehabilitation and social reintegration in order to increase the quality of life of people with schizophrenia. They are consistent with the results of other authors who point to a lower quality of life for the mentally ill as compared to the somatically ill persons (Ormel et al. 1994, The ESEMeD/MHEDEA 2000 Investigators 2004). Somatic diseases most often lead to constraints in physical capacities while in mentally ill, deficits are more numerous because cognitive and motivational capacities, affective regulation, social perception are all impaired. Consequences of mental capacities impairment on functioning in different social roles can be numerous and severe. In psychotic disorders, numerous neuropsychological deficits in memory and

executive functions are present which contribute to the decline of efficacy in pursuing different social roles and therefore to the low satisfaction with the quality of life (Pena et al. 2008).

In addition, the stigma of the mentally ill people affects their quality of life. Our results may add to this knowledge and help cope with stigma in patients in schizophrenia, psoriasis and disabilities.

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Contribution of individual authors:

Tija Žarković-Palijan and Dražen Kovačević have made the design of the study and interpretations of data.

Mirela Vlastelica and Elizabeta Dadić-Hero have made literature searches and analyses participating in interpretation of data.

Marijana Sarilar has made statystical analyses and participated in interpretation of data.

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