ejpmr, 2022, 9(1), 317-322

SJIF Impact Factor 6.222

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Research Article

ISSN 2394-3211

EJPMR

A PROSPECTIVE STUDY ON AWARENESS OF PATIENTS' MEDICATION KNOWLEDGE IN A TERTIARY CARE HOSPITAL

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Article Received on 25/10/2021 **Article Revised on 15/11/2021** **Article Accepted on 05/12/2021**

ABSTRACT

In recent years, outpatients are considered to be active receivers of drug therapy and patients' medication knowledge plays a pivotal role in the disease management, as it was shown to be positively correlated with a higher quality of life, adherence to treatment, and attainment of favourable clinical outcomes. Medication knowledge is the primary outcome. It has previously been shown that a medication plan enhanced with graphical and textual information on drug handling (enhanced medication plan) proved to immediately increase patients' drug knowledge. Patients' drug administration errors are often promoted by poor drug knowledge resulting from inadequate oral or written information. Patients' insufficient or wrong knowledge regarding the medication they use may vary and probably lead to the incorrect use of the latter, thus causing a decrease in its efficacy, or the appearance of other health problems. Patients' knowledge enhances active participation in therapy, thus increasing adherence and ultimately leading to better treatment outcomes. The primary aim of this study was to assess the impact of patient medication counselling by comparing the levels of patient's medication knowledge achieved by medication counselling in an outpatient clinic. This study was conducted to analyze the prescription. To assess patients' medication knowledge before and after counselling. Role of Clinical pharmacist through counselling was found to be more effective for improving patients' knowledge and understanding of prescribed medications and their factors. These techniques were valuable in helping to reduce incidence of recurrent adverse drug reactions (ADRs) and improve adherence to the regimen. **Objective**: The purpose of the study was to analyze the prescription, to assess patients' medication knowledge before and after counselling **Method:** A prospective observational study was conducted over a period of 1 Year from January 2019 to December 2019 in a tertiary care hospital. Patients attending to the out-patient department of general medicine and paediatric were selected randomly and enrolled into the study by considering the study criteria. Patient Informed consent will was taken from each patient at the time of enrolment into the study. A detail regarding patient demography and medication was collected from the case sheets and patient counselling was noted in a suitably designed patient data collection pro forma. The data collected was analyzed through a data collection form and documented. **Results:** Our study showed suboptimal medication-related knowledge and suboptimal patients' interaction and understanding of the prescribed medications. Although lack of awareness is common, most of the patients were unaware of their diagnosis and medications. Among older patients with Polypharmacy, only a minority of them correctly reported the indications for all prescribed drugs they were taking. **Conclusion:** Patients in this study showed a serious knowledge deficiency about medicine considerations and adverse effects. Patients were considered knowledgeable after counselling if they could at least name three items (e.g. indications, adverse effects and time). Many patients in this study stated they did not receive counselling about important medication information at their most recent pharmacy visit. Nevertheless, patients rated pharmacist counselling 4.5 out of 5 on averages, and 80% of those surveyed assessed counselling with the highest possible score. Despite expressing a need for further information, especially about safety issues, patients seemed satisfied with the clinical pharmacist counselling they received. **Role of clinical pharmacist:** Clinical Pharmacists' counselling after the visit to physician improved patients' knowledge about the prescribed medications and their factors along with medication adherence. Efforts should be to extend the role of the pharmacist and its positive effect on patient outcome. Other factors (e.g. psychosocial and lack of time) likely play more important roles in medication adherence and should be targeted in future interventional strategies to optimize medication adherence.

KEYWORDS: Role of Clinical Pharmacist, *Patients' medication awareness*, *Patients' medication knowledge* before and after counselling.

INTRODUCTION

The health-care system is a maze of complexities. It entails high-risk scenarios, collaboration between numerous specialists and institutions, and a substantial amount of technological assistance. The system's qualities may increase the likelihood of mistakes and exacerbate the repercussions of those mistakes. In this regard, assessing risk and harm to patients is critical in the pursuit of ultimate patient safety. Patient safety, according to the World Health Organization, is defined as the reduction of needless or probable harm connected with health care to an acceptable level.[1]

Rational pharmacotherapy involves the appropriate use of medications for the patients to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time and at the lowest cost to them and Rational pharmacotherapy their community.[2]

A patients' medication knowledge is defined as the awareness of drug name, purpose, administration schedule, adverse effects or side effects and special administration instructions. It has become evident that use of medications either with or without physician's prescription and over the counter has increased in the past few years all over the world.[3] Patients' medication knowledge plays a pivotal role in their disease management. Patient involvement in preventing outpatient medication errors is predicated upon patient knowledge of their medications.[4] Patient education ensures optimal use of medicines and minimizes drug related problems. Patient knowledge enhances active participation in therapy, thus increasing adherence and ultimately leading to better treatment outcomes.[5]

Patient knowledge and the intended benefits of their prescribed medications play an important role in medication adherence. Adherence to prescribed medications is extremely important to ensure the efficacy of medical treatment regimens and more positive health outcomes.[4] Adherence has been demonstrated to be influenced by several variables including patients' knowledge about the indications for the medications they take.[5] The level of patients' knowledge about their prescribed medications can be better understood by examining the counselling they receive.[3] The set of information acquired by the patients is needed to reach the therapeutic goal which includes indication and efficacy, the process of use (Posology, regimen, route of administration and treatment duration),safety (adverse effects, precautions, contraindications and interactions). Poor medication knowledge has a negative impact on medication adherence and patient safety and in increasing the use of medical resources. Patients' insufficient or wrong knowledge regarding the medications they use may vary and probably lead to the incorrect use of medications. Thus, causing a decrease in its efficacy or the appearance of other health problems.[6] Polypharmacy without prescription knowledge contributes to patients' non-adherence with physician's prescription. Polypharmacy increases the risk of morbidity, mortality, loss of functional independence and multiplicity of cognitive and physical problems in this population.[7] Patients' living condition appears to influence medication knowledge: Patients living independently with a partner are more knowledgeable in this respect than patients living in a retirement are less knowledgeable.[5] Patients' drug administration errors are often promoted by poor drug knowledge resulting from inadequate or oral information.[8] The use of personal medications could lead to adverse drug events without proper verification procedures.[9] Many patients' desire to self-medicate while in the hospital to ease anxiety over the loss of self-control of their care. Patients' with chronic diseases often undertake multiple medication regimes to manage their conditions, prevent complications and to maintain their quality of life. Many patients with chronic disease conditions are elderly and may struggle in following medication instructions such as taking the prescribed dosage and following the administration schedule. Persistent adherence to drug regimens is crucial for treatment efficacy. Studies reveal that patients often take medicines without sufficient knowledge. Several factors have been identified to be associated with poor adherence such as – patient and pharmacological characteristics, insufficient knowledge of drugs, and poor communication between the physicians & patients.[7] And less economy also leads to self-medication which could be wrong choice.[10]

Patient counselling has always been considered as one of the most effective measure to enhance medication adherence. In the absence of proper counselling, patients may not have enough information about their medication including the indication, dosage regimen, side effects or missed dose. Lack of information may compel them to not take the medication in the way it was intended which in turn may result in therapeutic failure, adverse effects additional expenditure on investigations and treatment, and even hospitalization.[10] Self-medication among patients has been found to be common in many developing countries and many of them might not have the complete information necessary for taking a medication. Knowledge, attitude and practice regarding nutrition and other healthcare facilities may also play a significant role in safety and efficacy. Lack of proper medication knowledge and practice might eventual have serious impacts on health. Thus, effective interventions are required to enhance knowledge, attitude and practice regarding safe medication. Education, access to health care facilities, availability of health care personnel, transportation and economy are major determinants. Health care facilities should ensure that patients receive sufficient knowledge about their medications before leaving the facility.

The American Society of Health-System Pharmacists (ASHP) statement on pharmacists' responsibility indicates that pharmacists are responsible for ensuring the safe and appropriate use of drug products and the

control and distribution of all drug products, which extend throughout the setting served.[9] The practice of allowing patients to use their own medications while hospitalized has been discouraged because the medications may be misbranded or adulterated.[7]

Small studies suggest that pharmacist providing counselling to patients about medications and providing basic information about ADRs and their management together with written information will result in improved knowledge.[12] Patient satisfaction is also an improvement tool for health care providers has been established. It is essential that patients should realize how early detection and treatment can help in preventing problems and aid in proper and early recovery.[13] It seems logical that the regimen be one of the aspects of the medication that most awakens patients' interest, and as such, be the most known, given that it implies a direct action, taking the medication at a given time. Patient knowledge is a potential determinant of medication adherence because it influences perceived or anticipated medication benefits and the necessity of treatment.[14] The level of patients' knowledge about their prescription medicines can be better understood by examining the counselling they receive. Providing written information in addition to verbal counselling enhances patient knowledge and encourages safer medication use. Patient education ensures optimal use of medicines and minimizes drug-related problems. Patients' knowledge enhances active participation in therapy, thus increasing adherence and ultimately leading to better treatment outcomes.[15] A fundamental source of patient education about medicines is clinical pharmacists, as they typically offer the last health professional advice before patients start taking their medicines. Counselling is one of the suitable methods to impart this required knowledge. Effective counselling has been associated with better and positive outcomes in terms of knowledge, attitude and practice of the safe and effective utilization of medicines. Thus, to enhance medication safety, this research was aimed to assess the knowledge, attitude and practice towards their medications, to provide counselling regarding their understanding of medication use and evaluate the impacts of such counselling. This also emphasizes the need of counselling or other suitable interventions to impart proper knowledge and change the attitude and practice. This would not only improve patient compliance and medication adherence, but could also be a milestone to prevent medication misadventures.[10] Therefore, their responsibility is to provide medication counselling every time they dispense a prescription medicine. Effective counselling includes two fundamental processes: asking patients what they already know and filling in knowledge gaps. Good pharmacy counselling improves patients' knowledge and their use of medicines.[5]

METHODOLOGY

Study Environment

This study was conducted at the General and Paediatric out-patient Departments of Shadan Hospital, Hyderabad.

Patient sample

Awareness of patients' medication knowledge: 400 out-patients.

DATA COLLECTION

Study period

The study duration and data for this study was collected in between January 2019 to December 2019.

Study Approval: This study was approved by Ethics Committee and permission for collecting Patients' data was given by Superintendent of Shadan Hospital and HOD of General Medicine and Paediatric Department.

Questionnaire Development

Questionnaire was developed to assess patient knowledge and medication adherence. There was a before and after study investigating management that included a questionnaire with addition to clinical pharmacist counselling in order to improve knowledge and understanding of prescribed medications.

The questionnaire was divided in two parts

- The first section comprised of 6 open-ended questions dealing with patients' knowledge about Medications and consisted questions focusing on specific counseling elements regarding the Medication purpose:
- Dose
- Administration route and time
- Duration of therapy and
- Recognition of medication effectiveness.
- The second section comprised of 6 questions regarding patients' knowledge after pharmacists' Counseling and further queries.

STUDY DESIGN

A prospective observational study was conducted over a period of 1 Year from January 2019 to December 2019 in a tertiary care hospital. Patients attending to the out-patient department of general medicine and paediatric were selected randomly and enrolled into the study by considering the study criteria. Patient Informed consent will was taken from each patient at the time of enrolment into the study. A detail regarding patient demography and medication was collected from the case sheets and patient counselling was noted in a suitably designed patient data collection proforma. The data collected was analyzed through a data collection form and documented.

STUDY CRITERIA

Inclusion criteria

1) Out patients visiting general medicine and paediatric departments.
2) Patients of either gender.

3) Patients willing to participate in the study.

Exclusion Criteria

1) Patients who are not willing to participate in the study.
2) Patients admitted into the hospital after op consultation.

Sources of Data

Out-patient cards

RESULT AND DISCUSSION

Results

300 out patients were counseled for awareness of medication knowledge.

Before counseling: 53.70%

After counseling: 85.91%

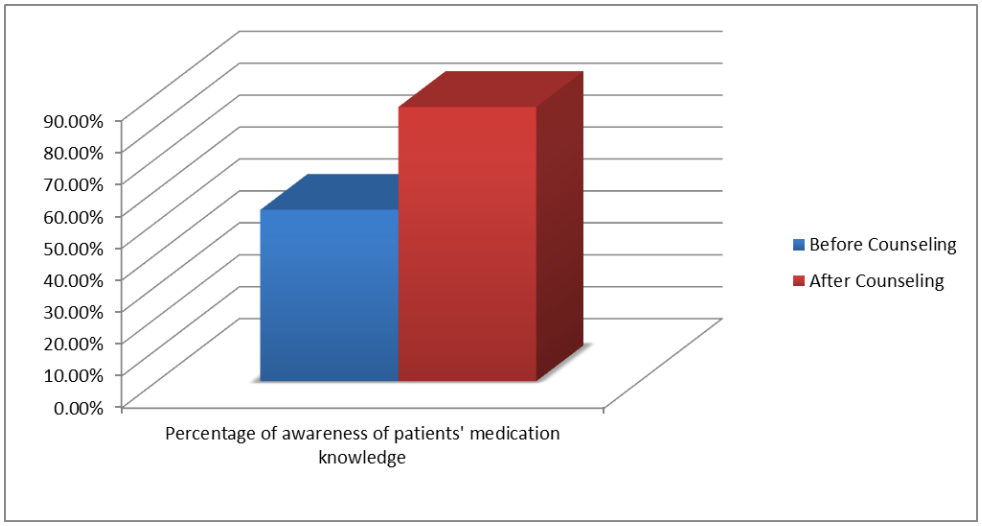

Fig. 1.1:

DISCUSSION

According to WHO, health is defined as state of complete physical, mental and social well being and not merely the absence of disease or infirmity. Current pharmacy education system in India has many drawbacks in it such as no clinical/hospital exposure for pharmacists, entry of non-meritorious students into the course, different syllabi for different universities, non-focused way of learning, outdated curriculum, lack of industrial and clinical exposure, unskilled ways of practical and laboratory training, non-commercialized and poor research etc.

It is estimated that poor adherence costs $100 billion annually in the U.S. Non-adherence may be voluntary or involuntary, and there are many reasons for patients not taking their medication as prescribed. Some reasons for not taking medication are involuntary, such as forgetfulness. Some are voluntary, such as fear of adverse events or a negative attitude toward medications in general.

Other reasons include high cost; complex regimen; lack of education; poor quality of life; busy schedule; poor patient–physician relationship; perceptions of disease severity and drug effectiveness; asymptomatic disease (e.g., hypertension, diabetes, hyperlipidemia); depression; stress; lack of social support; poor coping skills; substance abuse; and low literacy.

Clinical pharmacist can assess the patient self-report, pill counts, pharmacy databases or refill rates, and blood levels, which also are employed in research, Dosing simplification and minimization of adverse effects, are extremely successful strategies for improving adherence.

Clinical pharmacists in the US have established roles in many healthcare teams. Most are part of a multi professional team for acute care or ambulatory care populations, but some have a private practice upon referral from a broad population of physicians. Since medication management is the primary focus, most measurements reflect optimal use of medications and avoidance of adverse events.

Pharmacy practice is still in the initial stages of development in India, but launching of Doctor of Pharmacy (Pharm-D) study program has brought serious discussions about clinical pharmacy in the country. As the profession is in budding stage in the country, the patients, physicians, nurses, other healthcare providers, recruiters in pharmaceutical industries, prospective students, and their parents have numerous questions about this profession and study course.

In clinical review, pharmacists have to check the drug therapy to ensure that the patient is getting the most appropriate dose, dosage, dosage form, duration of therapy for their medical/disease state. Also, he has to correlate the signs and symptoms of the patient,

laboratory results, medical diagnoses and therapeutic goals with the medication history for better patient care. Errors and faults in prescribing are in most cases preventable. Intervention strategies should be primarily focused on education and the creation of a safe and cooperative working environment, to strengthen defence systems and minimize harm to the patient.

Patient counselling can be considered as the most important Clinical Pharmacy Services from the patient's point of view. The pharmacists may provide the information about current clinical condition/proceedings of the patient and educate him about the safe and appropriate use of medicines, thereby enhancing his therapeutic outcomes.

Benefits of patient counselling include patient satisfaction, prevention of medication errors, better clinical outcomes and psychological support to the patient. Patient education especially plays an important role in chronic diseases.

CONCLUSION

Awareness of Patients' Knowledge

Our study showed suboptimal medication-related knowledge and suboptimal patients' interaction and understanding of the prescribed medications. Although lack of awareness is common, most of the patients were unaware of their diagnosis and medications. Among older patients with Polypharmacy, only a minority of them correctly reported the indications for all prescribed drugs they were taking.

(i) Patients' Knowledge

Patients showed consistent knowledge about medication purpose, dose, application rate, and timing and administration route. Patients in this study showed a serious knowledge deficiency about medicine considerations and adverse effects. Patients were considered knowledgeable after counselling if they could at least name three items (eg: indications, adverse effects and time).

(ii) Medication Counselling

The level of patients' knowledge about their prescription medicines can be better understood by examining the counselling they received. Patients indicated they were frequently given directions for medication use, whereas information on considerations and adverse effects was seldom provided. Properly informed patients are likely to feel more control over and less apprehension about their medication use. They are more attentive to adverse effects, which they detect more quickly than patients who do not receive adequate information.

Many patients in this study stated they did not receive counselling about important medication information at their most recent pharmacy visit. Nevertheless, patients rated pharmacist counselling 4.5 out of 5 on averages, and 80% of those surveyed assessed counselling with the highest possible score. Despite expressing a need for further information, especially about safety issues, patients seemed satisfied with the clinical pharmacist counselling they received.

Misinformation about medication consumption by seniors was common. Undertaking routine medication reviews (with emphasis on OTC use), asking specific questions about actual consumption, encouraging use of one prescriber and one pharmacist, discouraging storage of discontinued medications, and reducing use of medication samples was of benefit.

Role of Clinical Pharmacist

Clinical Pharmacists' counselling after the visit to physician improved patients' knowledge about the prescribed medications and their factors along with medication adherence. Efforts should be to extend the role of the pharmacist and its positive effect on patient outcome. Other factors (e.g. psychosocial and lack of time) likely play more important roles in medication adherence and should be targeted in future interventional strategies to optimize medication adherence.

REFERENCES

1. Gabriella RD, Eloni TR, José Roberto G. Medication errors: classification of seriousness, type, and of medications involved in the reports from a University Teaching Hospital. Brazilian Journal of Pharmaceutical Sciences, 2013; 49(4): 793-802.
2. Kadir A, Subish P, Anil K, Ram B. Pattern of potential medication errors In a tertiary care hospital in Nepal . Ind J of Pract, 2010; 3(2): 1622.
3. Frank Wan-kin Chan, Fiona Yan-yan Wong, Wing Yee So,Kenny Kung, and Carmen Ka-man Wong; How much do elders with chronic conditions know about their medications?; BMC Geriatric, 2013; 13: 59.
4. Ramia E, Zeenny RM, Hallit S, Salameh P; Order of Pharmacists Scientific Committee – Medication Safety Subcommittee. Assessment of patients' knowledge and practices regarding their medication use and risks in Lebanon. Int J Clin Pharm, 2017 Oct; 39(5): 1084-1094. doi: 10.1007/s11096-017-0517-4. Epub 2017 Jul 29. PMID: 28756580.
5. Nejc Horvat Mitja Kos; Contribution of Slovenian community pharmacist counselling to patients' knowledge about their prescription medicines: a cross-sectional study; Croat Med J., 2015 Feb; 56(1): 41–49.
6. Rubio JS, García-Delgado P, Iglésias-Ferreira P, Mateus-Santos H, Martínez-Martínez F; Measurement of patients' knowledge of their medication in community pharmacies in Portugal; Cien Saude Colet., 2015 Jan; 20(1): 219-28.
7. Jarernsiripornkul N, Chaipichit N, Chumworathayi P, Krska J. Management for improving patients' knowledge and understanding about drug

allergy. *Pharm Pract (Granada)*, 2015; 13(1): 513. doi:10.18549/pharmpract. 2015.01.513.
8. Chiang-Hanisko L, Tan JY, Chiang LC; Polypharmacy issues in older adults; Hu Li Za Zhi, 2014 Jun; 61(3): 97-104.
9. Devkota R, Khan GM, Alam K, Sapkota B, Devkota D; Impacts of counseling on knowledge, attitude and practice of medication use during pregnancy; BMC Pregnancy Childbirth, 2017 Apr 27; 17(1): 131.
10. Abdullah M. Al Hathloul, Mohammad A. Al Jafer, and Ibrahim A. Al Fraih; Psychiatric patients' awareness of their illnesses and medications; Neurosciences (Riyadh), 2016 Jan; 21(1): 37–42.
11. Parthasarathi G, Hansen KN, Nahata MC. A textbook of clinical pharmacy practice: essential concepts and skills. 1st ed. Chennai: Orient Longman Private Limited, 2004.
12. Lin AH, Kendrick JG, Wilcox PG, Quon BS. Patient knowledge and pulmonary medication adherence in adult patients with cystic fibrosis. *Patient Prefer Adherence*, 2017; 11: 691-698. Published 2017 Mar 30. doi:10.2147/PPA.S129088.
13. Cumbler E, Wald H, Kutner J; Lack of patient knowledge regarding hospital medications; J Hosp Med, 2010 Feb; 5(2): 83-6.
14. Gandage, M., Ninne, S., salimath, P., Reddy, P.V., Buchanalli, S., Reddy, H., & Samson, K. A Study on Role of Clinical Pharmacist in Identification and Prevention of Medication Errors at a Teritiary Care Hospital. *Indian Journal of Pharmacy Practice*, 2018.
15. B Dean, M Schachter, C Vincent, and N Barber; Prescribing errors in hospital inpatients: their incidence and clinical significance; Qual Saf Health Care, 2002 Dec; 11(4): 340–344.