INTRODUCTION

Pharmacological treatment is one of the important components of management of psychotic and affective disorders. Depending on the diagnosis, in general, patients are expected to continue the psychotropics varying from the period of at least 1 year to lifetime, depending on the diagnosis. However, many patients do not follow the advice and discontinue the medications. Medication nonadherence to long-term use of psychotropic medications is common. Available studies suggest that rate of nonadherence varies from 24% to 90%, with an average of 50%. Poor medication adherence is associated with frequent relapses, recurrence of symptoms, increase in overall treatment costs and caregiver burden, increased rate of rehospitalization, frequent emergency visits, poor quality of life, and overall increased morbidity.

Medication adherence is influenced by many factors. Most of the available literature which have evaluated the risk factors for poor medication adherence has focused on the demographic, clinical, and treatment-related factors.

Key words: Adults, attitude, elderly, psychotropics

ABSTRACT

Background: Attitude toward psychotropic medications influences medication adherence. Although there are some data on attitude toward psychotropics among the adult patients, there is a lack of data on attitude of elderly patients toward psychotropic medications. Aim: The study aimed to evaluate the attitude of elderly patients toward psychotropic medications and compare the same with adult patients. Materials and Methodology: Attitude toward psychotropic medications of 102 elderly patients and 499 adult patients diagnosed with affective or psychotic disorders were compared using self-report attitude toward psychotropic medications questionnaire. Results: Compared to adult participants, higher proportion of elderly patients considered psychotropic medications to be the most effective way to treat mental illness and believed that psychotropics are a better option for treatment of mental illnesses than alternative treatments. Compared to adults, significantly lower proportion of the elderly believed that psychotropics do not cure but can lead to substantial improvement. In terms of negative attitude toward psychotropic medications, compared to adult participants, significantly higher proportion of the elderly believed that psychotropics are unnatural and poisonous substances which are harmful; psychotropics are just sedatives, which only calm down the patients; in long-run psychotropics worsen the illness; psychotropics can make the body unnaturally hot or cold; are expensive; make the subjects weak and enervated, and it is always better to take less than the prescribed dose of these medications. Compared to adults, elderly patients had significantly higher negative attitude subscale score. Conclusion: Compared to adult patients with affective and psychotic disorders, elderly patients have more negative attitude toward psychotropic medications. Hence, clinicians managing elderly patients should always evaluate the negative attitudes of the elderly toward psychotropic medications and try to address the same, to improve the medication adherence and outcome.

Key words: Attitudes, elderly, psychotropics

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Grover S, Mehra A, Chakrabarti S, Avasthi A. Attitude toward psychotropic medications: A comparison of the elderly and adult patients with affective and psychotic disorders. J Geriatr Ment Health 2019;6:38-45.
to understanding the patient’s perspective about the medication. Among the various patient-related factors, one of the important factors which are considered to influence the medication adherence is patient’s attitude toward psychotropic medications. Attitude of the patient is considered as a proxy measure of the patient’s decision-making process and is thought to play an important role in determining whether to take or not to take the medications.[10]

Attitude can be understood as a disposition or tendency to respond negatively or positively toward a certain idea, object, person, or situation.[10, 11, 12] Attitude toward the psychotropics is the subjective feeling, opinion about the medications, experiences, knowledge of the psychiatric illness, fear of drugs, and beliefs toward the prescribed psychotropics.[22-24] The attitude toward medications are further understood as positive or negative and are considered to influence medication adherence. Negative attitude toward antipsychotic medications is common in the clinical practice, with the prevalence ranges from 7.5% to 46.7%.[11-14] Available data suggest that about 75% of patients with negative attitude have poor adherence with the psychotropics.[9-16]

Attitude toward medications is influenced by demographic, clinical, and other (personal/cultural) factors. The demographic factors which are shown associated with a negative attitude toward medications include younger age, single, male gender, unemployment, lower level of education, and belonging to urban locality.[11, 12, 22, 25-28] The clinical factors which have been shown to influence the attitude toward psychotropic medications include shorter duration of the illness, later age of onset of illness, frequent hospitalization, the severity of the illness, poor insight, and side effects with medications.[13-15] Other factors that influence attitude toward psychotropic medications include religious beliefs, belief in traditional “alternative” treatment, and stigma.[25, 36-39]

In recent times, some of the studies from India have evaluated the attitude toward psychotropic medications among adult patients.[1, 2, 13, 23-38, 40] These studies have mostly focused on patients with psychotic disorders,[24, 25, 38, 40] with occasional studies including patients with affective disorders too.[24, 25] However, there is a lack of data on attitude toward psychotropic medications of elderly patients. A recent follow-up study from India, which evaluated the 1-year outcome of depression among the elderly reported high rate of poor adherence to medications.[41] Although the authors evaluated the attitude toward psychotropics, they did not report about the association of attitude and medication nonadherence in this study.[41] Accordingly, there is a need to understand the attitude of elderly toward the psychotropic medications. This study aimed to evaluate the attitude of elderly patients toward the psychotropic medications and compare the same with adult patients.

MATERIALS AND METHODOLOGY

This cross-sectional study was conducted at a tertiary care multispecialty hospital in North India. The study was approved by the Ethics Committee of the Institute, and all the participants were recruited after obtaining written informed consent. To be included in the study, the participants were required to be diagnosed with an affective disorder (i.e., first-episode depression, recurrent depressive disorder, or bipolar affective disorder) or a psychotic disorder (i.e., schizophrenia or psychosis not otherwise specified) (as per International classification of diseases, tenth revision (ICD-10)), duration of illness of at least 2 years, were able to read Hindi or English, were on psychotropics for a period of at least 1 year, and consented to participate in the study. In addition, the patients were required to be “clinically stable” for at least a period of last 3 months, i.e., no change in type of medications and dosage in the period of 3 months prior to assessment. Patients with organic brain syndrome and intellectual disability were excluded from the study.

The study comprised two groups of patients, Group I, i.e., elderly group (aged ≥60 years) and Group II (18-59 years).

Attitude toward medications was assessed using self-report attitude toward psychotropic medications questionnaire (SRAQ).[38] This is a scale, which has self-report questionnaire, available in both Hindi and English language, comprises 18 items. This scale was developed in Indian setting, with items covering the cultural-specific attitudes toward the psychotropic medications. The items for the scale were derived from the seven-item scale of Hebling et al.[42] and after discussions with the patients, their caregivers, and mental health professionals. Ten items assess the negative attitude and eight items assess the positive attitudes toward psychotropics medications. Each item is rated on a three-point Likert scale rated as 1 – disagree, 2 – somewhat agree, and 3 – strongly agree. For the items assessing negative attitudes, the pattern of scoring is reversed, which ensures that a higher score always reflects more positive attitudes than each item (1–3) and the total score for the scale ranges from 18 to 54.[38] Factor analysis of the questionnaire resulted in four-factor model, with factors 1 (items, 1–8, except 3 and reverse of item 11) and 4 (item 3) including positive attitude items and reflect the risk-benefit approach, in which benefits such as the efficacy of psychotropic medications in treating mental illnesses and preventing relapse, and medications being better than other options were being contrasted with the risks of side effects and permanent damage or harm to arrive at a positive attitude toward medication.[38] Factor 2 (items 10, 12, 15, 17, and 18) comprises items that focus on harm caused by the medications and one item reflecting the lack of necessity for these medications. Factor 3 (item 9, 13, 14, and 16) comprises items indicating harm caused by medications.[38]

RESULTS

The study included 601 patients, with 102 patients in the elderly group and 499 patients in the adult group. The mean age of the elderly group was 64.1 (standard deviation [SD]: 4.8) years and that for the participants in the adult group was 37.2 (SD: 10.6) years. As expected both the
groups differed significantly on this variable. When the sociodemographic profile of the elderly and adult patients was compared for other variables, significantly higher proportion of the patients in the elderly group were single and from nonnuclear families. However, both the groups did not differ in terms of gender and locality of residence. Compared to the participants in the elderly group, participants in the adult group had a higher number of years of formal education [Table 1].

### Attitude toward psychotropic medications

As is evident from Table 2, in general on positive attitude items, for the majority of the items, participants displayed positive attitude, with at least half of the patients in both the groups, showing positive attitude, small proportion showing ambivalent, and very few participants showing disagreement with the items. In terms of negative attitude items of the SRAQ, for most of the items, maximum proportion of the patients were ambivalent [Table 2].

In terms of positive attitude toward psychotropic medications, compared to adult participants, higher proportion of elderly patients considered psychotropic medications to be the most effective way to treat mental illness (item 1) and believed that psychotropics are a better option for the treatment of mental illnesses than alternative treatments (item 8). However, compared to the adult, significantly lower proportion of the elderly believed that psychotropics do not cure but can lead to substantial improvement (item 3) [Table 2].

In terms of negative attitude toward psychotropic medications, compared to adult participants, significantly higher proportion of the elderly believed that psychotropics are unnatural and poisonous substances which are harmful (item 10), psychotropics are just sedatives, which only calm down the patients (item 11), in long run psychotropics worsen the illness (item 12), psychotropics can make the body unnaturally hot or cold (item 13), are expensive (item 14), and make the subjects weak and enervated (item 15), and it is always better to take less than the prescribed dose of these medications (item 18). When the total scores were calculated, both the groups did not differ significantly in terms of the positive attitude subscale score. However, compared to adults, elderly patients had significantly higher negative attitude subscale score [Table 2].

To understand the attitude better, further analysis of the data was done by combining the “ambivalent and negative attitude” responses as a single response and the responses indicating positive response were considered as such. When both the groups were compared, significant differences between the two groups persisted, except that the significant differences for the negative attitude items of psychotropics are just sedatives, which only calm down the patients (item 11) and psychotropics make the subjects weak and enervated (item 16), and it is always better to take less than the prescribed dose of these medications (item 18) disappeared [Table 2].

When the factor structure of the questionnaire was used for comparison, it was seen that, compared to adult patients, elderly patient showed significantly more positive attitude (as reflected by higher scores for factor 1) and more negative attitude (as reflected by higher scores on both the negative attitude factors, factor 2 and factor 3) [Table 3].

### Relationship of attitude with demographic and clinical variables

To evaluate the relationship of attitude with demographic and clinical variables, correlation and comparison analyses were done as per the requirement. There was no correlation of demographic and clinical variables with attitude in

---

**Table 1: Sociodemographic and clinic profiles of adults and elderly patients**

| Variables                      | Group I (elderly) (n = 102) | Group II (adult) (n = 499) | Chi-square/t-test (P) |
|-------------------------------|-------------------------------|---------------------------|----------------------|
| Age (years)                   | 64.1 (4.8)                    | 37.2 (10.6)               | 25.06 (<0.001***    |
| Education (number of years)   | 9.5 (4.4)                     | 10.5 (4.2)                | 2.26 (0.024*)       |
| Gender                        |                               |                           |                      |
| Male                          | 60 (58.8%)                    | 292 (58.5%)               | 0.003 (0.954)       |
| Female                        | 42 (41.2%)                    | 207 (41.5%)               |                      |
| Marital status                |                               |                           |                      |
| Currently married             | 93 (91.2%)                    | 348 (69.7%)               | 19.99 (<0.001***    |
| Currently single              | 9 (8.8%)                      | 151 (30.3%)               |                      |
| Type of family                |                               |                           |                      |
| Nonnuclear                    | 70 (68.6%)                    | 183 (36.7%)               | 35.48 (<0.001***    |
| Nuclear                       | 32 (31.4%)                    | 316 (63.3%)               |                      |
| Locality                      |                               |                           |                      |
| Rural                         | 44 (43.1%)                    | 203 (40.7%)               | 0.211 (0.646)       |
| Urban                         | 58 (56.9%)                    | 296 (59.3%)               |                      |
| Diagnosis as per ICD-10       |                               |                           |                      |
| Psychotic illness             | 5 (4.9%)                      | 186 (37.3%)               | 40.937 (<0.001***   |
| Recurrent depressive disorder  | 24 (23.5%)                    | 43 (8.6%)                 | 19.012 (0.001***    |
| Bipolar disorder              | 19 (18.6%)                    | 136 (27.3%)               | 3.293 (0.695)       |
| Depressive disorder (first)    | 54 (52.9%)                    | 132 (26.5%)               | 27.904 (<0.001***   |
| Total duration of illness (months) | 99.1 (87.7) | 89.4 (76.1) | 1.1552 (0.250)       |
| Age of onset of illness       | 54.6 (11.9)                   | 29.3 (11.1)               | 20.665 (<0.001***   |

*P<0.05; **P<0.01; ***P<0.001. SD: Standard deviation, ICD: International classification of diseases, Tenth revision (ICD-10)
Table 2: Comparison of attitude toward the psychotropics medication among the adult and elderly patients

| Variables                                                                 | Frequency (%)/mean (SD) | Group I (elderly) (n = 102) | Group II (adult) (n = 499) | \( \chi^2 \) (P) | \( \chi^2 \) (P) |
|---------------------------------------------------------------------------|-------------------------|------------------------------|----------------------------|-------------------|-------------------|
| 1 Psychotropic medications are the most effective way to treat mental illness |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 95 (93.1%)              | 403 (80.8%)                  | 9.167 (0.010*)             | 9.134 (0.003**)   |
| Somewhat agree                                                            | 7 (6.9%)                | 95 (19.0%)                   |                            |                   |                   |
| Disagree                                                                  | 0                       | 1 (0.2%)                     |                            |                   |                   |
| 2 Their benefits outweigh their risks                                      |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 85 (83.3%)              | 395 (79.2%)                  | 1.379 (0.502)              | 0.918 (0.338)     |
| Somewhat agree                                                            | 15 (14.7%)              | 97 (19.4%)                   |                            |                   |                   |
| Disagree                                                                  | 2 (1.9%)                | 7 (1.4%)                     |                            |                   |                   |
| 3 They do not cure but can lead to substantial improvement                |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 63 (61.8%)              | 361 (72.3%)                  | 8.811 (0.012*)             | 4.563 (0.033*)    |
| Somewhat agree                                                            | 38 (37.3%)              | 120 (24.0%)                  |                            |                   |                   |
| Disagree                                                                  | 1 (0.9%)                | 18 (3.7%)                    |                            |                   |                   |
| 4 They have side effects, but these can be managed                        |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 72 (70.6%)              | 309 (61.9%)                  | 3.884 (0.143)              | 2.740 (0.098)     |
| Somewhat agree                                                            | 28 (27.5%)              | 185 (37.1%)                  |                            |                   |                   |
| Disagree                                                                  | 2 (1.9%)                | 5 (1.0%)                     |                            |                   |                   |
| 5 Use of psychotropic along with counseling help a lot of people with mental illness |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 78 (76.5%)              | 394 (79.0%)                  | 2.406 (0.300)              | 0.311 (0.577)     |
| Somewhat agree                                                            | 24 (23.5%)              | 97 (19.4%)                   |                            |                   |                   |
| Disagree                                                                  | 0                       | 8 (1.6%)                     |                            |                   |                   |
| 6 Psychotropic can prevent relapse                                         |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 53 (51.9%)              | 277 (55.5%)                  | 3.795 (0.150)              | 0.431 (0.511)     |
| Somewhat agree                                                            | 48 (47.1%)              | 200 (40.1%)                  |                            |                   |                   |
| Disagree                                                                  | 1 (0.9%)                | 22 (4.4%)                    |                            |                   |                   |
| 7 They rarely can cause permanent damage or harm                           |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 61 (59.8%)              | 324 (64.9%)                  | 3.213 (0.201)              | 0.967 (0.326)     |
| Somewhat agree                                                            | 40 (39.2%)              | 159 (31.9%)                  |                            |                   |                   |
| Disagree                                                                  | 1 (0.9%)                | 16 (3.2%)                    |                            |                   |                   |
| 8 They are a better option for the treatment of mental illnesses than alternative treatments |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 55 (53.9%)              | 259 (51.9%)                  | 11.266 (0.004**)           | 0.138 (0.710)     |
| Somewhat agree                                                            | 35 (34.3%)              | 114 (22.8%)                  |                            |                   |                   |
| Disagree                                                                  | 12 (11.8%)              | 126 (25.3%)                  |                            |                   |                   |
| 9 They have a high risk of dependency                                      |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 46 (45.1%)              | 212 (42.5%)                  | 4.557 (0.102)              | 0.236 (0.627)     |
| Somewhat agree                                                            | 43 (42.2%)              | 178 (35.7%)                  |                            |                   |                   |
| Disagree                                                                  | 13 (12.7%)              | 109 (21.8%)                  |                            |                   |                   |
| 10 They are unnatural and poisonous substances, which are harmful         |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 30 (29.4%)              | 89 (17.8%)                   | 13.843 (0.001**)           | 7.147 (0.008*)    |
| Somewhat agree                                                            | 48 (47.1%)              | 202 (40.5%)                  |                            |                   |                   |
| Disagree                                                                  | 24 (23.5%)              | 208 (41.7%)                  |                            |                   |                   |
| 11 They are just sedatives, which only calm down the patients              |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 36 (35.3%)              | 161 (32.3%)                  | 8.140 (0.017*)             | 0.353 (0.553)     |
| Somewhat agree                                                            | 48 (47.1%)              | 182 (36.5%)                  |                            |                   |                   |
| Disagree                                                                  | 18 (17.6%)              | 156 (31.3%)                  |                            |                   |                   |
| 12 In long run, they worsen the illness                                   |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 23 (22.5%)              | 70 (14.0%)                   | 20.092 (<0.001**)          | 4.701 (0.030*)    |
| Somewhat agree                                                            | 50 (49.0%)              | 166 (33.3%)                  |                            |                   |                   |
| Disagree                                                                  | 20 (19.6%)              | 263 (52.7%)                  |                            |                   |                   |
| 13 They can make the body unnaturally hot or cold                          |                         |                              |                            |                   |                   |
| Strongly agree                                                            | 34 (33.3%)              | 93 (18.6%)                   | 12.981 (0.002**)           | 10.975 (0.001**)  |
| Somewhat agree                                                            | 46 (45.1%)              | 235 (47.1%)                  |                            |                   |                   |
| Disagree                                                                  | 22 (21.6%)              | 171 (34.3%)                  |                            |                   |                   |

Contd...
Table 2: Contd...

| Variables | Frequency (%)/mean (SD) | χ² (P) | χ²# (P) |
|-----------|-------------------------|--------|---------|
| 14 They are very expensive | | | |
| Strongly agree | 26 (25.5%) | 62 (12.4%) | 11.634 (0.001**) |
| Somewhat agree | 45 (44.1%) | 266 (53.3%) | |
| Disagree | 31 (30.4%) | 171 (34.3%) | |
| 15 They are not necessary for the treatment of mental illness because mental illnesses can be controlled by other means too | | | |
| Strongly agree | 4 (3.9%) | 41 (8.2%) | 2.366 (0.306) |
| Somewhat agree | 29 (28.45%) | 128 (25.7%) | |
| Disagree | 69 (67.6%) | 330 (66.1%) | |
| 16 They make the subjects weak and enervated | | | |
| Strongly agree | 5 (4.9%) | 11 (2.2%) | 6.530 (0.038*) |
| Somewhat agree | 12 (11.8%) | 105 (21.0%) | |
| Disagree | 85 (83.3%) | 383 (76.8%) | |
| 17 They are the sole cause of unproductive life of that people with mental illnesses lead | | | |
| Strongly agree | 3 (2.9%) | 9 (1.8%) | 2.860 (0.239) |
| Somewhat agree | 9 (8.8%) | 73 (14.6%) | |
| Disagree | 90 (88.2%) | 417 (83.6%) | |
| 18 It is always better to take less than the prescribed dose of these medications | | | |
| Strongly agree | 8 (7.8%) | 25 (5.0%) | 9.178 (0.010**) |
| Somewhat agree | 2 (1.9%) | 56 (11.2%) | |
| Disagree | 92 (90.3%) | 418 (83.6%) | |
| Medication attitude total score | | | |
| 1-8 positive items | 21.3 (1.9) | 21.0 (2.4) | 1.07 (0.28) |
| 9-18 negative items* | 22.5 (4.2) | 23.7 (4.2) | 2.56 (0.011*) |
| 1-18 total items | 43.9 (5.3) | 44.8 (6.0) | 1.42 (0.16) |

*P<0.05; **P<0.01; ***P<0.001. *Reverse scoring done (lower the score higher the negative attitude), #χ² and P shows the comparison of by combining the ambivalent and the incorrect responses for each item. SD: Standard deviation.

Table 3: Comparison of attitude toward the psychotropics medication among the elderly and adult patients as per the factor structure of self-report attitude toward psychotropic medications questionnaire

| Variables | Elderly (n = 102) | Adult (n = 499) | χ² (P) |
|-----------|------------------|-----------------|--------|
| Positive attitude (factor 1) | 20.9 (1.9) | 20.4 (2.2) | 2.243 (0.025*) |
| Negative attitude (factor 2) | 12.3 (2.0) | 12.8 (2.2) | 2.097 (0.036*) |
| Negative attitude (factor 3) | 8.4 (1.9) | 8.9 (1.9) | 2.476 (0.014*) |
| Positive attitude (factor 4) | 1.4 (0.5) | 1.3 (0.5) | 1.376 (0.169) |

*P<0.05

Among the various factors, which influence adherence to medications, attitude toward medication can be considered as modifiable factors, which can be addressed by patient-centered interventions. Hence, it is important to understand and address the attitude toward psychotropics. Attitude toward medication is considered to encapsulate the belief of the patients after weighing relevant factors, which determine their decision, to either take or not to take medications. Accordingly, it is considered to be an important determinant of the final common pathway which determines whether patient is going to take medications or not. Medication adherence is understood from different sociocognitive and psychological models. The health belief model is the most commonly used model to understand the medication adherence, which consists of four major beliefs. These include attitudes toward medication intake based on the perceived benefits of treatment (symptom reduction), perceived barriers to treatment (e.g., stigma and side effects), beliefs about susceptibility to illness or relapse of symptoms in the absence of medications, and perceived severity of the outcome (negative consequences of relapse).

Patients usually decide to take medications based on weighing these perceived benefits of taking medications against the perceived risks of continuation or relapse of illness and costs of treatment. Another psychological model which influences the medication adherence includes the necessity-concerns framework, according to which, the decision to start and continue the treatment is influenced by patients beliefs about their need for treatment (necessity beliefs) against their belief about the potential or possible side effects with the medications (concern beliefs). These models highlight the importance of attitude in determining the medication adherence. Accordingly, it is important to understand the attitude of the patients toward the psychotropic medications.

**DISCUSSION**

Among the various factors, which influence adherence to medications, attitude toward medication can be considered as modifiable factors, which can be addressed by patient-centered interventions. Hence, it is important to understand and address the attitude toward psychotropics. Attitude toward medication is considered to encapsulate the belief of the patients after weighing relevant factors, which determine their decision, to either take or not to take medications. Accordingly, it is considered to be an important determinant of the final common pathway which determines whether patient is going to take medications or not. Medication adherence is understood from different sociocognitive and psychological models. The health belief model is the most commonly used model to understand the medication adherence, which consists of four major beliefs. These include attitudes toward medication intake based on the perceived benefits of treatment (symptom reduction), perceived barriers to treatment (e.g., stigma and side effects), beliefs about susceptibility to illness or relapse of symptoms in the absence of medications, and perceived severity of the outcome (negative consequences of relapse). Patients usually decide to take medications based on weighing these perceived benefits of taking medications against the perceived risks of continuation or relapse of illness and costs of treatment. Another psychological model which influences the medication adherence includes the necessity-concerns framework, according to which, the decision to start and continue the treatment is influenced by patients beliefs about their need for treatment (necessity beliefs) against their belief about the potential or possible side effects with the medications (concern beliefs). These models highlight the importance of attitude in determining the medication adherence. Accordingly, it is important to understand the attitude of the patients toward the psychotropic medications.
Available data suggest that cultural factors do influence the attitude toward medications. Accordingly, the findings from the Western countries may not be directly applicable to the Indian setting, and there is a need to evaluate the attitude of the patients using a culture-specific instrument to understand the factors to be addressed in the patient-centered interventions.

There is a lack of data on the attitude of the elderly patients toward psychotropic medications. Elderly population is increasing day by day, and it is estimated that in India that this will increase to approximately 324 million by the year 2050. [43,44] Hence, there is a need to understand the factors which influence psychiatric treatment among the elderly. The present study was an attempt in this direction. Compared to many of the previous studies done from India, the present study relied on use of SRAQ, which is an indigiously developed scale, which incorporates some of the culture-specific negative and positive attitude toward psychotropics.

Although multiple studies are available on attitude toward psychotropics from other parts of the world and India, it is difficult to compare the findings of the present study, with the existing literature due to difference in the assessment scale. Hence, we would limit ourselves to comparing the findings of the present study, with studies which have used SRAQ in the past and compare the findings with other relevant studies.

The mean total score of positive and negative subscale score of SRAQ in the present study is comparable with the previous studies done in the adult patients and elderly patients too. [38] These findings suggest that the study sample included in the present study was representative of the clinic population.

The findings of the present study suggest that compared to the adult patients, the elderly have a higher negative attitude toward psychotropic medications. In spite of the difference in the assessment scale, the findings of the present study are supported by the available literature, which suggest that older age is associated with the negative attitude toward the psychotropics. [11,45-48] Some of the studies which have evaluated the attitude of elderly patients receiving lithium have also highlighted the prevalence of negative attitude toward the lithium. [49,50] The findings of the present study are supported by the existing literature on attitude of the elderly in general toward allopathic medications and treatment. Available data suggest that elderly patients have more belief in traditional treatment [29] and have negative view about the allopathic treatment.

In the present study, compared to adult participants, elderly patients more often believe that psychotropics are unnatural and poisonous substances which are harmful, psychotropics are just sedatives which only calm down the patients, in long run psychotropics worsen the illness, psychotropics can make the body unnaturally hot or cold, are expensive and make the subjects weak and enervated, and it is always better to take less than the prescribed dose of these medications. Further, the present study suggests that compared to adult participants, higher proportion of elderly patients consider psychotropic medications to be the most effective way to treat mental illness and believed that psychotropics are a better option for the treatment of mental illnesses than alternative treatments, but significantly lower proportion of the elderly believed that psychotropics do not cure but can lead to substantial improvement. Adult and elderly group did not differ significantly on 5 of the 8 positive attitude items and 3 of the 10 negative attitude items. These findings highlight the fact, although there is similarity in the attitude toward psychotropics across the adult and the elderly group, there are some differences in the attitude and beliefs toward psychotropics among the elderly and the adult patients. In view of these findings, it can be said that the clinicians managing the patients with psychiatric ailments need to evaluate the attitude of the patients, more so for the elderly patients and give sufficient time to address the prevailing myths and doubts of the patients. This exercise must not be limited to the time of first prescription but should be made an integral part of the psychoeducation and must be evaluated and addressed from time to time.

In the present study, sociodemographic and the clinical variables were not associated significantly with the attitude among both the groups, except for the significant correlation of longer duration of illness with positive attitude and total attitude score in the adult group. Previous studies which have evaluated the attitude toward psychotropics in different diagnostic groups have come up with inconsistent correlates. [11,14,23,29,37-40] However, the present study do not support the same, and this difference could be due to the difference in the assessment scale used to assess the attitude. The association of longer duration of illness with positive attitude could be due to longer duration of treatment and resultant psychoeducation received from time to time.

**Limitation**

Certain limitations of the present study must be kept in mind while interpreting the results of this study. First, the study was limited to patients who were clinically stable and were on regular follow-up. This can influence the findings of our study, as patients with higher negative attitude could have already dropped out of the treatment. Hence, the findings of the negative attitude in the present study could be an underestimate and the findings of the positive attitude could be overestimate of the prevailing beliefs. Future studies must focus on new patients to have a better understanding of the attitude toward psychotropic medications. Second, this was a cross-sectional study, and hence, the findings cannot answer the change in attitude of the patients over time. Third, the present study did not involve the assessment of medication adherence, other clinical variables (such as insight, severity of psychopathology, and subjective well-being with medications), side effects of ongoing medications, other cultural factors (such as stigma), and familial factors (such as belief among treatment), which can influence attitude toward medications.
CONCLUSION

The present study suggests that compared to adult patients with affective and psychotic disorders, elderly patients with affective and psychotic disorders have more negative attitude toward psychotropic medications. Attitude toward psychotropics is not associated with demographic and clinical variables. In view of higher prevalence of negative attitude toward psychotropics among the elderly, clinicians managing elderly patients should always evaluate the negative attitudes of the elderly toward the psychotropic medications and try to address the same, to improve the medication adherence and outcome.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Nancy KM, Nazreena C, Sunny S, Rodrigues L, Jacob V. Attitude towards the administration of psychotropic medication among the caregivers of patients with mental illness. J Nurs Health Sci 2017;6:88-90.

2. Nosé M, Barbui C, Tansella M. How often do patients with psychosis fail to adhere to treatment programmes? A systematic review. Psychol Med 2003;33:1149-60.

3. Byrne N, Regan C, Livingston G. Adherence to treatment in mood disorders. Curr Opin Psychiatry 2006;19:44-9.

4. Sansone RA, Sansone LA. Antidepressant adherence: Are patients taking their medications? Innov Clin Neurosci 2012;9:41-6.

5. Higashi K, Medic G, Littlewood KJ, Diez T, Granström O, De Hert M. Medication adherence in schizophrenia: Factors influencing adherence and consequences of nonadherence, a systematic literature review. Ther Adv Psychopharmacol 2013;3:200-18.

6. Morken G, Widen JH, Graw RW. Non-adherence to antipsychotic medication, relapse and rehospitalisation in recent-onset schizophrenia. BMC Psychiatry 2008;8:32.

7. World Bank Group, World Health Organization. Out of the Shadows: Making mental health a global development priority. Washington, DC: World Bank Group, World Health Organization, April 13-14, 2016. Washington, DC: World Health Organization, 2016.

8. Semahgen A, Torpey K, Manu A, Assella N, Tesfaye G, Ankomah A. Psychotropic medication non-adherence and associated factors among adult patients with major psychiatric disorders: A protocol for a systematic review. Syst Rev 2017;6:10.

9. Kirigia JM, Sambo LG. Cost of mental and behavioural disorders in Kenya. Ann Gen Hosp Psychiatry 2003;2:7.

10. Burton SC. Strategies for improving adherence to second-generation antipsychotics in patients with schizophrenia by increasing ease of use. J Psychiatr Pract 2005;11:369-78.

11. Kuroda N, Sun S, Lin CK, Morita N, Kashiwase H, Yang F, et al. Attitudes toward taking medication among outpatients with schizophrenia: Cross-national comparison between Tokyo and Beijing. Environ Health Prev Med 2008;13:288-95.

12. Kataki EO. Impact of Side Effect Sontantipsychoisis on Attitude and Adherence to Treatment among Adult Psychiatric Outpatients at Mathari Hospital in Kenya. School of Pharm, Uni Nairobi, 2014.

13. Sajatovic M, Dilisio F, Legacy SN. Attitudes towards antipsychotic treatment among patients with bipolar disorders and their clinicians: A systematic review. Neuropsychiatr Dis Treat 2017;13:2285-96.

14. Effong JH, Umoh KA. Medication non-adherence inschizophrenia: Prevalence and correlates among out patients in a tertiary healthcare facility in Uyo, South-South Nigeria. Clin Med Diagn 2015;5:107-3.

15. Saddad PM, Brain C, Scott J. Nonadherence with antipsychotic medication in schizophrenia: Challenges and management strategies. Patient Relat Outcome Meas 2014;5:43-62.

16. Serrano MJ, Vives M, Mateu C, Vicens C, Molina R, Puebla-Guedea M, et al. Therapeutic adherence in primary care depressed patients: A longitudinal study. Actas Esp Psiquiatr 2014;42:91-8.

17. De Las Cuevas C, Peitare E, Explaining pharmacophobia and pharmacophobia in psychiatric patients: Relationship with treatment adherence. Hum Psychopharmacol 2015;30:377-81.

18. Jin J, Sklar GE, Min Sen Oh V, Chuen Li S. Factors affecting therapeutic compliance: A review from the patient’s perspective. Ther Clin Risk Manag 2008;4:269-86.

19. Freundreich O, Cather C, Evins AE, Henderson DC, Goft DC. Attitudes of schizophrenia outpatients toward psychiatric medications: Relationship to clinical variables and insight. J Clin Psychiatry 2004;65:1372-6.

20. Triandis HC. Attitude and Attitude Change. New York: Wiley, 1971.

21. Hogan TP, Awad AG, Eastwood R. A self-report scale predictive of drug compliance in schizophrenics: Reliability and discriminative validity. Psychol Med 1983;13:177-83.

22. Nielen RE, Lindström E, Nielsen J, Levander S. DAI-10 is as good as DAI-30 in schizophrenia. Eur Neuropsychopharmacol 2012;22:747-50.

23. Karthik MS, Warikoo N, Chakrabarti S, Grover S, Kulkara P. Attitudes towards antipsychotics among patients with schizophrenia on first- or second-generation medications. Indian J Psychiatr Med 2014;36:298-93.

24. Ganesan S, Selvaraj N, Dass VK, Jayabalan N, Rajamohammed MA, Anandan IA. Assessment of drug attitude, medication adherence and quality of life among psychiatric patients in South Indian population: A cross sectional study. Int J Basic Clin Pharm 2019;9:861-7.

25. Ziegler A, Mungee A, Schoenner G, Ta TM, Weyers A, Böge K, et al. Attitude toward psychiatrists and psychiatric medication: A survey from five metropolitan cities in India. Indian J Psychiatry 2017;59:341-6.

26. Chandra IS, Kumar KL, Reddy MF, Reddy CM. Attitudes toward treatment and reasons for non-compliance in patients with schizophrenia. Indian J Psychiatr Med 2014;36:294-8.

27. Adevuwa OA, Ola BA, Mosaku SK, Fatoye FO, Egunranti AB. Attitude towards antipsychotics among out-patients with schizophrenia in Nigeria. Acta Psychiatr Scand 2006;113:207-11.

28. Hofer A, Rettenbacher MA, Edlinger M, Kemmler G, Widschwendter CG, Fleischhacker WN. Subjective response and attitudes toward antipsychotic drug therapy during the initial treatment period: A prospective follow-up study in patients with schizophrenia. Acta Psychiatr Scand 2007;116:354-61.

29. Baby R, Gupta S, Sagar R. Attitudes and subjective reasons of medication compliance and noncompliance among outpatients with schizophrenia in India. Int J Epidemiol 2008;7:1-9.

30. Kassem T, Demilew D, Birhanu A, Wonde M, Liyew B, Shumet S. Attitude towards antipsychotic medications in patients diagnosed with schizophrenia: A cross-sectional study at amanuel mental specialized hospital, Addis Ababa, Ethiopia. Schizophr Res Treatment 2019;2019:5094017.

31. Vassilieva I, Milanova V, Asan T. Predictors of medication non-adherence in Bulgarian outpatients with schizophrenia. Community Ment Health J 2014;50:854-61.

32. Rocca P, Crivelli B, Marino F, Morgioni T, Portaleone F, Boggetto F. Correlations of attitudes toward antipsychotic drugs with insight and objective psychopathology in schizophrenia. Compr Psychiatry 2008;49:170-6.

33. Day JC, Bentall RP, Roberts C, Randall E, Rogers A, Cattell D, et al. Attitudes toward antipsychotic medication: The impact of clinical variables and relationships with health professionals. Arch Gen Psychiatry 2005;62:717-24.

34. Mohamed S, Rosenheck R, McEvoy J, Swartz M, Stroup S, Lieberman JA. Compliance in schizophrenia: Reliability and discriminative validity. Psychol Med 2005;35:336-46.

35. Rettenbacher MA, Hofer A, Eder U, Hummer M, Kemmler G, Weiss EM, et al. Attitudes toward antipsychotic medication and clinical outcomes in chronic schizophrenia. Schizophr Bull 2009;35:336-46.

36. Hofer A, Rettenbacher MA, Demilew D, Birhanu A, Wonde M, Liyew B, Shumet S. Attitude toward antipsychotic medications in patients diagnosed with schizophrenia: A cross-sectional study at amanuel mental specialized hospital, Addis Ababa, Ethiopia. Schizophr Res Treatment 2019;2019:5094017.

37. Vassilieva I, Milanova V, Asan T. Predictors of medication non-adherence in Bulgarian outpatients with schizophrenia. Community Ment Health J 2014;50:854-61.

38. Rocca P, Crivelli B, Marino F, Morgioni T, Portaleone F, Boggetto F. Correlations of attitudes toward antipsychotic drugs with insight and objective psychopathology in schizophrenia. Compr Psychiatry 2008;49:170-6.

39. Day JC, Bentall RP, Roberts C, Randall E, Rogers A, Cattell D, et al. Attitudes toward antipsychotic medication: The impact of clinical variables and relationships with health professionals. Arch Gen Psychiatry 2005;62:717-24.

40. Mohamed S, Rosenheck R, McEvoy J, Swartz M, Stroup S, Lieberman JA. Compliance in schizophrenia: Reliability and discriminative validity. Psychol Med 2005;35:336-46.

41. Grover S, Avasthi A, Chakrabarti S, Kulhara P, Sharma A, Tyagi S. Attitudes toward psychotropic medications among patients with chronic psychiatric disorders and their family caregivers. J Neurosci Rural Pract 2014;5:374-83.

42. Ministry of Health, Government of India. National Mental Health Policy of India: New Pathways. New Hope, 2014;7:1-24.

43. Goddard M, Chadda RK, Mishra AK, Kumari K, Sukrini R. Attitude toward antipsychotics and its correlation with psychopathology and insight in patients with schizophrenia. Indian J Soc Psychiatr 2018;34:200-2.

44. Grover S, Mehra A, Dalla E, Chakrabarti S, Avasthi A. A naturalistic 1 year follow-up study of the elderly patients with depression visiting the psychiatric outpatient services for the first time. Psychiatry Res 2018;267:112-9.

45. Helbling J, Ajdacic-Gross V, Lauber C, Weyermann R, Burns T, Rüssler W. Attitudes toward psychotropic medications
to antipsychotic drugs and their side effects: A comparison between general practitioners and the general population. BMC Psychiatry 2006;6:42.

43. Liebig PS, Rajan SL. An aging India: Perspectives, prospects, and policies. J Aging Soc Policy 2003;15:1-9.

44. Lodha P, De Sousa A. Geriatric mental health: The challenges for India. J Geriatr Ment Health 2018;5:16-29.

45. Chan MF, Mok E, Wong YS, Tong TF, Day MC, Tang CK, et al. Attitudes of Hong Kong Chinese to traditional Chinese medicine and Western medicine: Survey and cluster analysis. Complement Ther Med 2003;11:103-9.

46. Vrbová K, Kamarádová D, Látalová K, Ocisková M, Praško J, Mainerová B, et al. Self-stigma and adherence to medication in patients with psychotic disorders – Cross-sectional study. Neuro Endocrinol Lett 2014;35:645-52.

47. Cabeza IG, Amador MS, López CA, González de Chávez M. Subjective response to antipsychotics in schizophrenic patients: Clinical implications and related factors. Schizophr Res 2000;41:349-55.

48. Sirey JA, Raue PJ, Alexopoulos GS. An intervention to improve depression care in older adults with COPD. Int J Geriatr Psychiatry 2007;22:154-9.

49. Dols A, Rhebergen D, Beekman A, Kapka R, Sajatovic M, Stek ML. Psychiatric and medical comorbidities: Results from a bipolar elderly cohort study. Am J Geriatr Psychiatry 2014;22:1066-74.

50. Rej S, Schuurmans J, Elie D, Stek ML, Shulman K, Dols A. Attitudes towards pharmacotherapy in late-life bipolar disorder. Int Psychogeriatr 2016;28:945-50.