

Original article:

Negative symptoms and quality of life in schizophrenia

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Abstract

Negative symptoms of schizophrenia have been recognized for a long time as the most devastating among all symptoms clusters of schizophrenia. Research over the last few decades has demonstrated different biological, social and clinical correlates for negative symptoms. Negative symptoms account for much of the long-term morbidity and poor functional outcome of patients with schizophrenia ^{7,8}.

In present study, 24 (48%) of schizophrenic patients manifested with negative symptoms. Studies by Makinen J et al, they found prevalence of negative symptoms of Schizophrenia was 50 – 90 % and study by Anna Galuppi, they found prevalence of negative symptoms of Schizophrenia was 36 %

Background

Schizophrenia is a heterogeneous disorder with diverse history, symptoms, and subtypes. It is a chronic mental health disorder characterized by an array of symptoms. Earliest diagnostic refinements involved the subdivision of schizophrenia into positive and negative syndromes.^{1,2} Delusions, hallucinations, and bizarre behavior are part of positive schizophrenia, while blunted affect, avolition, and attentional problems are the features of negative schizophrenia.

Negative symptoms can be divided essentially into primary and secondary negative symptoms ³ :

1. Primary negative symptoms can be:
 - a) Negative symptoms preceding the illness.
 - (b) Negative symptoms fluctuate with each psychotic episode.
 - (c) Negative symptoms intensify following each psychotic episode and leads to further deterioration in socio-occupational functioning.
2. Secondary negative symptoms: Negative symptoms caused due to secondary factors.
 - (a) Depressive symptoms simulating negative features.
 - (b) Negative symptoms due to effects of antipsychotic drugs used in the treatment.
 - c) Poor psychosocial support affects illness adversely and may present as negative symptoms

Negative symptoms in general are strong predictors of a poorer prognosis, poorer social outcome, and poorer quality of life ⁴.

Negative symptoms account for much of the long-term morbidity and poor functional outcome of patients with schizophrenia. The development of a negative symptom treatment is a major challenge for the field. These symptoms are also associated with poor psychosocial functioning and a reduced likelihood of remission ^{5,6}.

Negative symptoms are though now better but still incompletely understood, and their treatment is still inadequate.

Aim and Objectives

Aim of this study was to study the clinical profile of Negative symptoms of Schizophrenia and to correlate Negative symptoms of Schizophrenia with socio-economic factors

Materials and Methods

A cross sectional study was conducted in a private medical college and hospital(Sri Siddhartha university, Tumkur, Karnataka) between November 2015 to April 2017 with sample size of 50 on patients attending psychiatry OPD and IPD. In the age group of 18-65years after taking consent diagnosis of Schizophrenia was done according to I.C.D. – 10 with at least two-year duration of illness were included in the study. Mental retardation, history of head injury, with psychotic illness, with substance abuse, duration less than 2 years of psychotic illness, acute psychotic illness and uncooperative patients were excluded from the study.

Tools used for the study;

- A. Semi structured proforma was used for evaluation of the patients. It included Socio demographic data sheet and clinical profile sheet.
- B. Positive and negative syndrome scale (PANSS)
This 30-item, 7-point rating instrument was conceived as a carefully defined and operationalized method that evaluates positive, negative, or other symptom dimensions on the basis of a formal semi-structured clinical interview and other informational sources.
Quality of Life Instrument (WHO QOL - BREF)
- C. It is a structured self-report interview it was developed by WHO division of mental health contained 26 items to assess QOL of a person. It assesses patients under four domains which are physical, psychological, social and environmental.

Statistical analysis

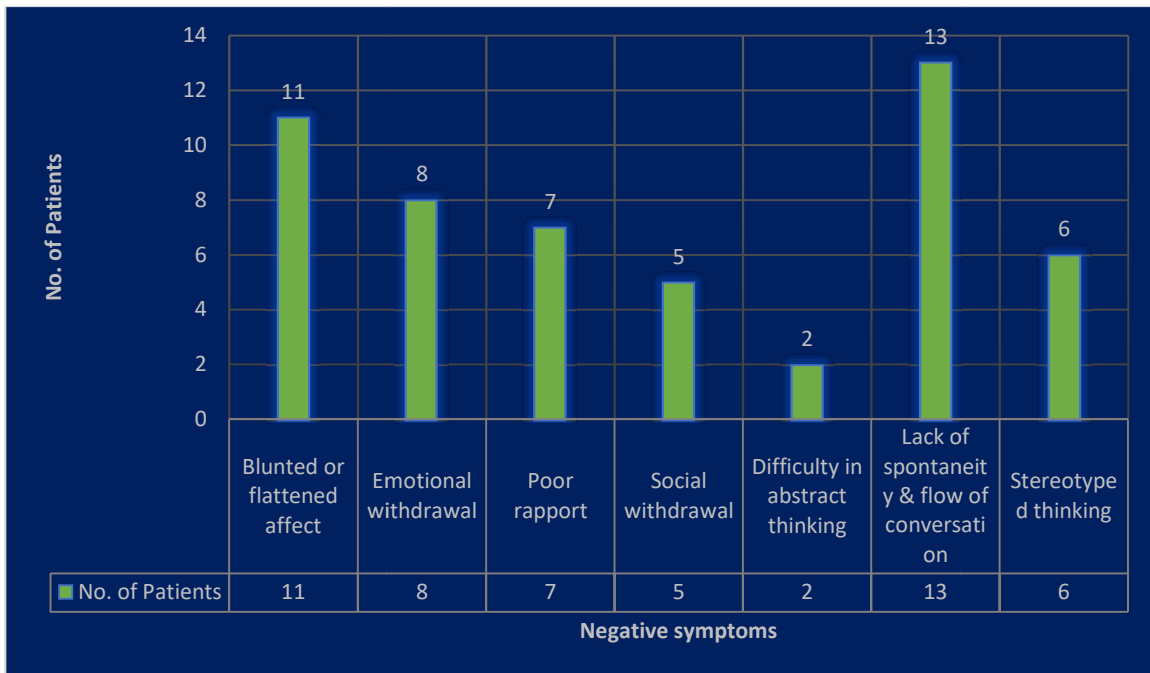
Collected information were analyzed using student t test ,Mann whitney test and Chi-square test or Fisher's exact test. $P < 0.05$ was taken to indicate a statistically significant difference.

Observation and Result

Table: 1 Demographic profile

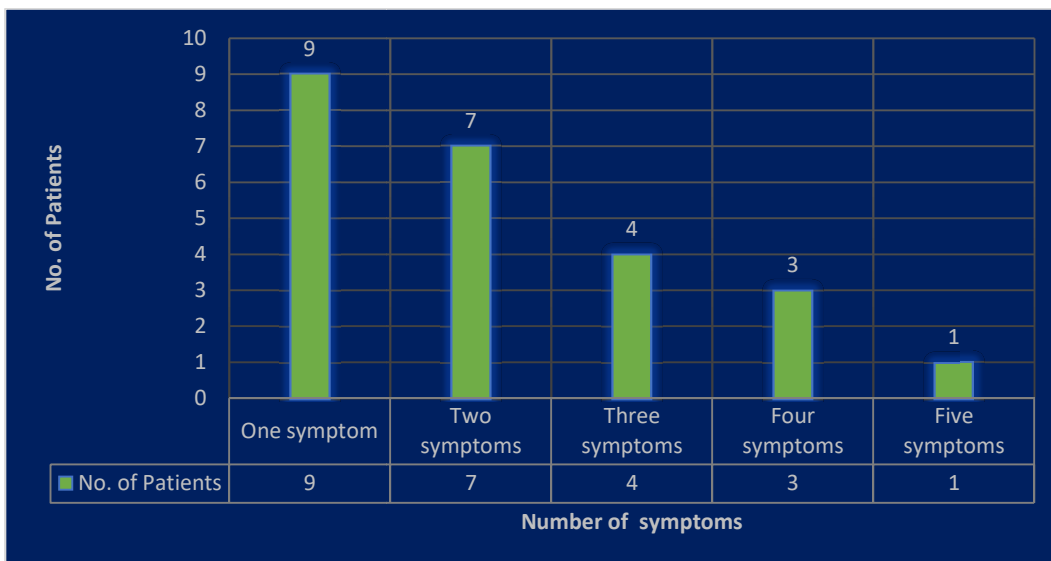
Variables		Male (n= 28)	Female (n = 22)
Mean Age		44.26 ± 7.64	41.23 ± 8.43
Marital status	Single	7	6
	Married	16	14
	Widowed	1	1
	Divorced	2	1
	Separated	2	0
	Occupation	Professional/semi-skilled	1
	Farmer	2	2
	Skilled worker	1	1
	Semi-skilled	2	3
	Unemployed	4	15
	Housewife	6	0
	Retired	2	1
Residence	Urban	7	7
	Rural	21	15
Literacy	Illiterate	4	1
	Elementary	2	1
	high school	2	2
	Pre university	8	8
	Graduate	7	6
	post-graduate	5	4
Total monthly income	< RS.1000/-	9	10
	RS.1000-2500	1	1
	RS.2500-5000	3	1
	RS.5000-10000	11	6
	> RS.10000	4	4

Diagram.1 Prevalence of Negative symptoms of Schizophrenia



In our study many of the patients presented with lack of spontaneity and flow of conversation followed by flattened or blunted affect and other negative symptoms

Diagram 2. Frequency of Negative symptoms

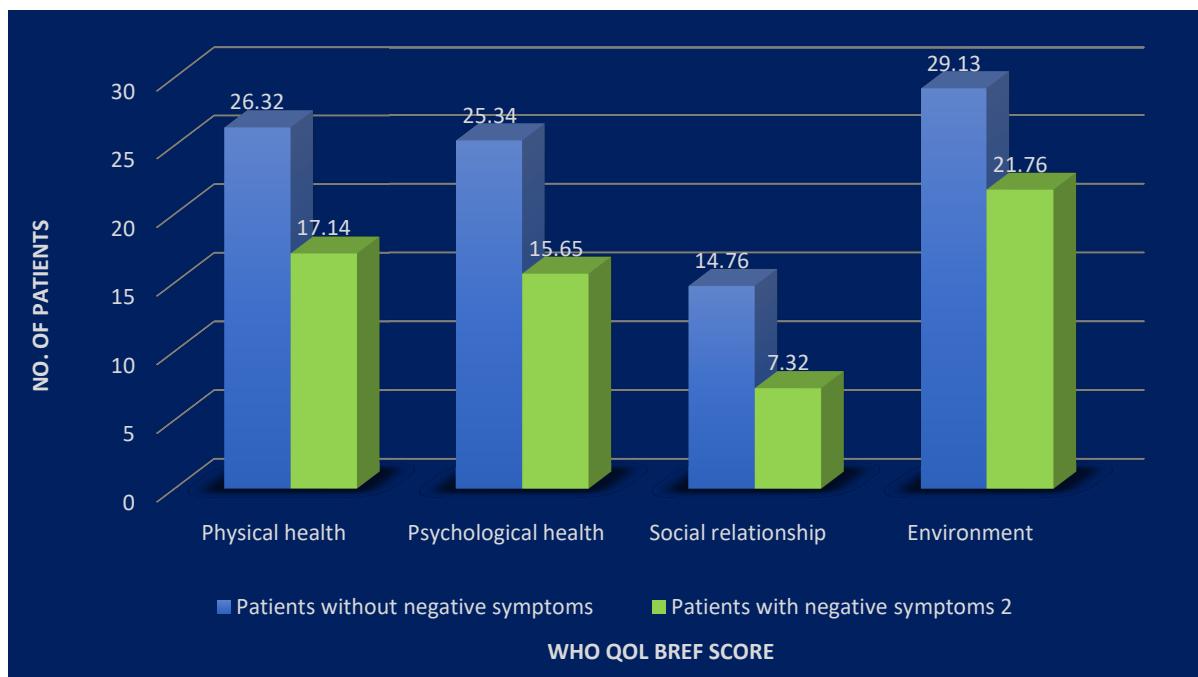


Maximum patients presented with only one negative symptom and few patients presented with 2 or more symptoms.

Tab.2 Quality of life scores between negative versus no negative symptoms

Variables (WHO QOL BREF)	Patients without negative symptoms (Mean ± SD)	Patients with negative symptoms (Mean ± SD)	Total (Mean ± SD)	P value
Physical health	26.32 ± 8.32	17.14 ± 8.32	22.68 ± 5.72	0.036
Psychological health	25.34 ± 6.11	15.65 ± 6.34	19.32 ± 3.61	0.041
Social relationship	14.76 ± 7.35	7.32 ± 4.32	9.72 ± 3.72	0.023
Environment	29.13 ± 8.23	21.76 ± 4.32	25.23 ± 4.25	0.071
Total score	91.18 ± 6.32	68.06 ± 4.25	76.95 ± 4.12	0.037

Diagram.3 Quality of life scores



Statistically significant difference between patients with negative symptoms and patients without negative symptoms in all subscales of WHO QOL BREF

Discussion

Negative symptoms of schizophrenia have been recognized for a long time as the most devastating among all symptoms clusters of schizophrenia. Research over the last few decades has demonstrated different biological, social and clinical correlates for negative symptoms. Negative symptoms account for much of the long-term morbidity and poor functional outcome of patients with schizophrenia ^{7,8}.

In present study, 24 (48%) of schizophrenic patients manifested with negative symptoms. Studies by Makinen J et al, they found prevalence of negative symptoms of Schizophrenia was 50 – 90 % and study by Anna Galuppi, they found prevalence of negative symptoms of Schizophrenia was 36 % ^{9,10}.

In our study, Lack of spontaneity & flow of conversation and Blunted or flattened affect was prevalent in 13 (26%) and 11 (22%) of patients, respectively affecting highest number of schizophrenic patients. Whereas Difficulty in abstract thinking and Social withdrawal was prevalent in 2 (4%) and 5 (10%) of patients, respectively affecting least number of schizophrenic patients.

In our study, there was statistically significant difference between patients with negative symptoms and patients without negative symptoms and females in all subscales of WHO QOL BREF. Study by Browne et al observed that patients had a poor to moderate quality of life which was related to negative symptom severity¹¹. Study by Solakni et al observed that quality of life was poor in patients having predominant negative symptoms¹². On the contrary, in a study by Fitzgerald et al. on 193 patients, showed that subjectively reported life satisfaction was not related to positive or negative symptoms of schizophrenia but did correlate with depressive symptoms¹³.

Further, our study found no statistically significant correlation between prevalence of negative symptoms of Schizophrenia with Age, Gender, Marital status, Literacy and Residence. In a study by Ampalam et al, they observed no significant correlation between prevalence of negative symptoms of Schizophrenia with demographic parameters like Age, Gender, Marital status¹⁴. However, study by Karin Siegrist et al observed that negative symptoms of Schizophrenia affected quality life in elderly patients, females and divorced and unmarried patients¹⁵.

Conclusion

From the above it is evident that there is a strong need for understanding the negative symptoms of schizophrenia and quality of life like Physical health, psychological health, social relationship and environment are affected with negative symptoms of schizophrenia. However we require more research to understand and improve quality of life with negative symptoms of schizophrenia.

References

1. Uçok A, Serbest S, Kandemir PE. Remission after first-episode schizophrenia: results of a long-term follow-up. *Psychiatry Res* 2011;189:33–7
2. Hunter R, Barry S. Negative symptoms and psychosocial functioning in schizophrenia: neglected but important targets for treatment. *Eur Psychiatry* 2012;27:432–6.
3. Moller HJ, Bottlender R, Wegner U et al. Long-term course of schizophrenic, affective and schizoaffective psychosis: focus on negative symptoms and their impact on global indicators of outcome. *Acta Psychiatr Scand Suppl* 2000;407:54–7.
4. Eugen Bleuler's Concept of Schizophrenia and Its Relevance to Present-Day Psychiatry "Schizophrenia," NIH Publication No. 09-3517, Revised 2009
5. Kumar SPN. Impact of vocational rehabilitation on social functioning, Cognitive functioning, and psychopathology in patients with chronic schizophrenia. *Indian J Psychiatry*. 2008;50:257-61
6. Gaur V et al .Quality of life in outpatient Schizophrenics: Correlation with Illness severity and psychopathology. *Delhi Psychiatry Journal* 2015; 18:(1)
7. Browne Roe M, Lane A. Quality of life in schizophrenia: relationship to sociodemographic factors, symptomatology and tardive dyskinesia. *Acta Psychiatr Scand*. 1996 Aug;94(2):118-24.

8. Dominguez M-G, Saka MC, can Saka M et al. Early expression of negative/disorganized symptoms predicting psychotic experiences and subsequent clinical psychosis: a 10-year study. *Am J Psychiatry* 2010;167:1075–82
9. Kirkpatrick B, Fenton WS, Carpenter WT et al. The NIMH-MATRICES consensus statement on negative symptoms. *Schizophr Bull* 2006;32:214–19.
10. Patel R, Lloyd T, Jackson R et al. Mood instability is a common feature of mental health disorders and is associated with poor clinical outcomes. *BMJ Open* 2015;5:e007504
11. Cunningham H, Tablan V, Roberts A et al. Getting more out of biomedical documents with GATE's full lifecycle open source text analytics. *PLoS Comput Biol* 2013;9:e1002854
12. Solanki RK, Singh P, Midha A, Chugh K. Schizophrenia: Impact on quality of life. *Indian Journal of Psychiatry*. 2008;50(3):181-186.
13. Fitzgerald PB, Williams CL, Corteling N, Filia SL, Brewer K, Adams A, de Castella AR, Rolfe T, Davey P, Kulkarni J. Subject and observer-rated quality of life in schizophrenia. *Acta Psychiatr Scand*. 2001;103:387–392.
14. Ampalam P, Deepthi R, Vadaparty P. Schizophrenia – Insight, Depression: A Correlation Study. *Indian Journal of Psychological Medicine*. 2012;34(1):44-48.
15. Karin Siegrist, Aurelie Millier, Ikbal Amri. Association between social contact frequency and negative symptoms, psychosocial functioning and quality of life in patients with schizophrenia. *Psychiatry Research*. 230 (3). December 2015; 860-86