INTRODUCTION

The research on the concept of Quality of Life (QoL) has been expanding over the last two decades. QoL has a subjective and an objective aspect, and it should be considered multidimensionally. The frequency of the research on QoL, in somatic diseases, was initially significant, and it was not before the 90s that the first studies on QoL of psychiatric patients appeared (Katschnig 2006, Opalić 2008). QoL can be defined as a patient’s perception of the disorder’s and therapy’s influence on his/her physical and psychological wellbeing, work ability, social communication, and physical health (Schiper 1990). QoL of psychiatric patients is becoming a prime measurement of assessment of the outcome of therapy. The patients with grave mental illnesses have lower QoL in comparison to the general population (Xiang 2010). It is important to consider a few factors in assessing QoL. First, QoL (particularly of psychiatric patients) depends on the cultural background of the studied population. Some studies show a better prognosis of schizophrenia in less developed and poorer communities in comparison to urban societies (Christholm 1997). A subjective aspect of QoL depends on a cultural system, and it also depends on a personal value system. A study conducted in Nigeria showed that a lower QoL of patients with schizophrenia is correlated with a lower social status and unemployment (Adewuya 2009). Although QoL represents a direct consequence of mental health, it is noticed that better QoL can improve the level of mental functioning (Jakovljević 2010). A study done by Xiang et al. (2010) shows that social functioning is the main predictor of QoL in patients with schizophrenia, at the beginning of a treatment, and after one year of a follow-up. It has already been mentioned that QoL has a subjective component and relies significantly on the assessment of mental health of the patient himself/herself i.e. his/her perception. In most cases, in somatic medicine, it is a helpful marker, and sometimes, it is the only one needed. However, a subjective assessment of the mental functioning of psychiatric patients is often influenced by a “changed” mental state. A subjective assessment related to social, professional, marital, and other types of functioning, can be affected by few factors called the “psychopathological fallacies, “which include: “affective fallacy”, “cognitive fallacy” and “reality distortion fallacy” (Katschnig 2006). Therefore, the assessment of QoL should be conducted not only in patients suffering from mental disorders, but also in...
A review of the literature showed that QoL was most researched in patients with schizophrenia. Just recently, the research on QoL of other psychiatric disorders (i.e. bipolar affective disorder, eating disorders, personality disorders, alcoholism, etc.) has begun to emerge.

Psychopathological symptoms and cognitive functioning influence the subjective assessment of QoL in patients with schizophrenia (Tomida et al. 2010). A significant research of Rocca (2009) showed that the depressive symptomatology was the most important predictor of QoL in patients who had been diagnosed with it within less than three years. Furthermore, a negative symptomatology was the most significant predictor in patients who had been diagnosed with the disorder for four or more years, and after six years, the negative symptomatology remained the most important predictor of QoL, together with the severity of the disorder. Cohen (2009) also confirmed that the most significant influence on QoL was negative symptomatology and social domain. Lately, the research on QoL significantly expanded to other “non-psychotic” disorders. It is shown that patients with obsessive-compulsive disorder (OCD) had higher QoL in comparison to the patients with depression (Vikas 2009) and that the patients with anorexia nervosa, after one year of follow up, had the worst perception of QoL, and less improvement in the domain of mental health, in comparison to the patients with other eating disorders (Munoz 2009). The significant research that focused on the period from 1974 to 2009, and on 47 studies, showed that QoL of patients with major depressive disorders (MDD) was significantly lower before the treatment and in the period of remission (Ishak 2009). The therapy procedures, pharmacological as well as psychotherapeutical, give a significant contribution to QoL of people with mental disorders. Atypical antipsychotics are superior in comparison to the typical antipsychotics, as far as the improvement of QoL is regarded. The treatment with typical antipsychotics, in comparison to the second generation of antipsychotics, has, as a consequence, a lower QoL of patients with schizophrenia (Pušić 2005). The review of Opalić (2008) shows that the researches on the subject of QoL can be categorized in several categories: 1) a comparison of QoL of patients with schizophrenia on one side, and QoL of healthy subjects, patients with somatic diseases and other psychiatric patients, on the other side, 2) the research of QoL of patients with schizophrenia treated in a hospital environment, in comparison to the patients treated outside of a hospital, 3) the studies of correlation between socio-demographic factors and QoL of the patients with schizophrenia, 4) the research on the correlation between QoL and specific psychopathology of patients with schizophrenia, 5) the research on QoL of patients with schizophrenia in different social and cultural environments, 6) the studies on QoL in correlation with the treatment of patients with schizophrenia (first psychopharmacological, and then social, psychotherapeutical, and the treatment in the community), and 7) the research on QoL of the caregivers of patients with schizophrenia. The aim of this study was to review the papers published in the main Serbian medical journals on the topic of QoL of people who suffer from mental disorders and to assess the focus points of the research on QoL in Serbia, during the period from 2000 to 2009.

MATERIAL AND METHODS

The search was done through the databases Medline and Kobson. The Serbian medical journals available in these databases and taken into consideration were: Srpski Arhiv za Celokupno Lekarstvo (Medline), Vojnosanitetski pregled (Medline), and Medicinski pregled (Medline). The main university medical journals in Serbia were also taken in consideration (i.e. Engrami, Psihijatrija Danas, and Acta Med Fac Naiss). Only the papers on the subject of QoL and psychiatric disorders were included in the research. The master and doctoral thesis regarding the subject of QoL and the psychiatric disorders were not taken in consideration. The search was done using the key words: “quality of life” and “psychiatric disorders.”

RESULTS

The search through the databases showed that, in the listed journals in Serbia, during the period 2000-2009, 8 papers were published on the subject of QoL and psychiatric disorders. The results of the review of literature will be illustrated in Table 1.

The analysis of literature regarding QoL in psychiatry focuses the research of this problem on the following subjects: a) the comparison between QoL of psychiatric patients, on one side, and the healthy controls and/or somatic patients, on the other side, b) the research on the correlation between QoL and the general psychopathology, c) the research on the correlation between QoL and the applied therapy (pharmacological), d) the possibilities for prediction of QoL using the assessment scales, and e) the review papers.
Table 1. The Review of the Literature: Quality of Life and Psychiatric Disorders

<table>
<thead>
<tr>
<th>Author</th>
<th>Journal</th>
<th>Year</th>
<th>Sample/assessment scales for QoL</th>
<th>Main findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opalić P.</td>
<td>Med Pregl</td>
<td>2008</td>
<td>Sample: 80 patients with schizophrenia, 80 healthy subjects Assessment scales for QoL: combination of MANSA and LQoLP</td>
<td>The patients with schizophrenia, in comparison to healthy subject, felt more like chronically ill; suffered more from bad mood, fear and hallucinations.</td>
</tr>
<tr>
<td>Opalić P.</td>
<td>Vojnosanit Pregl</td>
<td>2008</td>
<td>Review</td>
<td>The studies on QoL have proven to be a reliable indicator of the outcome of different treatment in patients with schizophrenia. A reduction or disappearance of symptoms of schizophrenia doesn’t automatically mean improvement of QoL. QoL of the family members of patients with schizophrenia is significantly lower in comparison to the general population.</td>
</tr>
<tr>
<td>Pavlović A.</td>
<td>Engrami</td>
<td>2007</td>
<td>Sample: 89 patients with head trauma Assessment scales for QoL: SF-36</td>
<td>The most important predictors of depression are the scores on the general mental functioning and the general health on the assessment scale SF-36.</td>
</tr>
<tr>
<td>Trajanović Lj.</td>
<td>Acta Fac Med Naiss</td>
<td>2007</td>
<td>Sample: 22 papers, 7 MSc thesis, 3 PhD thesis, 1 monography</td>
<td>The concept of QoL is mostly accepted in the field of hemodialysis and psychiatry. The research on QoL should become a routine part of work in the clinical disciplines.</td>
</tr>
<tr>
<td>Stanković Z.</td>
<td>Srp Arh Cel Lek</td>
<td>2006</td>
<td>Sample: 65 patients: 15 with recurrent depressive disorder in remission (group E); 15 with DM II (group K1); 15 healthy subjects (group K2) Assessment scales for QoL: SASS, WBQ</td>
<td>There is a significant difference of the mean values of the scores on BDI and WBQ of group E and K2, as well as the groups K1 and K2. The level of inverse correlation of the mean score values of BDI and SASS scales were significant in the group K1, while such levels of BDI and WBQ scales were found in all groups of the study.</td>
</tr>
<tr>
<td>Pušičić V.</td>
<td>Engrami</td>
<td>2005</td>
<td>Review</td>
<td>Atypical antipsychotics, in comparison to the typical contribute to a higher improvement of the subjective QoL of psychotic patients.</td>
</tr>
<tr>
<td>Janković Gavrilović J. et al.</td>
<td>Psihijat Dan</td>
<td>2005</td>
<td>Sample: 641 healthy subjects exposed to bombing as civilians (139 interviewed after one year from trauma, 475 after 2 years) Assessment scales for QoL: MANSA</td>
<td>Higher level of PTS, mostly influenced by depressive mood and anxiety, affect the subjective QoL and vice versa.</td>
</tr>
<tr>
<td>Šušić V.</td>
<td>Psihijat Dan</td>
<td>2003</td>
<td>Sample: 475 healthy subjects exposed to bombing as a civilians Assessment scales for QoL: MANSA</td>
<td>A traumatic experience often contributes to the comparison of sleep disorders, which consequently lowers the QoL of a person with a trauma.</td>
</tr>
</tbody>
</table>

DISCUSSION

The search through databases showed that, in the Serbian medical journals, during the period from 2000 to 2009, 8 papers were published on the subject of QoL and psychiatric disorders. One paper was published during the period between 2000 and 2005, while other seven were published during the period from 2005 to 2009. The studies identified through the search indicated that the research was quite heterogeneous in nature, and that it could be classified in four main categories according to the topic of the research. The first category includes the papers on the subject of QoL of psychotic patients (3 papers). Out of these papers, just one was about the effects of therapy on the QoL of the psychotic patients. The second category included the works on QoL and depression (2 papers). The third category included the papers on the post-traumatic stress disorder (PTSD) and QoL (2 papers). The fourth category included the papers comparing the research on the patients’ QoL in all fields of medicine, including psychiatry (1 paper). A study of Opalić (2008) researc-
chend the QoL of patients with schizophrenia living in Belgrade. The results showed that the patients with schizophrenia, in comparison to the healthy subjects, felt more like chronic patients and suffered more from depression, anxiety, and perceptive delusions. However, the results also showed that the patients with schizophrenia were also significantly happier with their living conditions and incomes. The healthy subjects were more satisfied with their sexual life and social activities. The listed paper is practically the only research paper on the subject of QoL and schizophrenia in Serbia. The same author (Opalić 2008) also questioned the subject of QoL of patients with schizophrenia in the review. The research included not only the main characteristics of QoL of patients with schizophrenia (i.e. QoL of patients with schizophrenia vs. QoL of other participants; QoL of patients with schizophrenia in the hospital and extra hospital conditions; QoL of patients with schizophrenia, in correlation with the sociodemographic characteristics; QoL in correlation to the psychopathology of schizophrenia; QoL in correlation with the treatment and the QoL of caregivers) but also the assessment scales used in the measurement of QoL (Opalić 2008). The third paper on the QoL in patients with psychotic disorders was also a review and significantly studied the treatment of patients with schizophrenia (atypical vs. typical antipsychotics) (Pušić 2005). The atypical antipsychotics, in comparison to the typical antipsychotics, significantly improved the subjective QoL in the patients with psychotic disorders. Most studies agree that patients with schizophrenia have lower QoL in comparison to the general population. Also, the QoL of psychiatric patients was mostly researched in the patients with schizophrenia (Priebe 1994). The psychosocial factors have more influence on QoL in patients with schizophrenia than on the psychopathological manifestations of the disorder (Opalić 2008). The phase of the disorder (acute vs. remission) and therapy are not less important. On the other hand, some studies showed a low effect of socio-demographic factors on QoL of patients with schizophrenia (Xiang 2010). A study conducted in four European states found no correlation between the gender and QoL of patients with schizophrenia (Masfety Kovess et al. 2006). The social support is a significant predictor of change of QoL, and has a great influence on QoL of patients with schizophrenia (Stanković 2006). A publication of Miljković (2004) about QoL of patients with schizophrenia showed that: a) a lower QoL of patients with schizophrenia in comparison to the general population and somatic patients; b) younger persons, women, married individuals, and people with a lower level of education affected by schizophrenia have better QoL in comparison to other patients with schizophrenia; c) the duration of the disorder and a number of hospitalizations are correlated to a lower QoL; d) the negative symptoms of schizophrenia are inversely correlated to QoL; e) a combined psychotherapeutical and pharmacotherapeutical treatment contribute to better QoL; and f) the programs of social support are very influential on QoL in patients with schizophrenia. The majority of researches regarded the assessment of the pharmacological treatment in patients with schizophrenia mostly under influence of the atypical antipsychotics. The treatment with the typical antipsychotics leads to a lower QoL of patients with schizophrenia (Pušić 2005).

The positive influence of various psychotherapies on many psychiatric disorders has already been established. However, the influence of psychotherapy on QoL of psychiatric patients has not been sufficiently researched. A study of Bechhof et al. (2010) examined the impact of a short group cognitive-behavior therapy (CBT) and a program of group psycho-education on QoL of patients with schizophrenia. The results show a significant improvement of QoL in most domains regardless of a type of the therapy. Similar results were found in patients suffering from depression (Swan 2009). A study of Patellis-Siotis et al. (2001) found significant improvement on some items [vitality and role (emotional) scores] on the SF-36 assessment scale after the use of CBT on patients with bipolar affective disorder (BAD), in the phase of a mild depression. In Serbia, during the last ten years, no such research was conducted. However, the review of the literature shows that most of the studies find the combination of the psychotherapeutical and pharmacological treatment as the best solution as far as the QoL of psychiatric patients is concerned (Miljković 2004).

The studies on QoL in patients with affective disorders (mainly depression) were done in Serbia, while the research on the QoL in patients with BAD was not conducted. The research of Stanković (2006), on the perception of QoL and social adaptation in patients with recurrent depression, is interesting, since the comparison was done with the patients with somatic illness (DM type II) and healthy controls. The results showed significant difference between the experimental and control groups on the assessment scales for depression and QoL. Also, the statistically significant inverse correlation between the scores on the assessment scales for depression and QoL was noticed among all three groups. Another study done on the non-clinical population, dealt with the correlation between depression and some aspects of QoL and the overall perception of QoL using the assessment scale SF-36 (Pavlović 2007). The results showed that the most significant predictors of depression were items assessing mental health and general health on SF-36. A study of Chung (2009) points out that the intensity of the depressive symptoms is a key factor for all domains of QoL. The intensity of depressive phenomenology is important for functional, professional, and social incompetence, which contributes to a lower QoL (Stanković 2006). A depression is strongly connected to
a lower QoL, but it does not influence the perception of the past or future QoL (Moore 2005). A study of Atkinson (1997) shows that the patients with BAD and MDD have a lower subjective QoL in comparison to the patients with schizophrenia, while, on the subject of objective QoL, the situation was inverse, which confirmed other studies (Koivumaa-Honkanen 1999). However, some studies show no difference between QoL of psychotic and non-psychotic patients (McQuean 1997).

The research on the correlation between QoL and post-traumatic stress (PTS) has rarely been done. In the country, a group of researchers studied the correlation between PTS and QoL in healthy subjects who survived the air bombing of Serbia. One group was tested one year after the bombing and the other was tested after two years. The results showed weak to moderate correlation between PTS and the subjective QoL (Janković Gavrilović et al. 2005), as well as the influence of anxiety and on the correlation between post-traumatic stress and subjective QoL. Another paper was about the correlation of PTS, quality of sleep, and QoL (Šušić 2003). The results showed a higher frequency of sleep disorders (i.e. initial and transitory insomnia), nightmares, and a lower QoL in the group of subjects, who were diagnosed with PTSD in the course of research. The statistical significance was found between the groups of subjects with, or without PTSD, in almost all domains of QoL. The first researches of the topic on the subject was done in 1997 (Solokhina 1997).

The families of psychiatric patients strongly struggle to accept the disorder and the change of the life style, in comparison to the families of other patients (Kuipers 2003). The caregivers of the depressed frequently themselves develop depressive symptomatology, which additionally harms already affected QoL (Draganić Gajić 2005).

**Limitations**

The study had several limitations that might have influenced the findings. The papers included in the research were predominantly reviews (3 papers) or the studies done on the “non-psychiatric” population (3 papers). Only two papers were research papers done on the “psychiatric population” (1 on depression and QoL, 1 on QoL and schizophrenia). The research did not include the master and doctoral thesis, as well as monographies regarding QoL and psychiatric disorders published in Serbia, during the period from 2000 to 2009. The methodological shortcoming is a cross-sectional design of the studies, which does not allow the conclusion at the basis of the cause. The studies were not designed as a longitudinal, prospective research and a small sample may also represent a limitation in some studies.

**CONCLUSIONS**

QoL of psychiatric patients in Serbia is still under-researched. It would be important to measure QoL from both patient’s and observer’s (family members, friends, nursing staff, mental health professionals etc.) perspective, in the context of social, economic, and cultural background of the patient. In the future, studies on QoL in Serbia should also include “disease specific” assessment scales that would consider particular aspects of psychopathology and eventually follow up longitudinal course of mental illness, treatment outcome and recovery.

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