

Studies on the concept, knowledge and attitude of the rational use of medicines among the sixth semester 2nd MBBS student of Jawaharlal Nehru Institute of Medical Sciences, Porompat, Imphal, Manipur, India

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ABSTRACT

Background: The present study was designed to access the concept, knowledge and attitude of rational use of medicine among the sixth semester 2nd MBBS students with the aim to install rational use of medicine amongst the prescriber right from the grass root level.

Methods: The study has been conducted in Jawaharlal Nehru Institute of Medical Sciences Porompat, Imphal, Manipur during 2015-2016 session. The studies has been organised in accordance with World Health Organisation (WHO) Good Prescribing Guide. The students were subjected to presented questionnaire on concept, knowledge and attitude on the rational use of medicine. The design of the study is simple cross sectional study. Percentage, proportions and means are used for descriptive statistics while the associations are calculated using corresponding tests for the associations.

Results: The majority of the students have a clear cut concept in the present studies (96.7%); integration with other subject (80.3%); usefulness in the future practice (98.3%); initiative and willingness (91.0%); learning the topic in the MBBS course (95.0%); out of the total questionnaire of 61, only 7 questions on concept, knowledge and attitude have been selected for further analysis. 3.2% do not have the knowledge of RUMs; 13.1% do not feel necessary to integrate with other subjects; 8.1% are indecisive, 4.91% do not feel necessary to learn RUMs; 16.3% do not have any idea about the role of evaluation.

Conclusions: The present study will enlightened the young energetic medical students to practice rational use of medicine and improves WHO Good prescribing method and rational pharmacotherapy skills in the future.

Keywords: Rational use of medicine (RUM), Medical student, Adverse drug reactions (ADRs), World Health Organisation (WHO)

INTRODUCTION

According to World Health Organisation (WHO) definition, rational pharmacotherapy requires that patients receive medications appropriate to their clinical needs, in doses that meet their own requirements, for an adequate period of time, and at the lowest cost to them and their community.¹

Rational prescribing is a stepwise process of scientifically analysing the therapeutic set up based on relevant inputs about the patient as well as the drug and then taking appropriate decisions. It does not end with handing over the prescription to the patient, but extends to subsequent

monitoring, periodic evaluations and modifications as and when needed, till the therapeutic goals are achieved. Rational prescribing is not just the choice of a correct drug for a disease, or mere matching of drugs with diseases, but also the appropriateness of the whole therapeutic set up along with follow up of the outcome.²

Drug prescription is difficult and requires a thorough knowledge of the disease and the pharmacological properties of the drugs. It has been widely accepted that general practitioners prescribing habits are not easily altered once established. Thus, good prescription training and also practical applications should be given during undergraduate education to prevent bad prescribing

habits. Different educational approaches have been developed so far for that purpose. Several studies have shown that WHO/Good Prescribing Model have a good impact on Rational Pharmacotherapy education.³

Drug therapy involves a great deal more than matching the name of the drug to the name of a disease; it requires knowledge, judgement, skill and wisdom, but above all a sense of responsibility. Doctors must choose which drugs to use and must apply them correctly in relation not only to their properties, but also to those of the patients and their disease. The doctor's aim must be not merely to give the patient what will do good, but to give only what will do good, or at least more good than harm.⁴

The most important consequence of irrational use of medicine is poor quality of health care delivery leading to increased morbidity and mortality, impacting on the health care sector's economic performance as well as on the entire community's productivity. The choice of which strategy to use depends on the expected magnitude of impact, the likelihood for success, the potential for unintended effects, as well as technical, economic, political, and cultural feasibility.⁵

A multitude of factors have been found to lead to irrational use of drugs and these affects at various levels at which drugs are handled. Even if correct drug is prescribed patients may not adhere to prescription due to lack of communication between doctors and patients.⁶ Inadequate information and training of health workers are indeed major factors of irrational drug use in hospital.^{7,8} The irrational prescribing of drugs is a common problem that may lead to medication errors. It is well known that many medication errors are made by young doctors.⁹⁻¹³

Indiscriminate use of drug not only wastes scarce resources that could otherwise be spent on other essential services, but also lead to drug induced disease. The drug control authority, the teaching institutes, drug industries, NGO and the patient himself may be helpful for rational drug use. Teaching institute must conduct regular research work and proper training of undergraduate and post graduate. Motivation of NGO to organise various programmes for public awareness, lastly, the patient himself should observe strict compliance to the physician prescription and never indulge in self-medication. Evidence-based practice is the new watchword in every profession concerned with the treatment and prevention of disease and promotion of health and well-being. This requires both the gathering of evidence and its critical interpretation.¹⁴

METHODS

The present study has been carried out after obtaining permission from institutional ethical committee (IEC). The material is the presented questionnaire on concept, knowledge and practice on RUMs. The setting and duration of the study is among the sixth semester 2nd

MBBS student during December 2015 to May 2016. The exclusion criteria are refusal to give consent, no available or fail to return questionnaire in spite of the reminder and unable to attempt the questions. Percentage, proportions and means are used for descriptive statistics while the associations are calculated by using corresponding tests for the associations.¹⁵

RESULTS

There are 15 questions on concepts; but only 7 questions on knowledge, need of integration, usefulness in future medication, initiative & willingness, CME, evaluation on selected population are selected for statistical analysis. Result of the data analysis is shown on Table 1. A Bar graph showing the different distribution of percentage of the students having the knowledge and attitude on Rational use of drugs, usefulness in future practice, role of evaluation, Initiative and willingness to learn and CME is presented for reference.

Table 1: Percentage distribution of different parameters.

S.no	Parameters	Yes	No	Dont know
1.	Knowing of RUM	96.7 %	3.2%	0%
2.	Need of integration	80.3 %	6.5%	13.1%
3.	Usefulness in practice	98.3 %	0%	1.6%
4.	Initiative & willingness	91.8 %	0%	8.1%
5.	Importance of learning	95.0%	0%	4.9%
6.	Role of evaluation	73.7 %	9.8%	16.3%
7.	CME-learning RUM	93.4 %	3.2%	3.2%

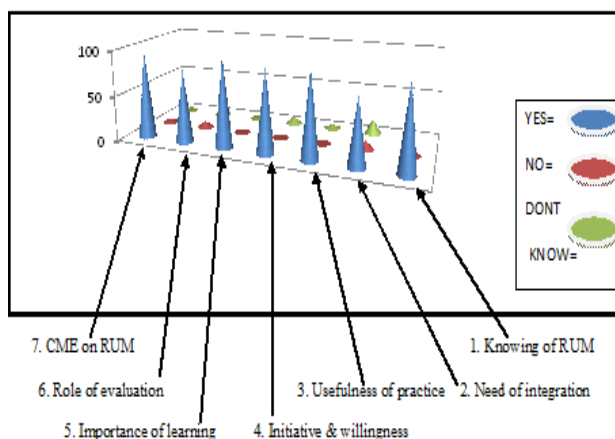
Table 2: Correlation of concept and knowledge on different parameters.

Parameters	Value	Significance level
Usefulness of RUM to Prescriber	0.87	0.01
Usefulness of RUM to Student	0.23	0.05

There comes up our points of concern, 3.2% of the student do not at all have the knowledge of RUMs; 13.1% do not feel necessary to integrate the topic to other subjects; 8.1% of the student are indecisive in the study, 4.91% of the student do not feel necessary to learn RUMs; 16.3% of the student do not have any idea about the role of evaluation on RUMs. These indicate concepts, knowledge and practice of the RUMs is somewhat satisfactory, but not up to the mark.

Table 3: Correlation of knowledge and attitude on different parameters.

Parameters	Value	Significance level
Pattern of study	0.55	0.01
Integrated learning	0.46	0.01

**Figure 1: Bar graph showing the different distribution of percentage of the students having the knowledge and attitude on rationale use of drugs.**

Therefore our study will rectify all the lacunae; so that need of rational use of drugs should be installed in the mind of the student to avoided irrational use of medicine in the future.

DISCUSSION

The knowledge and attitude on RUMs, the initiative and willingness, need of integrated learning, role of evaluation and CME is satisfactory. The result obtained from the present study indicates that the majority of the student has a clear cut knowledge on RUMs (96.7%) out of which 3.2 % of the student have no knowledge about it. Though it is now a well-accepted fact that RUM is an important issues and that doctor are the major prescribers of medicines, teaching of RUM is not given much importance in most of the medical colleges.¹⁶

This can be considered as a major cause of errors in prescribing with its adverse consequences subsequently 80.3% of the student feel the need to integrate the RUMs subject to other clinical While examining the usefulness of the RUM to the Prescribers and the students, the significance level is value 0.87 (p-0.01) and value 0.23(p - 0.05), the knowledge of students towards the practice on RUM and integrated learning value 0.55(p-0.01) and value 0.46 (p-0.01) shown as table II and III.¹⁷ Initiative and willingness on the part of the student is also up to the mark (91.8%). Importance of further learning and the role of evaluation for better and successful RUMs is about 75.7% and 95% respectively. On CME, the response is also overwhelming 93.4%.

CONCLUSION

From the present study, there are ample room for improvement of RUMs and more initiative and implementation of works has to be done at the grass root level. Teaching on RUMs will be useful in educating the students, doctors and the officials working in controlling and regulating the sale and supply of drug. RUM is a matter of great concern for the health care providers and the general mass too. Therefore, rational use of medicine programme should be mandatory in each and every state health care institutions and the prescriber in particular.

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