Original Research Article

A descriptive study of factors affecting adherence to antipsychotic medication among patients of schizophrenia in adults and elderly age groups

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Abstract

Aims: The present paper studies the factors affecting adherence to Antipsychotics among the patients of schizophrenia in adult and elderly patients. **Participants and Methods:** A descriptive study was done on outdoor patients of department of Psychiatry, SMS hospital, Jaipur (Rajasthan). After excluding the patients whose MMSE Scores was less than 24 two age groups were made, <60 and >60 years with the 30 patients in each group. Glasgow antipsychotic side effect scale (GASS),s The Medication Adherence Questionnaire (Clinician Rating Scale), VAGUS CR insight scale and Semi Structured Performa were filled in two groups and evaluated. Statistical analysis of data was done using SPSS 21 software.**Results:** In elderly age group poor income, positive family history of psychiatric illness, more side effects, poor social support, presence of chronic illness, absence of substance use and in adults unemployment, rural background, positive family history of psychiatric illness and poor insight were found to be main factors behind poor adherence to antipsychotics.**Conclusion:** Adherence is important in delivering the maximum therapeutic benefits to patients. To maximize antipsychotic adherence, factors are more relevant in particular age groups should be targetted.

Keywords: Schizophrenia,medication, scores.

Introduction

Schizophrenia is chronic relapsing deteriorating illness of thought, perception, memory, and cognition affecting 1% population across the world. Mainstay of treatment is antipsychotics, which continues almost indefinite. It is well known and obvious that medication nonadherence is significant problem in the management of schizophrenia.Importance of studying adherence can be understood by the fact that about half of the patients suffering from schizophrenia show non adherence during the whole course of treatment.[1] [2] This is responsible for increase in the relapse and readmission in hospital [3]and many other problems like increased rates of involuntary admissions, slower recovery and longer hospital stay,[4] higher risk of suicide,[5] poorer prognosis, [6] and low satisfaction with life.[7] Because of these consequences, non-adherence may result in unnecessary emotional, social as well as financial burden on patients and their families. If we identify those risk factors associated with non-adherence, we can manage them timely.[8]Medication adherence is a multifactorial phenomenon, including factors related to patient, illness, medications, and health-care delivery system which together influence the medicine taking behavior. [9] Factors affecting adherence to medications vary in different age groups in different studies. These include patient related factors (age, gender, education level, physical and mental status, and literacy level), medication factors (complexity of medication regimen, medication costs, and poor instructions), patient–provider relationship factors (dissatisfaction with health care providers, lack of trust, and lack of patient involvement), and health care system factors (e.g., inability or difficulty in accessing pharmacy, lack of follow-up, and poor treatment by untrained staff). [10][11]To improve the outcome of schizophrenia we need to know the factors affecting adherence to medications in both the age groups and address them accordinglyEthical approval for the study was obtained from institutional review board at SMS medical college, Jaipur.

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Material and methods

Study was conducted on outdoor patients of Psychiatric centre, Department of Psychiatry, SMS Medical College, Jaipur. After excluding the patients whose MMSE Scores is <24 the two age groups were made,<60 and >60 years with the 30 patients in each group. The duration of study was 3 months from July 2018 to September, 2018. After written informed consent, patients fulfilling inclusion and exclusion criteria were interviewed along with their attendants with a semi-structured pro forma. The semi-structured pro forma consisted of sociodemographic details of the patient and information regarding his/her psychiatric and treatment history. They were also administered Glasgow antipsychotic side effect scale (GASS) ,The Medication Adherence Questionnaire (Clinician Rating Scale),VAGUS CR insight scale and Semi Structured Performa which addresses issues and factors for nonadherence apart from insight and side effects (patient related, family and social support related, financial, medication availability and accessibility related, physician related) were filled in two groups and evaluated. Brief details of the scales used have been given below.

- Consent form: A Hindi version of consent form would be given to all participants of this study. The written consent would be taken from each subject/ attendant before screening procedure.
- Screening proforma: The proforma will include all exclusion criteria with Yes / No option before each question
- Clinical Profile proforma: This will include detailed history of the psychiatric illness.
- Mini–Mental State Examination (MMSE): Is a 30-point questionnaire that is used extensively in clinical and research settings to measure cognitive impairment. Administration of the test takes between 5 and 10 minutes and examines functions including registration (repeating named prompts), attention and

calculation, recall, language, ability to follow simple commands and orientation.

- Glasgow antipsychotic side effect scale (GASS): is an easy to use self-reporting questionnaire aimed at identifying the side effects of antipsychotic medication. It consists of 22 questions with points assigned based on answers given by the patient. The great benefit of it is that it identifies what specific problems the patient is suffering from.
- Morisky 8-Item Medication Adherence Questionnaire: The eight-item Morisky Medication Adherence Scale (MMAS-8) is one of the simplest self-report scales measuring medication adherence behavior. The reliability and validity of the MMAS-8 are being or have already been measured in other languages across different populations, settings, and diseases.
- VAGUS CR Insight scale: the VAGUS measures the core dimensions of clinical insight into psychosis, including general illness awareness, symptom attribution, awareness of need for treatment, and awareness of negative consequences attributable to the illness. The VAGUS was designed to assess clinical insight in schizophrenia spectrum disorders, namely schizophrenia and schizoaffective disorder.

Inclusion criteria

i. Patients diagnosed as having schizophrenia as per the International Statistical Classification of Diseases-10

ii. Patients' age more than 18

iii. Willing to give written informed consent andparticipate in the study.

Exclusion criteria

i. Patients who were acutely psychotic at the time of interview

ii. Patients having MMSE score<24

iii. History of neurological disorder/ significant head injury.

Statistical analysis of data was done using SPSS 21 software (IBM SPSS Statistics for Windows, Armonk, NY: IBM Corp).

Results

In adult group there was significant positive correlation (p=0.00) was found between occupation and adherence. Adherence was better among skilled, students and professionals. Adherence was significantly better in the patients from urban background then in rural background. (0.009)

In the elderly age group in socio demographic data the income (0.001) is correlated positively to adherence.The patients who were having negative family history were found to be more adhere to psychotropic medications. (p=0.004) In the present study the patients with high scores on insight scale had high adherence than in the low scores on the same.In the clinical and treatment related factors it was found to be high adherence in patients with negative family history for psychiatric illness (p=0.00). Patients on Antipsychotics who had few side effects had good adherence to medications. People with good social support (p=0.00), absence of other chronic illness (p=0.002) and presence of substance use (0.034) were scored more on adherence scale.High and medium adherence to treatment was present in 66.66% of the patient in adult group while it was 53.33% in elderly group.

Discussion

In the present study 33.33% adults patients found to be low-adherent to medications which is in line with the studies done previously 30% and 29%.[12,13]While in elderly group the low adherence was found in the 46.66% patients who are higher than the adult population. Similar results were seen in the study done by Jin H.K et al. [14] He found that among 160 elderly participants, 52.5% showed low adherence to medication. [15] However, younger patients were found be at greater risk of non-adherence to antipsychotic therapy in other studies done by Valenstein M et al[15] and HoganTP et al. [12]This may be because of difference in methodologies that is differing criteria used for differentiating adherence as well as difference in grouping patients.Adherence was better among skilled workers, students and professionals, as self-dependence makes oneself more aware of negative consequences of untreated illness. They are more educable about early signs of relapse, are financial independent and able to take decisions about themselves. In our study awareness of illness and the ability to label symptoms were significantly associated with adherence in the present work unlike another study done by HoganTP [12] who found that compliance is affected by how the patient feels on medication, and not by his belief and knowledge about the same. Adherence was better in the patients from ubran background than in rural background because of easy access to Psychiatric services. In Indian context especially in Rajasthan, psychiatry services are mainly available at medical college and some district levels. This fact makes further difficult for the people from rural background to approach the services. The another fact is that people from rural background more frequently visit faith healers .Also tolerance for behavior deviations is more in rural setting. As kane JM [16] also elaborated non-adherence is highly influenced by patient knowledge, attitudes towards their illness and the medication. A study done by Koschorke M [22] stated that, in Indian community because of mental health unawareness, different belief systems like effect of supernatural powers and frequent visit to faith healer, shame and stigma about psychiatric illness is quite prevalent.The patients who were having negative family history were found to be more adherent to psychotropic medications then positive history. This could be explained by the fact that the positive family history being a poor prognostic indicator make the disease more difficult to treat because of more severe symptoms and poor response to Antipsychotics. This is also because of negative experiences observed about the medications. Less improvement on the medication make it difficult oneself to take the trouble to swallow the pills. While in other study done by Chaudhari B et al found that positive family history is associated with good adherence. [17]In the present study the patients with high scores on insight scale had high adherence. Many studies like done by Acosta FJ et al, [18] Velligan D et al, [19] Jonsdottir H et al,[20]Buckley PF et al[20] established this fact that Lack of insight is one of the most important factor that affect non-adherence to treatment in schizophrenia.In the elderly age group in sociodemographic data the income (0.001) is correlated to adherence. More the income high the adherence was found because of the fact that most of the Antipsychotics prescribed in elderly age group are not available free in hospital supply. It's like vicious cycle schizophrenia makes patients morbid for long time which further makes them unproductive and unemployed which further leads them more financially weak. [22]In the clinical and treatment related factors it was found to be high adherence in patients with negative family history for psychiatric illness like in adult age groups.Patients on Antipsychotics who had few side effects had good adherence to medications as side effects is important factor because tolerability changes the mindset of patient to continue or discontinue the medications. [23]This factor is more important in elderly population for non-adherence as this population is more vulnerable for severe and troublesome side effects. Some studies showed that more than half of the patients reported that it was side effect of medicines which made them non adherent to same. [25] [26]People with good social support found to be significant factor for high adherence as fear of being discriminated because of stigma of taking psychotropic medicines is also an important factor which may lead patients to discontinue their treatment. [27]Also because elderly patients suffering from schizophrenia often needs someone to accompany them to the hospital and due to executive dysfunction they have difficulty managing themselves.Absence of other chronic illness made the elderly more adherent to medications. In the presence of chronic illness patient have to take multiple medication which further causes inconvenience. This finding is consistent with previous study done by Claxton AJ et al, which showed that a more frequent dosing schedule was associated with a negative impact on adherence as it increases further inconvenience. [28]Presence of substance use

(0.034) was correlated positively with adherence scale. This may be because patients with comorbid substance use may have more physical symptoms for which they visit hospital more often however the previous study done by hudson T et al reported the contrast finding that substance abuse was found to be significantly associated with non-adherence. [29]

Conclusion

As the present study shows that prevalence of non adherence is quite high especially in elderly population. So as a clinician we should find out the patients according to their ages who are at the high risk for non adherence for the effective management of schizophrenia. Different factors found in both the groups for the nonadherence in our study which need to be addressed accordingly. Hence, as a part of management strategies we should psychoeducate the patient and caretaker about course and prognosis of schizophrenia and importance of treatment. There is need for psychosocial interventions eg. to address financial and treatment accessibility problems at primary health centre and community health centre to improve treatment adherence.

Table 1: Correlation of Socio demographic factors with adherence in age <60 (Mean=38yr, SD=9.9)

Variable	High adherence	Medium adherence	Low Adherence	Total	P*
Sex					.026
Male	10	4	10	24	
Female	2	4	0	6	
Education					.731
Illiterate	1	2	4	7	
Upto 12th	7	2	2	11	
graduate	4	4	4	12	
Occupation					.000
Skilled	0	4	0	4	
Housewife	0	4	0	4	
Unemployed	0	0	2	2	
Semiskilled	6	0	6	12	
Retired	0	0	0	0	
Student	2	0	0	2	
Professional	4	0	2	6	
Marital status					.196
Married	10	4	6	20	
Widow	2	0	0	2	
Unmarried		2	2	4	
Separated		2	2	4	
FamilyType					.123
Nuclear	6	4	2	12	
Extended	2	2	2	6	
Joint	4	2	4	10	
Single	0	0	2	2	
Income (in Thousand rupees)					.142
<5	0	0	2	2	
5-10	8	6	7	21	
10-20	4	2	1	7	
20-40	0	0	0	0	
>40	0	0	0	0	
Locality					.009
Rural	2	4	8	14	
Urban	10	4	2	16	
Religion					.052
Hindu	12	6	10	28	
Muslim	0	2	0	2	

Table 2: Correlation of socio demographic factors with adherence in age >60 (Mean = 66.9yr/ SD =5.54)

Variable	High adherence	Medium adherence	Low Adherence	Total	P*
Sex					.026
Male	10	4	10	24	
Female	2	4	0	6	
Education					.731
Illiterate	1	2	4	7	
Upto 12th	7	2	2	11	
graduate	4	4	4	12	

Occupation					.000
Skilled	0	4	0	4	
Housewife	0	4	0	4	
Unemployed	0	0	2	2	
Semiskilled	6	0	6	12	
Retired	0	0	0	0	
Student	2	0	0	2	
Professional	4	0	2	6	
Marital status					.196
Married	10	4	6	20	
Widow	2	0	0	2	
Unmarried		2	2	4	
Separated		2	2	4	
Family Type					.123
Nuclear	6	4	2	12	
Extended	2	2	2	6	
Joint	4	2	4	10	
Single	0	0	2	2	
Income(In Thousand)					.142
<5	0	0	2	2	
5-10	8	6	7	21	
10-20	4	2	1	7	
20-40	0	0	0	0	
>40	0	0	0	0	
Locality					.009
Rural	2	4	8	14	
Urban	10	4	2	16	
Religion					.052
Hindu	12	6	10	28	
Muslim	0	2	0	2	

Table 3: Correlation of clinical- and treatment-related factors with adherence in age <60

Variable	High adherence	Medium adherence	Low adherence	Total	P*
TDI (Mean)	**10.16**	**13.25**	**14.8**	12.53	.529
Family history					.004
Present	0	2	6	8	
Absent	12	6	4	22	
Type of treatment					.153
Atypical	11	8	7	26	
Typical	1	0	3	4	
Side Effects					.037
Mild	10	6	4	20	
Moderate	2	2	4	8	
Severe			2	2	
Insight (Mean)	42.66	32.5	27.8	35	.012
Substance use					.193
Present	2	4	5	11	
Absent	10	4	5	19	
Transport					.256
Easy	10	8	7	25	
Difficult	2	0	3	5	
Family Support					.086
Good	8	3	2	13	
Poor	4	5	8	17	
Chronic Illness					.217
Yes	2	0	0	2	
No	10	8	10	28	
Comorbidity					
Yes	6	5	4	15	.663
No	6	3	6	15	

Table 4: Correlation of clinical- and treatment-related factors with adherence in age >60

Variable	High adherence	Medium adherence	Low adherence	Total	P*
TDI	**26.7**	**31.0**	**38.0**	32.8	.141
Family history					.000
Present	0	6	8	14	
Absent	10	0	6	16	
Type of treatment					.16
Atypical	10	6	11	27	
Typical	0	0	3	3	
Side Effects					,003
Mild	10	3	5	18	
Moderate	0	3	3	6	
Severe	0		6	6	
Insight (Mean)	35.9	41.0	37.35	37.6	.526
Substance use					.034
Present	7	6	14	27	
Absent	3			3	
Transport					.772
Easy	7	3	8	18	
Difficult	3	3	6	12	
Family Support					.000
Good	10	3	0	13	
Poor	0	3	14	17	
Chronic Illness					.002
Yes	3	6	3	12	
No	7	0	11	18	
Comorbidity					.732
Yes	4	3	8	15	
No	6	3	6	15	

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