

Quality of life in caregivers of patients with schizophrenia and its correlation with severity of illness

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ABSTRACT

With the advent of deinstitutionalization there is increasing interest in the quality of life of caregivers of patients of schizophrenia all over the world. Quality of life of 50 caregivers of schizophrenia patients were evaluated using Q-LES-Q-SF. Severity of Schizophrenia was evaluated using PANNS scales. Quality of life was found to be moderately low. Parents of patients had the poorest quality of life compared to caregivers in other relationships. Quality of life in caregivers was negatively correlated with PANSS general psychopathology score and PANSS total score.

KEYWORDS: Caregivers, PANSS general psychopathology score, PANSS total score, Schizophrenia, Quality of Life

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I. INTRODUCTION

The role of the mental hospital in patient population peaked in the 50's and has since declined. Over the last thirty years the world has accepted, indeed advocated, that the community rehabilitation approach provides the most appropriate means for dealing with mentally ill people. This has involved a multitude of initiatives, including the development of psychiatric units in district general hospitals, increased emphasis upon providing psychiatric services in primary care settings, the development of residential and day care facilities, and an increased emphasis on the role of voluntary groups, friends, relatives and neighbors in the provision of care for people with mental disorders in the community. Among the various types of functional psychosis, schizophrenia is numerically the most common and clinically the most disabling kind of psychosis. Although there are regional variations, the overall rate of schizophrenia is marked as 1% in most countries around the world. As part of the World Health Organization (WHO) collaborative study, two geographically defined populations in urban and rural Chandigarh (North India) were monitored for a period of two years. The annual incidence rates of schizophrenia were 4.4 and 3.8 per 10,000 for the rural and urban areas respectively. As part of an ICMR funded longitudinal study in urban Madras (now Chennai), Rajkumar et al. [1] found an incidence rate of schizophrenia of 2.1 per 10,000 by the community survey and 4.1 per 10,000 by the leakage study.

A number of studies have been done on the quality of life and burden of care in caregivers of patients with schizophrenia [2], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12], [13], [14], [15], [16], [17], [18], [19], [20], [21], [22], [23], [24], [25], [26], [27], [28], [29], [30], [31], [32], [33], [34], [35], [36], [37], [38].

But very few studies from India have been done on the quality of life of caregivers of schizophrenia patients [6], [39], [40], [41], [42], [43], [44]. Considering the increasing interest in the quality of life of caregivers of patients of schizophrenia all over the world, we thought that this study will be fruitful in understanding quality of life of such caregivers in our cultural setup. The present study is an effort in this direction and is designed to assess the quality of life of caregivers of schizophrenia patients and find its correlation with the severity of illness.

II. MATERIALS AND METHODS

This is a cross-sectional study in clinical setting without use of any normal control group. The study was done during the period from January 2013 to October 2013. All the consecutive indoor patients with

schizophrenia (diagnosed as per DSM IV- TR) in Department of Psychiatry, PDU Medical College, Rajkot (which is a tertiary care centre) and their caregivers were taken for study between the 3rd to 5th day of admission. Totally 50 patients with schizophrenia and their 50 caregivers (1 caregiver for each patient) were taken. They were explained about the nature of the study. Informed written consent was taken. Quality of life of caregivers was determined using Quality of Life Enjoyment and Satisfaction Questionnaire- Short Form (Q-LES-Q-SF). Severity of schizophrenia was assessed using Positive and Negative Syndrome Scale (PANSS). SPSS version 17.0 was used to analyse data. Data was analysed for statistical significance with chi square test and t-test as the case may be. Probability value less than 0.05 has been taken as statistically significant. Pearson correlation was used to find out correlation between quality of life and severity of illness. Correlation is considered significant at the 0.01 level (2-tailed).

III. RESULTS

Table 1 shows the socio-demographic characteristics of schizophrenia patients. Mean age of schizophrenia patients was 36.08 years. 66% of the patients were males while 34% were females. 50% of the patients resided in urban areas, 18% in semi-urban areas and 32% in rural areas.

Table 1: Socio-demographic Characteristics of Schizophrenia Patients

Patients	Schizophrenia N = 50(%)
Age (years) Mean	36.08
Sex	N (%)
Male	33 (66)
Female	17 (34)
Domicile	N (%)
Urban	25 (50)
Semi-urban	9 (18)
Rural	16 (32)

Table 2 shows the socio-demographic characteristics of caregivers of schizophrenia patients. Mean age of caregivers was 47.88 years. 50% of the caregivers were males while 50% were females. 50% of the caregivers were parents to the patients, 32% were spouses while 18% were in other relationships with the patients.

Table 2: Socio-Demographic Characteristics of Caregivers

Caregivers	Schizophrenia N=50 (%)
Age (years) Mean	47.88
Sex	N (%)
Male	25 (50)
Female	25 (50)
Relationship with Patient	N (%)
Parents	25 (50)
Spouse	16 (32)
Other relationships	9 (18)

Table 3 shows the clinical variables of patients. The mean duration of illness was 9.78 years and the mean age at onset of illness was 26.26 years.

Table 3: Clinical Variables of Patients

Patients	Schizophrenia N = 50(%)
Duration of Illness (years) Mean Duration	9.78
Age at onset (years) Mean	26.26

Table 4 shows the quality of life in caregivers. The mean Q-LES-Q-SF score was 45.14.

Table 4: Quality of Life in Caregivers

Q-LES-Q-SF score	Schizophrenia N=50
Mean (SD)	45.14 (8.624)

Table 5 shows caregiver’s quality of life and relationship with patient. Q-LES-Q-SF score for parents was the lowest at 41.88. Q-LES-Q-SF score for spouses was 46.13 and for caregivers in other relationships it was 52.44. Parents had a statistically significant poorer quality of life when compared to caregivers in other relationships.

Table 5: Caregiver’s Quality of Life and Relationship with Patient

Relationship with Patient	Schizophrenia Q-LES-Q-SF Score Mean (SD) N=50
Spouse	46.13 (7.108)
Parents	41.88 (6.735)
Others	52.44 (11.381)
Test of Significance Spouse Vs Parents	t=1.927, p=0.061, NS
Spouse Vs Others	t= -1.717, p=0.099, NS
Parents Vs Others	t= -3.335, p=0.002, S

NS= Not Significant, S=Significant

Table 7 shows correlation of schizophrenic caregiver’s quality of life with PANSS Scores. Pearson Correlation was used to correlate Q-LES-Q-SF Score in caregivers and PANSS scores in schizophrenic patients. Quality of life in schizophrenic caregivers had negative correlation with PANSS Positive score (p=0.111) and PANSS Negative (p=0.062) score but this correlation was not statistically significant. Quality of life in schizophrenic caregivers had statistically significant negative correlation with PANSS General Psychopathology score (p=0.000) and PANSS Total score (p=0.000).

Table 7: Correlation of Schizophrenic Caregiver’s Quality of Life with PANSS Scores

Variable	Correlation Type	PANSS Positive Score	PANSS Negative Score	PANSS General Psychopathology Score	PANSS Total Score
Q-LES-Q-SF Score	Pearson Correlation	-0.228	-0.266	-0.535 (**)	-0.512(**)
	Sig. (2-tailed)	0.111	0.062	0.000	0.000
	N	50	50	50	50

** - Correlation is significant at the 0.01 level (2-tailed)

IV. DISCUSSION

Quality of life in caregivers is inversely related to their burden. Alejandra Caqueo-Urizar et al [2] reported decreased QOL to be associated with caregivers' burden. Selwyn Stanley et al [36] and Anniqa Foldemo et al [5] obtained a significant negative correlation between the family burden and QOL scores of the caregiver indicating that these two dimensions mutually influence one another. Mean Q-LES-Q-SF score represents quality of life in caregivers. In our study we found quality of life to be moderately low. This is similar to the findings of Laurent Boyer et al [21] and Lueboonthavatchai P et al [23] who found Schizophrenic caregivers' QoL levels to be either low or moderately low. Sally Wai-chi Chan [33], Zahid MA [38] reported that high family burdens were encountered by caregivers of schizophrenic patients in various parts of the world.

Also when we compare the Quality of Life of parents with spouses, we find that they have a similar Quality of Life ($p=0.061$). This finding is consistent with the findings of K.K.Ganguly et al [41] who found that spouses and parents had similar burden. But our findings differ from the findings of Anupama Rammohan et al [6] who found greater burden in spouses. Parents had a statistically significant ($p=0.002$) poorer Quality of Life when compared to caregivers in other relationships (children, sibling). Similar findings have been reported by many other authors. Caqueo-Urizar A et al [10] have reported mothers to have a very high degree of burden. Alejandra Caqueo-Urizar et al [4], Roick C et al [31], Johannes Jungbauer et al [18] all found parents to have a very high degree of burden. Laurent Boyer et al [21] found mothers to have a poorer quality of life. Anniqa Foldemo et al [5] and Awadalla AW et al [9] found parents to have least QOL scores.

In our study we found that Quality of life in schizophrenic caregivers had negative correlation with PANSS Positive score ($p=0.111$) and PANSS Negative score ($p=0.062$) but this correlation was not statistically significant. Also Quality of life had statistically significant negative correlation with PANSS General Psychopathology score ($p=0.000$) and PANSS Total score ($p=0.000$). Similar findings have been reported by a number of studies. Ruzanna ZamZam et al [32] found there to be significant association between higher Quality of Life in caregivers and lower BPRS (Brief Psychiatric Rating Scale) in patients. Alejandra Caqueo-Urizar et al [3] found negative symptoms and general psychopathology to be negatively correlated with quality of life in caregivers. Setsuko Hanzawa et al [37] found that caregiver burden was significantly associated with the patient's social functioning and care needs. Zahid MA et al [38] reported higher burden subscale scores to be associated with patient's need for hospital care and disruptive behavior. Ochoa S et al [29] found that patients' psychotic symptoms, a higher number of needs, higher levels of psychopathology and disability accounted for higher levels of family burden. Grandón P et al [15] reported that more positive symptoms and lower independence-performance, together with lower self-control attributed to the patient, decrease in social interests, and less affective support, predict burden in caregivers. Awad AG et al [8] found that the severity of symptoms increases caregiver's burden of care. Sandy M. Magaña et al [34] reported that higher levels of the patients' mental illness symptoms were predictive of higher levels of caregivers' perceived burden. Roick C et al [31], Ritu Nehra et al [42] found family burden to be associated with patients' symptoms and dysfunction. Laidlaw TM et al [20] identified severity of patient's disorder as most predictive of caregiver's subjective global stress ratings. Anupama Rammohan et al [6] found poorer level of patient's functioning to be significant predictor of caregiver burden. Dyck DG et al [13] found greater burden to be predicted by more severe patient negative symptoms. But contrary to our findings and all the above studies M Scazufca et al [28] reported that patients' psychopathology was not associated with burden of care.

V. CONCLUSION

Our study suggests that quality of life is moderately low in caregivers of schizophrenia patients. Quality of life of parents is poorer as compared to caregivers in other relationships. Quality of life of caregivers is inversely related to severity of illness. This study suggests that taking care of caregivers is quite important to improve their overall quality of life. Some of the methodological limitations of the present work need to be mentioned here. The major limitation of this study is its cross-sectional nature. We have studied the quality of life only during the acute phase of the illness. As schizophrenia tends to be chronic with many remissions and relapses we can't comment on the overall quality of life of the caregivers. We have conducted the study on the caregivers of only indoor patients. These caregivers may not be representative of all the caregivers in the community, particularly those who have no access to mental health care. Also we have conducted the study only on 50 caregivers of each disorder. A larger sample size is needed to comment more accurately on the quality of life of caregivers. To get a more accurate idea of quality of life of caregivers of Schizophrenia and Bipolar Mood Disorder patients large scale community based longitudinal study of such caregivers can be helpful.

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