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The Quality of Life in Patients with Schizophrenia

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ABSTRACT

Background: Schizophrenia commonly coexists with substance abuse, suicidal ideation, depression, and anxiety. Patients diagnosed with schizophrenia can be housing insecure, have poor nutrition, have limited access to healthcare, poor health maintenance and fewer social relationships when compared to patients without a diagnosis of schizophrenia. These factors often contribute to reports of poor quality of life (QOL). The purpose of the research was to identify influencing positive and negative factors related to QOL and discuss strategies that improve the QOL in the population of patients with a diagnosis of schizophrenia. **Method:** A review of the literature aims to assess interventions and behaviors that increase or decrease the QOL in patients with schizophrenia. **Results:** The results indicate that a combination of maintaining social relationships, treatment with antipsychotic medications, consuming dietary supplements and healthy foods, partaking in regular exercise, and participating in cognitive behavioral therapy is associated with improved QOL.

INTRODUCTION

Patients diagnosed with schizophrenia are generally more vulnerable to comorbidities and concurrent mental illnesses, which puts them at risk of having a decreased QOL. The purpose of this review was to identify specific factors that influence QOL in patients with schizophrenia, in addition to identifying strategies to improve the QOL for this patient population. Reviewing the literature for this study was to assess behaviors and interventions that cause an increase in the QOL compared to behaviors and interventions that decrease the QOL among patients with schizophrenia.

The National Alliance for Mental Illness (NAMI) published an article from an author who was diagnosed with schizophrenia, discussing key concepts that are beneficial for managing the disorder [1]. These concepts include finding the right individualized treatment plan and being actively involved in support groups. However, almost more importantly, the person needs to find ways to improve their own QOL, including making efforts to consume a balanced diet, exercise regularly, participate in art therapy or music therapy, partake in spirituality, and finding ways to be productive. Being productive can fall on a spectrum anywhere between doing household chores and fulfilling a more official employment role [1].

Background

The World Health Organization [2] defined QOL as "an individual's perception of their position in life in the context of the culture and value systems in which they live and about their goals, expectations, standards, and concerns". The concept of QOL is affected by physical health, psychological state, social relationships and individual personal beliefs [2]. The QOL is very subjective and is unique to individuals and specific situations. In patients with schizophrenia or other mental illnesses, typical QOL assessment scales are not always appropriate because of changes in physical or cognitive functioning and social interactions or relationships. The Quality of Life Scale (QLS) developed in 1894 by Henrichs, Hanlon, and Carpenter was specifically designed to assess functioning and functional outcomes in patients diagnosed with schizophrenia [3].

The QOL scale developed for patients with schizophrenia is unique in that it considers negative symptoms of schizophrenia when assessing personal experience, quality of relationships and productivity in occupational roles regardless of whether positive symptoms are present or absent in that person [3]. The QLS is administered by a clinician in a semi-structured interview. The first section assesses intrapsychic foundations such as motivation, curiosity, empathy, emotional interaction, and the ability to feel pleasure. The second section assesses interpersonal relations that include the quality and quantity of social relationships. The third section evaluates instrumental role functioning and identifies productivity in an occupational role. Occupational roles can include school, work, parental roles, or doing household chores. The final section evaluates patient possession of common objects used for societal functioning like watches in addition to assessing involvement in activities that indicate active participation in society, such as taking public transport. The Quality of Life Scale is scored on a scale of 0-6 for each domain and the overall score. Specifically identifying function over the previous four weeks, scores of 0-1 indicate serious functional impairment, 2-4 indicates considerable loss of function and 5-6 is an unaltered function [3].

History

The deinstitutionalization movement of psychiatry in the 1960s was intended to free the patients who were institutionalized in light that their symptoms would subside [4]. At this time, psychiatrist Franco Basagila believed symptoms such as word salad, vacant stares, repetitive gestures and flat affects would abate after being released from an institution [4]. Those against the deinstitutionalization movement soon revealed that those suffering from bipolar and schizophrenia still experienced symptoms and found themselves homeless, incarcerated, victims of assault, or victims of suicide. During this time, family members were overwhelmed with adjusting to becoming unassisted and exclusive caregivers for their loved ones. More recent studies have shown that newer generation antipsychotics and half-way houses became a hallmark in creating less stressful transitions from psychiatric facilities to community living for both patients and families. Pharmacologic treatment was condemned as ‘poisonous’ or ‘controlling’ during the deinstitutionalization movement [4].

The goal of modern psychiatry is to foster an independent lifestyle and autonomous dealing with the illness, as exemplified by the concept of empowerment [4]. Kilian and his team constructed a questionnaire consisting of 33 questions that measured concepts such as financial and living situation, work activity, social life, participation in therapy, acceptance of illness, medication regime, sense of hope, and family relations among other factors. This is known as Kilian's empowerment questionnaire [4]. This questionnaire was developed by focus groups including patient participants with severe mental illness, their family members and expert psychiatrists. Present issues consist of managing or reducing symptoms for patients living in the community or half-way houses. Supportive psychotherapy can help in reducing symptoms for these patients. Modern antipsychotics such as clozapine have created a more tolerable transition during deinstitutionalization, although more research is needed to further reduce symptoms of patients with schizophrenia [4].

A meta-analysis demonstrated how patients with schizophrenia indicate that the presence of positive and negative symptoms correlated with poor QOL [4]. A Nigerian study revealed that medication compliance and adherence is associated with an improved QOL, this can be increased through eliminating medication side effects. Herbal substances such as Ginseng and cannabinoids have been explored as a method to reduce symptoms in patients with schizophrenia. Ginseng has shown potential in decreasing depression in patients with high levels of negative symptoms. The cannabis derivative tetrahydrocannabinol (THC) has been shown to trigger symptoms of schizophrenia, while another cannabis derivative (CBD) has shown a reduction in schizophrenic symptoms [4].

Case Study

Based on other research, prior knowledge, and an interview with an acquaintance diagnosed with schizophrenia, it is reasonable to assume that all patients with schizophrenia will struggle with QOL at one time or another. This section is generalized for the entire population instead of an individual with a few excerpts from the interview.

Schizophrenia is a chronic psychiatric disorder that affects a patient's cognition, behavior, and expression of emotions that usually presents when a person is around 16-30 years old [5]. Individuals with schizophrenia manifest alterations in brain chemistry, structure and

neurotransmission that is seen when multiple inherited gene abnormalities combine with non-genetic factors such as viral infections, birth injuries, environmental stressors, prenatal malnutrition, and abnormal neural pruning and causes alterations in brain function [6]. Early-onset that occurs before 15 years of age and late-onset that occurs after a person is 40 years old are also forms of schizophrenia, although they are less common [6]. Despite schizophrenia affecting all races and cultures equally, it affects male individuals 1.4 times more frequently than female individuals and those growing up in urban areas [6]. Patients with schizophrenia can express a mixture of positive, negative and cognitive symptoms. Positive symptoms such as hallucinations, delusions, movement disorders and unusual or dysfunctional ways of thinking are often more apparent than negative symptoms such as difficulty beginning or sustaining activities, anhedonia, a decrease in speaking, and reduced expression of emotions via a vocal tone or facial expression that can also be called flat affect [5]. However, G.N. [7] stated that he "did not realize his visual and auditory hallucinations were abnormal," therefore, he did not seek treatment for many years despite these symptoms slowly worsening. Cognitive symptoms that include difficulty focusing or paying attention, poor executive function, and issues with working memory can also occur in patients with schizophrenia [5].

Substance use disorders occur in nearly half of all patients with schizophrenia; alcohol and cannabis are the most commonly used substances. Up to 60% of the people diagnosed with schizophrenia use nicotine as a coping mechanism [5]. Anxiety, depression, and suicide frequently co-occur with schizophrenia. Approximately 20% of patients with schizophrenia attempt suicide and 5-10% die by suicide, at a rate of 5 times more than the general population [5]. On average, those with schizophrenia die more than 20 years prematurely due to factors such as poor health maintenance behaviors, poor nutrition, substance abuse, medication effects, poverty, limited access to healthcare, and reduced ability to acknowledge or act to signs of illness [5]. G.N. [7] explained that he heard "louder" voices when sober and self-medicated to make the voices "quieter" with cocaine, alprazolam, and alcohol use.

Treatments for schizophrenia vary widely (see Figure 1). Initial treatment for patients diagnosed with schizophrenia often includes various antipsychotics [8]. These medications treat positive symptoms of the disorder but do not treat root causes such as stress or substance abuse. Antipsychotic medications do help to decrease the incidence of disoriented or disorganized

behavior that can play a role in cognitive impairment, which improves social relationships, education, and employment in day-to-day life [8]. Positive symptoms such as visual or auditory hallucinations can change over time, which may require changes in treatment [7]. G.N. [7] also said that while he does take antipsychotic medication, he still experiences hallucinations but describes them as "static sounds" instead of voices. He also said that this continuous "static" was much less distressing than his previous auditory hallucinations, which included hearing commands from familiar voices [7]. Hallucinations and delusions are often treated with antipsychotic medications along with cognitive-behavioral therapy (CBT), but can also be treated with dietary supplements and yoga as adjuncts to medication [8]. Dietary supplements of Vitamins B, C, and E are important because patients with schizophrenia often consume less fruit, vegetables, and fiber than the average person [8]. Improving diet habits can decrease symptoms of schizophrenia in addition to decreasing the risk of comorbid diseases such as diabetes and heart disease, which decreases premature mortality and improves overall health [8]. Polydipsia, or excessive thirst, occurs in up to 20% of patients with schizophrenia and one of the most common side effects of antipsychotic medications is dry mouth [6]. Changes in sodium ions that result in hyponatremia occur in 2-5% of these cases [6].

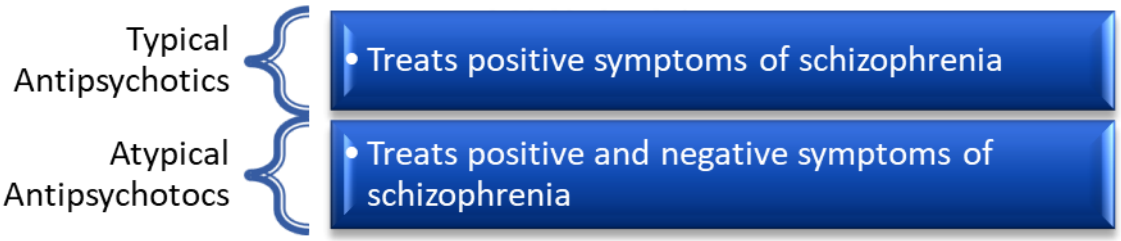

Figure No. 1: Medications for positive and negative symptoms of schizophrenia

Negative symptoms that cause withdrawal from social behaviors and suicidal ideation are treated with CBT in addition to antipsychotic medications that improve cognitive function [8]. Disorganized behavior affecting daily life, lack of community integration, decreases in sense of stability and security for basic needs, substance abuse, and deficits in education or employment are commonly treated with CBT and antipsychotic medications. Cognitive-behavioral therapy (CBT) focuses on "modifying undesirable modes of thinking, feeling, and behavior" which benefits patients with schizophrenia to identify and address distressing symptoms of the disorder

and discuss resulting social impairments [8]. Maintaining social relationships during episodes of psychosis or depression is often difficult and requires effort from all involved individuals [7]. Support from family and friends is vital for the management of mental disorders [7].

Needs for increased recreation activities, entertainment, exercise, and overall well-being are effectively treated with yoga [8]. Yoga is an effective holistic therapy when used in conjunction with pharmacologic interventions. Some medications cause weight gain and endocrine dysfunction, which are improved by regular yoga therapy [8]. Yoga therapy reduces positive symptoms of schizophrenia, decreases symptoms of depression, improves cognition, and increases QOL due to the production of oxytocin that contributes to overall wellbeing [8]. Simple exercises such as yoga or walking are effective in improving mood and decreasing symptoms [7]. G.N. [7] reported having "better" QOL when he participated in various holistic therapies and activities.

METHODS

Sources were identified from searches through databases accessed via the university library system including PubMed, ProQuest, ScienceDirect, National Center for Biotechnology Information (NCBI), and Elsevier. Common search terms included schizophrenia, QOL, assessment tool, interventions, management, and holistic. Results were narrowed down by article publication date, publication in a peer-reviewed journal, and availability of full-text articles online.

LITERATURE REVIEW

The purpose of this literature review was to gain insight into existing research focused on the QOL in patients with schizophrenia. Articles were gathered regarding the use of QOL scales, social factors, and cultural factors. These articles had different types of research, including meta-analysis and cross-sectional studies, and primarily used patients with schizophrenia compared to a control group of patients not diagnosed with schizophrenia.

Comparing Quality of Life Scales

A meta-analysis comparing the QOL of individuals experiencing schizophrenia compared to a healthy control group found that age, male gender, income, and illness duration have meaningful effects on QOL [9]. Fifteen case-control studies were done encompassing 2,195 schizophrenic patients and 1,508 healthy subjects, but only studies using the World Health Organization Quality of Life (WHOQOL) or the Short Form-36 Health Survey were used [9]. Schizophrenic patients scored significantly lower in physical health, psychological health, social relationships and environmental domain areas compared to the control group on the WHOQOL scale. The Short Form-36 Health Survey showed a more significant decrease in mental and physical health for patients with schizophrenia than patients in the control group [9].

A cluster cross-sectional study was done consisting of 323 outpatients with stable schizophrenia [10]. A two-step cluster analysis was used to define groups of patients based on baseline values for the Heinrichs-Carpenter Quality of Life Scale. Three distinct clusters were identified as moderate, poor, and good; 50.4% of patients were classified as having moderate functioning, 27.9% were classified as having poor functioning and 21.7% classified as having good functioning. Good versus poor functioning was characterized by less severe negative and depressive symptoms, being employed, having a long-term relationship, and treatment with second-generation antipsychotics [10].

Social Considerations

Social defeat occurs when a person is physically or psychologically put down by another or if a person feels they are excluded from a group [11]. Patients with schizophrenia are more often socially excluded than non-schizophrenic peers [12]. Patients with schizophrenia often internalize stigma about their diagnosis, which causes their identity to revolve increasingly around their mental illness [13]. Psychosis is thought to develop more commonly when there are significant disturbances in a person's self-perception [13].

Reddy et al. [12] argued individuals who experienced social exclusion had decreased working memory and decreased security for psychological needs. The control group of participants without schizophrenia described a more significant stress level than the group of participants

with the diagnosis of schizophrenia. The authors attribute this to the concept that "social exclusion is less familiar, and therefore more salient and painful" to individuals without severe mental illness. The results indicated that increased social interaction and social support systems improve functioning, reduce psychological stress, and reduce cognitive impairment [12].

Cultural Considerations

When a person is a part of more than one cultural group, the changes that occur as a result of dual contact is called acculturation [13]. This process has several framework strategies for multicultural individuals including integration, assimilation, separation, marginalization, and enculturation. Mamani et al. [13] defined enculturation as "the degree to which one maintains the customs of his or her culture of origin", but the authors specified that enculturation does not assume separation, in which a person maintains the minority culture and limits interactions with the host culture. Another framework strategy is called integration, in which a person engages with the host culture and also maintains the minority culture within their identity. Integration differs from assimilation, where the person gives up the minority culture and engages primarily with the host culture. The final strategy is called marginalization, in which a person establishes a set number of relationships within the host culture and also relinquishes many values and traditions common in the minority culture [13].

Integration is the most adaptive strategy for multicultural individuals, promoting resilience, physical health, and positive psychological well-being [13]. On the other end of the spectrum, marginalization is the least adaptive framework strategy. In a study, the researchers sought to determine if Black and Hispanic ethnic minorities with more integrative acculturation strategies would display less severe psychiatric symptoms and greater QOL compared to other Black and Hispanic ethnic minorities with primarily marginalizing acculturation strategies [13]. The researchers found that although enculturation strategies did not affect the presence or severity of schizophrenia symptoms, study participants who scored higher on assimilation and enculturation scales reported more positively on the QOL scale while participants who had lower scores on assimilation and enculturation scales reported a more negative QOL score [13].

SUMMARY AND EMERGING THEMES

Rocca et al. [10] concluded a cross-sectional study containing three cluster groups consisting of patients with moderate, good, and poor functioning. Over half of the participants in this study were classified under the moderate cluster. Factors that influenced poor functioning versus good functioning were characterized by the presence of less severe negative and depressive symptoms, being employed, having a long-term relationship, and treatment with second-generation antipsychotics [10].

Reddy et al. [12] suggested that increased social interaction for patients with schizophrenia is an effective intervention for negative symptoms, which in turn can increase the QOL. Some social interaction or support can come from family and friends. Helping a loved one who has been diagnosed with schizophrenia includes helping the person get treatment and encouraging the continuation of treatment. It also includes treating them with respect, support, and kindness without tolerating inappropriate or dangerous behaviors, remembering that hallucinations and delusions are very real to the affected person, and seeking out support groups if they are available [5].

Since patients with schizophrenia can come from any culture or ethnicity, some of these patients may experience an increase in discrimination or exclusion based on their ethnicity or culture in addition to their diagnosis of schizophrenia [13]. These cultural factors can have an increased negative effect on mental health, as well as a further increase in health disparities. However, in some smaller cultural groups, there are unique social supports that are provided exclusively through a person's culture such as attending religious services or participating in community events. These cultural resources and social circles may improve QOL, increase social support systems, and help the affected person gain coping skills that can improve mental health [13]. Some of the prominent emerging themes are illustrated in Figure 2.

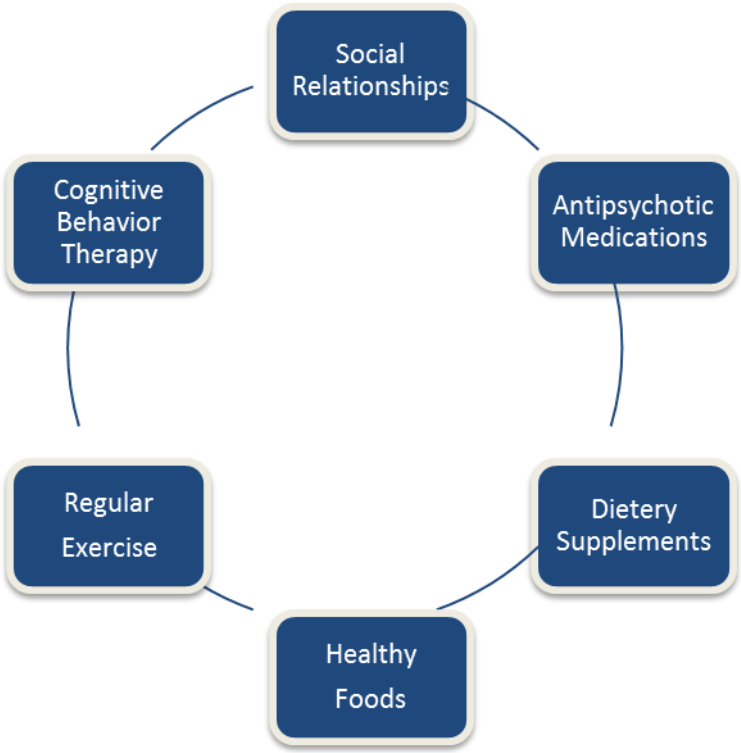

Figure No. 2: Emerging themes associated with essentials for improved quality of life in patients with schizophrenia

CONCLUSION

Reddy et al. [12] concluded that social interaction decreases the presence of negative symptoms of schizophrenia. A decrease in symptoms is associated with an increase in the QOL. Mamani et al. [13] concluded that cultural resources such as church groups can increase social interaction, produce effective support systems, aid in the development of healthy coping skills, and improve reported QOL. However, cultural discrimination and exclusion can have a profound negative effect on QOL, health disparities, and overall mental health [13]. Dong et al. [9] concluded that physical health, psychological health, social relationships, and environmental domains are greatly affected and reduced in patients experiencing schizophrenia. Meta-regression analyses determined that age, male gender, income, and illness duration have profound effects on schizophrenic patients' QOL [9]. Rocca et al. [10] aimed the research towards understanding factors that are associated with enhanced outcomes that may direct specific and additional therapeutic interventions to reinforce benefits for patients and improve the delivery of care in the

community. A two-step cluster analysis was used to determine groups of patients based on the Heinrich-Carpenter Quality of Life Scale total score [10].

This review indicated that social interactions and relationships are vital to the QOL, especially in patients with schizophrenia. Adequate treatment with antipsychotic medications in addition to dietary changes, regular exercise, and therapy has shown to improve the QOL by decreasing positive and negative symptoms. Measuring the QOL on a scale designed to evaluate functioning is vital when assessing patients with schizophrenia because many of the symptoms impair normal functioning.

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