

Prescription auditing in Institute of Mental Health and Neurosciences, Srinagar, Jammu, and Kashmir: A prospective study



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ABSTRACT

Background: Prescription audit can be described as a tool to evaluate the quality of medical treatment which is being offered to the patients in any health care facility. It can prove to be helpful in devising any effective changes that would improve quality of care to the patients. **Aims and Objective:** The study was conducted to carry out prescription audit among the psychiatric patients seeking consultation in a tertiary care centre. **Materials and Methods:** This prospective observational study was conducted on 500 prescriptions for a time period of six months in the outpatient department of Institute of Mental Health and Neurosciences (MHANS). During the study all the prescriptions were collected and evaluated based on WHO prescribing indicators. Data was entered and analyzed using SPSS software version 16.0. **Results:** Five hundred prescriptions comprising of 1,260 drugs were analyzed. The average number of drugs per prescription was 2.8. There were 52.7% males and 47.3% females. Most patients (49%) were from the age group of 21-40 years. In majority of the cases (90.9%) more than one drug was prescribed and 4.6% (20) of medications were prescribed by generic names. The study revealed that Major Depression Disorder (MDD) was the most common psychiatric morbidity (40%). Clonazepam was the most common drug (19.6%) that was prescribed for the patients irrespective of the diagnosis. **Conclusion:** Prescription audit can be helpful to evaluate the existing prescription pattern of any health care facility and ensure the rational drug therapy as per WHO prescription parameters.

Key words: Prescription pattern; Audit; Psychiatric medicines

INTRODUCTION

An audit in healthcare can be defined as a system used by health-care professionals to determine, analyze and improve the care of patients in an efficient way.¹ A prescription audit is undertaken to measure the existing practice against a defined standard and it facilitates the assessment of drug handling, drug disbursement, appropriateness of prescriptions, and adherence to evidence-based recommendations.²

One of the most important part of health-care system is to deliver the right medicine to the right patient and

prescription auditing can prove to be helpful to avoid misuse of drugs and improve rational use of drugs. It is estimated that worldwide, over half of all medicines, are prescribed, dispensed, or sold inappropriately, and that half of all patients fail to take their medicine correctly.³

Inappropriate use of drugs seems to be a common problem, particularly in developing countries substantially contributing to deleterious effects on health and economic burden.

Psychiatric disorders are considered to be an important public health problem and its incidence has increased

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manyfold in the union territory of Jammu and Kashmir because of the political turmoil and turbulence that is prevailing in UT.⁴ Drug prescribing patterns may vary in different geographical areas as it is influenced by many factors which include patient characteristics, type of disease prevalent, drug availability and prescribing priority of physicians. Prescription studies are carried out to evaluate and if necessary suggest modifications in prescribing pattern so that the medical care becomes rational and cost-effective.⁵ In India, many studies have evaluated the drug prescribing pattern and safety profile in psychiatric patients, however, very little data is available regarding prescribing pattern in psychiatric disorders from this part of our country. The increasing prevalence of psychiatric disorders in the union territory of Jammu and Kashmir does warrant exploration of rational and safer therapeutic options.

Therefore, this study was undertaken to investigate the practice of rational drug use (RDU) using the World Health Organization (WHO) core prescribing indicators and prescription audit checklist to identify the extent of the problem, improve RDU practice, and provide information for further investigation.

Aims and objectives

The study was carried out with the aim to look into the prescription pattern in the outpatient Department of Institute of Mental Health and Neurosciences (IMHANS) and the prescriptions were audited in terms of WHO core prescribing indicators.

MATERIALS AND METHODS

This prospective, observational, and cross-sectional study was undertaken in the Outpatient department of the Institute of Mental Health and Neurosciences (IMHANS) Srinagar, which is a Psychiatric tertiary care teaching hospital associated with Government Medical College, Srinagar. An assessment of 500 prescriptions was done over a span of 6 months from March 2022 to August 2022. Before conduct of study, ethical clearance was obtained from the Institutional Ethics Committee, GMC Srinagar (vide order no: 5121/EC-GMC, dated 05/02/2022). All the principles of bioethics were taken into consideration and informed verbal consent of the patient or legally acceptable representative was taken as the present study falls under Category C, with no risk to the patient, and was an observational study.

Inclusion criteria

Prescriptions for patients of any age and sex from outpatient clinics in the IMHANS. Prescriptions for

patients undertaking new visits (visiting the department for the first time) and review visits (visiting the department more than once either for review or for follow-up).

Exclusion criteria

Patients who were critically ill. Patients who were not willing to participate in the study and share their prescription for the study.

Source of data

The data source required to conduct the study was retrieved from the patient's prescription which was done by clicking its picture with mobile phone outside the outpatient department (OPD) by an independent person. Data collected from the prescriptions was entered into the predesigned proforma which was prepared from the WHO guidelines on how to evaluate drug use in health facilities.⁶ The prescriptions were evaluated for patient's socio demographic and clinical profiles, disease classification, pharmacological class of drug prescribed, dosage, route of administration, frequency, duration, drug formulations outside the essential drug list (EDL), generic versus brand drugs, fixed-dose combination (FDC) prescribing rate, average number of drugs per prescription. WHO basic indicators referred to as core indicators were used as a measure of performance in three general areas related to the rational use of drugs.⁶

Statistical analysis

The data collected was tabulated, interpreted, and analyzed as numbers and percentage and presented with the help of appropriate tables. All statistical analyses were performed using SPSS software version 16.0 (SPSS, Chicago, Illinois, USA). Descriptive statistics such as frequencies and percentages were calculated for categorical variables.

RESULTS

A total of 500 prescriptions were evaluated for the study, out of which 440 (88%) were found to be legible and 60 (12%) were not written clearly and were not taken into consideration. When the sociodemographic profile of the patients was considered, it was found that 232 (52.7%) prescriptions were written for males and 208 (47.3%) for females. Majority (67.3%) of the prescriptions were written for patients belonging to rural areas whereas only 32.7% of them were prescribed for urban population. Considering the age of the population for whom the medicines were prescribed, it was observed the most common age group was 21–40 years followed by the age group of 41–60 years and the percentage was 49% and 39% respectively. The mean age of the patients was 40 years (Table 1).

When the prescriptions were analyzed for the number of drugs prescribed, it was observed that in majority of cases (39%) three drugs were prescribed in a prescription, which was followed by two drugs (28.2%). Single drug was prescribed only in 9% of prescriptions whereas 0.9% of prescriptions contained either six or seven drugs (Table 2).

The prescriptions were also evaluated for the drugs prescribed, it was observed that clonazepam (19.6%) was the most commonly used drug, followed by escitalopram (8.5%) and divalproex sodium (7.6%) (Table 3).

During the current study, the prescriptions were mainly analyzed for WHO prescription criteria. It was observed that the average number of drugs prescribed per prescription was 2.8. Most of the prescriptions (90.9%) contained more than single drug and majority of the drugs

(95.4%) were prescribed by brand names. Only a small number (19%) of prescriptions were found to have FDC written in them, whereas most of the drugs (79%) were chosen outside the National List of Essential Medicines (NLEM). During the study, it was also observed that most of the drugs were chosen from hospital formulary and a small number of them (9.1%) were prescribed from outside the formulary. The injectables were prescribed in only 3.6% of prescriptions, whereas Multivitamins were found in only 1.8% of prescriptions (Table 4).

The current study revealed that major depression disorder (MDD) was the most common psychiatric disorder among the studied population as it was found in 40% of the evaluated prescriptions, followed by bipolar affective disorder (BPAD) and schizophrenia which was found in 30% and 14% of the studied population. Obsessive-compulsion disorder was found in 9% of the prescriptions.

When the prescriptions were evaluated in terms of drugs used for the individual psychiatric disorders, it was found that escitalopram which belongs to benzodiazepine group was the most common drug prescribed for those diagnosed to be suffering from MDD, as it was given in 43% of MDD cases, followed by sertraline, a selective serotonin reuptake inhibitor (SSRI) and mirtazapine, an atypical antidepressants, which were given in 14% and 10% diagnosed patients, respectively. For the treatment of BPAD, divalproex sodium which belongs to anti-epileptic category and quetiapine, an atypical anti-psychotic, were the most commonly prescribed drugs and the two were used in 47% and 44% of the cases, respectively and in 25% of the patients suffering from BPAD the two drugs were used together. The other drug used in this category was olanzapine as it was used in 20% of the prescriptions. When the prescriptions were evaluated in terms of the treatment for schizophrenia, it was found that such cases

Table 1: Depicting the socio-demographic profile of the patients for whom the prescriptions were prescribed

| Parameters | Number of prescriptions, (n=440), n (%) |
|------------------|---|
| Sex | |
| Male | 232 (52.7) |
| Female | 208 (47.3) |
| Residence | |
| Urban | 144 (32.7) |
| Rural | 296 (67.3) |
| Age (years) | |
| 0–20 | 20 (4.50) |
| 21–40 | 216 (49.01) |
| 41–60 | 172 (39.01) |
| >60 | 32 (7.20) |
| Mean age (years) | 40.05 |

Table 2: Depicting the number of drugs prescribed per prescription (n=440)

| Number of drugs used per prescription | n (%) |
|---------------------------------------|------------|
| Single drug | 40 (9.0) |
| Two drugs | 124 (28.2) |
| Three drugs | 172 (39.0) |
| Four drugs | 76 (17.2) |
| Five drugs | 20 (4.5) |
| Six drugs | 4 (0.9) |
| Seven drugs | 4 (0.9) |

Table 3: Summarizes the different drugs used during the study (n=1260)

| Name of drug | n (%) |
|-----------------------|------------|
| Clonazepam | 248 (19.6) |
| Escitalopram | 108 (8.5) |
| Divalproex sodium | 96 (7.6) |
| Quetiapine | 76 (6.0) |
| Olanzapine | 60 (4.7) |
| Proton pump inhibitor | 56 (4.4) |
| Other drugs | 616 (48.8) |

Table 4: Summary of parameters assessed as per the World Health Organization prescribing indicators

| Parameters | n (%) |
|--|------------|
| Total number of prescriptions collected | 440 |
| Average number of drugs per prescription | 2.8 |
| Number of prescriptions with monotherapy | 40 (9.1) |
| Number of prescriptions with polytherapy | 400 (90.9) |
| Number of prescriptions with generic names | 20 (4.6) |
| Number of prescriptions with FDC | 84 (19) |
| Number of prescriptions with drugs from hospital formulary | 400 (90.9) |
| Number of prescriptions with drugs from NLEM | 92 (20.9) |
| Number of prescriptions with injectables | 16 (3.6) |
| Number of prescriptions with multivitamins | 8 (1.8) |

FDC: Fixed dose combination, NLEM: National List of Essential Medicines

were treated with multidrug therapy in majority of the cases and the two most common drugs used were olanzapine and risperidone.

DISCUSSION

The prescribing behavior of a prescriber is influenced by a number of factors including the professional knowledge of the treating doctor, the influence of a professional colleagues, commercial publicity of a product, government regulations, and even patients. Various prescribing errors are result of ineffective use of these inputs and are very common in clinical practice. It has been observed that inappropriate prescribing has affected the rational use of drugs, especially in developing countries.⁷ The WHO has devised various parameters to evaluate the rational use of medicines during prescription writing which include the prescription indicators.

Since the patient data in prescriptions were computer generated, all the prescriptions were completed in respective patient demographic profile. The IMHANS is the only tertiary care center for mental diseases so all the patients visit this facility from the entire valley that is the reason for rural predominance in the study population. Majority of the prescriptions that were analyzed in the current study contained two or three drugs with the average number of 2.8 drugs per prescription which is more than the WHO parameters. Similar results have been observed by several studies conducted in this regard. In a single-centric study conducted in India in year 2014 the average number of drugs prescribed per prescription was reported to be 3.11 and a similar study conducted in Ghana reported the average drugs per prescription as 4.8, respectively.^{8,9} The polypharmacy which was observed in the current study can be justified by the fact that most of the participants were suffering from MDD which needs to be controlled by more than one drug in most of the cases as these patients suffer from chronic illness and in most of cases these patients do not respond to single drug therapy.

One of the determinants of a quality prescription is that it should contain generic drugs. As per the WHO parameters, the prescription should be in a generic name by all means.¹⁰ However, the results of this study have shown only 4.6% of prescriptions used generic names, which is much lesser than the prescription pattern in other Asian countries. In a couple of prescription audit studies were carried out in Pakistan (71.6%), Nepal (59.02%), and Jordan (57.6%). The percentage of prescriptions written with generic names was reported to be 71.6%, 59.0%, and 57.6%, respectively, which is much higher than the results of the current study.¹¹⁻¹³ In a study carried out in India itself the generic prescription was reported in 96.8% of the prescriptions and even 100% generic prescribing was observed in a study

conducted in UAE.^{8,14} High rates of polypharmacy with the low number of generic prescriptions can be justified by the ease of availability of these drugs and the lack of enforcement by the government authorities in India. This in turn demonstrates the poor quality of the prescriptions, which in turn would contribute to irrational prescribing. There is a need to formulate the national guidelines for the rational use of medicines and the data that is being generated will help the regulating authorities in this regard.

One of the ways that could curtail irrational prescribing is the prescription audit and the assessment and analysis of the prescription pattern of drugs as per WHO criteria could encourage rational use of drugs. There is increasing use of antibiotics and injectables the world over. A study in Nigeria has shown the overuse of antibiotics and injectables in public sector health facilities.¹⁵ However, in the present study, only 3.6% of the prescriptions had injectables. Injectables are mostly administered for indoor patient departments. As the prescriptions in the present study were collected from OPDs of the hospital, the number of prescriptions containing injectables was found to be less as compared to other studies.

During the past few years, the trend of prescription of multivitamins and mineral supplements has greatly increased.^{16,17} They are mostly prescribed as a part of nutrient supplements in many chronic disease conditions and also used as pre-emptive therapy.¹⁸ In the present study, only 8 (1.8%) prescriptions were found to contain multivitamin formulation. However, some of the studies conducted in different parts of India have reported much higher percentage of prescriptions containing multivitamins, such as Bhardwaj et al. and Hussain et al. reported 35.76%–48.57% and 23.12% of the prescriptions containing vitamins and supplements, respectively.^{19,20} These supplements need to be prescribed with caution and only in cases where they are indicated because there is every possibility that their use can lead to certain adverse effects as the same has been reported by number of studies including the one study carried out in the United States on dietary supplements.²¹

One of the important prescribing parameters is the percentage of the drugs chosen from the EDL of a particular country and WHO requires that every drug should be prescribed from the EDL. In the present study, only 20.9% of the drugs were chosen from the EDL. These figures were less than the study by Hazra et al, where the percentage was reported to be 45.71%.²² The percentage of prescribing drugs from EDL is still lower in India as compared to the other countries such as South Ethiopia and Nepal, where the percentage was reported to be 99.6% and 88%, respectively. One of the major reasons for this

could be due to the lack of awareness of the essential drugs among the treating physicians as the list is not usually available in the OPD rooms. This can be further justified by the fact that clinicians are inclined to treat these patients with newer drugs that are claimed to be more effective yet they are not included in the NLEM yet. The prescription of essential drugs can be improved if the list is displayed in the OPD blocks and the treating physicians are made aware about the drugs that are included in NLEM. As the essential drugs are usually provided by health care facilities this will further enhance the compliance of patients to the treatment. The low percentage of drugs chosen from the EDL in our study can be because of the easy availability of the other newer drugs in the hospital formulary which are yet to be added to the NLEM. Most of these branded drugs were being provided to the patients free of cost, which may also encourage the prescribing clinician to prescribe these drugs.

FDC are being prescribed widely throughout the world. In India itself, the scenario is not too good as most clinicians are prescribing the FDCs. In the current study the percentage of FDCs was found to be 19%, which is similar to the study conducted by Goel et al. where it was found to be 22.5%.²³ As FDCs bring about synergistic action which can reduce the dose of individual components and reduce adverse effects which may intern increase compliance. However, many of the marketed FDCs do not contain the required amount of the individual drugs which may lead to treatment failure. As FDCs are usually prescribed by the brand name which may further increase the use of branded drugs.

Several studies carried out on drug utilization pattern have shown that anxiolytics (BZD) and anti-depressants are the most commonly used psychotropic drugs.^{24,25} Similar findings were found in our study, where clonazepam and escitalopram were the most common drugs prescribed. With regard to antidepressants, selective serotonin reuptake inhibitors (SSRI) are the most commonly prescribed drugs compared to other classes of antidepressants as they generally free of sedative effects and safer at higher doses.^{26,27} Similar reports were observed in our study as escitalopram and sertraline were found to be most commonly prescribed drugs. Escitalopram has a more favorable pharmacokinetic profile, including fewer pharmacokinetic drug interactions than other SSRIs.²⁸

Limitations of the study

Only 500 prescriptions were considered for the present study and similar types of studies could be carried out with larger population size to have valuable insight and broader perspective regarding the prescription pattern among the patients suffering from psychiatric comorbidities.

CONCLUSION

As with the other prescription auditing studies, the current study has revealed polypharmacy, limited generic prescribing, prescription of FDCs, and drugs not from NLEM as the areas of concern. Accordingly, the WHO as urged to improve the rational use of medicines. There is an urgent need for implementation of a well-formulated action plan over the country insisting for adherence to standard treatment guidelines to encourage the rational use of medicines and the prescription audit studies will be an initial step in this direction.

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REFERENCES

- Esposito P and Dal Canton A. Clinical audit, a valuable tool to improve quality of care: General methodology and applications in nephrology. *World J Nephrol.* 2014;3(4):249-255. <https://doi.org/10.5527/wjn.v3.i4.249>
- Hussain S, Parveen Z, Gupta S, Kumar D, Gupta R and Thakur S. A study of prescription auditing in rural health care setting of North India. *Int J Med Sci Public Health.* 2016;5(12):2461. <https://doi.org/10.5455/ijmsph.2016.18042016495>
- Hogerzeil HV. Promoting rational prescribing: An international perspective. *Br J Clin Pharmacol.* 1995;39(1):1-6. <https://doi.org/10.1111/j.1365-2125.1995.tb04402.x>
- Banal R, Thappa J, Shah HU, Hussain A, Chowhan A, Kaur H, et al. Psychiatric morbidity in adult Kashmiri migrants living in a migrant camp at Jammu. *Indian J Psychiatry.* 2010;52(2):154-158. <https://doi.org/10.4103/0019-5545.64597>
- Gupta N, Sharma D, Garg SK and Bhargava VK. Auditing of prescriptions to study utilization of antimicrobials in a tertiary hospital. *Indian J Pharmacol.* 1997;29(6):411-415.
- World Health Organization. How to Investigate Drug Use in Health Facilities: Selected Drug Use Indicators, WHO/DAP/93. Vol 1. Geneva: World Health Organization; 1993. p. 1-87.
- Jain S, Upadhyaya P, Goyal J, Kumar A, Jain P, Seth V, et al. A systematic review of prescription pattern monitoring studies and their effectiveness in promoting rational use of medicines. *Perspect Clin Res.* 2015;6(2):86-90. <https://doi.org/10.4103/2229-3485.154005>
- Singh UR, Prabhakas S, Ambika A, Roshani S, Bhupendra R and Mishra S. Pharmacoepidemiology of prescribing drug in tertiary care hospital in Central India; Rewa, Madhya Pradesh in year 2013-14. *Int J Res Pharm Biosci.* 2014;1:8-14. https://doi.org/10.4103%2fijp.ijp_976_21
- Bosu WK and Ofori-Adjei D. An audit of prescribing practices in health care facilities of the Wassa West district of Ghana. *West Afr J Med.* 2000;19(4):298-303. <https://doi.org/10.1177/004947559702700412>

10. Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations; 2002. Available from: <https://www.nmc.org.in/wp-content/uploads/2017/10/ethics-regulations-2002.pdf> [Last accessed on 2021 Sep 23].
11. Atif M, Sarwar MR, Azeem M, Naz M, Amir S and Nazir K. Assessment of core drug use indicators using WHO/INRUD methodology at primary healthcare centers in Bahawalpur, Pakistan. *BMC Health Serv Res.* 2016;16(1):684. <https://doi.org/10.1186/s12913-016-1932-2>
12. Dahal P, Bhattarai B, Adhikari D, Shrestha R, Baral SR and Shrestha N. Drug use pattern in primary health care facilities of Kaski district, Western Nepal. *Sunsari Tech Coll J.* 2013;1(1):1-8. <https://doi.org/10.3126/stcj.v1i1.8652>
13. Al-Azayzih A, Al-Azzam SI, Alzoubi KH, Shawaqfeh M and Masadeh MM. Evaluation of drug-prescribing patterns based on the WHO prescribing indicators at outpatient clinics of five hospitals in Jordan: A cross-sectional study. *Int J Clin Pharmacol Ther.* 2017;55(5):425-432. <https://doi.org/10.5414/CP202733>
14. Mahmood A, Elnour AA, Ali AA, Hassan NA, Shehab A and Bhagavathula AS. Evaluation of rational use of medicines (RUM) in four government hospitals in UAE. *Saudi Pharm J.* 2016;24(2):189-196. <https://doi.org/10.1016/j.jsps.2015.03.003>
15. Tamuno I and Fadare JO. Drug prescription pattern in a Nigerian tertiary hospital. *Trop J Pharm Res.* 2012;11(1):146-152. <https://doi.org/10.4314/tjpr.v11i1.19>
16. Arshad A, Ali M, Manzoor S, Khan SA, Rashid M, Salam MU, et al. Emerging trends to prescribe multivitamins. *J Virol Curr Res.* 2017;2(3):555588. <https://doi.org/10.19080/vojiv.2017.02.555588>
17. Blumberg JB, Bailey RL, Sesso HD and Ulrich CM. The evolving role of multivitamin/multimineral supplement use among adults in the age of personalized nutrition. *Nutrients.* 2018;10(2):248. <https://doi.org/10.3390/nu10020248>
18. Anila AB, Ancy PS, Sreelekshmi BS, Mahesh NM and Vishwanath BA. A study on prescription pattern of multivitamins in Type-2 diabetes mellitus in tertiary care hospital. *J Drug Deliv Ther.* 2020;10(3-s):91-97. <https://doi.org/10.22270/jddt.v10i3-s.4157>
19. Bhardwaj VK, Budania N, Kumar N, Mondal A, Lata S, Sharma M, et al. Evaluation of vitamins/tonics prescribing pattern in tertiary care teaching hospital and private sector. *Int J Basic Clin Pharmacol.* 2018;7(4):733-737. <https://doi.org/10.18203/2319-2003.ijbcp20181178>
20. Hussain S, Yadav SS, Sawlani KK and Khattri S. Assessment of drug prescribing pattern using world health organization indicators in a tertiary care teaching hospital. *Indian J Public Health.* 2018;62(2):156-158. https://doi.org/10.4103/ijph.ijph_429_16
21. Timbo BB, Ross MP, McCarthy PV and Lin CT. Dietary supplements in a national survey: Prevalence of use and reports of adverse events. *J Am Diet Assoc.* 2006;106(12):1966-1974. <https://doi.org/10.1016/j.jada.2006.09.002>
22. Hazra A, Tripathi SK and Alam MS. Prescribing and dispensing activities at the health facilities of a non-governmental organization. *Natl Med J India.* 2000;13(4):177-182.
23. Goel RK, Bhati Y, Dutt HK and Chopra VS. Prescribing pattern of drugs in the outpatient department of a tertiary care teaching hospital in Ghaziabad, Uttar Pradesh. *J Appl Pharm Sci.* 2013;3(4 Suppl 1):S48-S51. <https://doi.org/10.7324/JAPS.2013.34.S8>
24. Grover S, Kumar V, Avasthi A and Kulhara P. An audit of first prescription of new patients attending a psychiatry walk-in-clinic in North India. *Indian J Pharmacol.* 2012;44(3):319-325. <https://doi.org/10.4103/0253-7613.96302>
25. Trivedi JK, Dhyani M, Yadav VS and Rai SB. Anti-psychotic drug prescription pattern for schizophrenia: Observation from a general hospital psychiatry unit. *Indian J Psychiatry.* 2010;52(3):279. <https://doi.org/10.4103/0019-5545.70996>
26. Zito JM, Safer DJ, DosReis S, Gardner JF, Magder L, Soeken K, et al. Psychotropic practice patterns for youth: A 10-year perspective. *Arch Pediatr Adolesc Med.* 2003;157(1):17-25. <https://doi.org/10.1001/archpedi.157.1.17>
27. McVoy M and Findling R. Child and adolescent psychopharmacology update. *Psychiatr Clin North Am.* 2009;32(1):111-133. <https://doi.org/10.1016/j.psc.2008.11.002>
28. Hemeryck A and Belpaire FM. Selective serotonin reuptake inhibitors and cytochrome P-450 mediated drug-drug interactions: An update. *Curr Drug Metab.* 2002;3(1):13-37. <https://doi.org/10.2174/1389200023338017>

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SSH- Definition of intellectual content, Literature survey, Prepared first draft of manuscript, implementation of study protocol, data collection, data analysis, manuscript preparation and submission of article; **MB-** Concept, design, clinical protocol, manuscript preparation, editing, and manuscript revision; **ZAR-** Design of study, statistical Analysis and Interpretation, preparation of Figures, Coordination and Manuscript revision.

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