

Research Article

A study on awareness of pharmacoeconomics among post graduates in a tertiary care teaching hospital

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ABSTRACT

Background: Pharmacoeconomics identifies, measures, and compares the costs and consequences of drug therapy to healthcare systems and society. At present health care cost is increasing day by day. Especially poor and middle class people unable to bear the cost of medical expenses. This is the doctor responsibility to balance both cost and quality of treatment.

Methods : For this study 100 postgraduates of various departments were enrolled in Sri Venkateswara Medical College. We gave a questionnaire on pharmacoeconomics which contains four parts. This questionnaire describes awareness, knowledge, application and students' attitude about pharmacoeconomics.

Results: The willingness to participate in the study among postgraduates was extremely poor. Only 30% of post graduates have awareness of pharmacoeconomics. 28% of postgraduate students were having Knowledge on pharmacoeconomics and 16% on application of pharmacoeconomics. 65% of postgraduates showed interest to know about pharmacoeconomics. 55% of postgraduates felt pharmacoeconomics should include in postgraduate curriculum. 75% of postgraduates wanted to conduct continuous medical education on pharmacoeconomics. Only 11% showed self interest in learning pharmacoeconomics. 21% of postgraduates agreed that need a specialization degree for pharmacoeconomics.

Conclusion: By conducting this study we concluded that postgraduates have extremely poor awareness and knowledge. They don't know the importance of pharmacoeconomics. Right from their medical education it's necessary to include in MBBS curriculum, conducting CME and work shop on pharmacoeconomics will enhance their interest and application of pharmacoeconomics in their medical practices.

Key words: Awareness, Knowledge, Pharmacoeconomics and postgraduate students

INTRODUCTION

"Because of growing pressure on the healthcare budget in developing countries, applicable justification of current expenditures and future investments publically attention are getting progressively vital. The cost of prescribed drugs and pharmacy services have, therefore, become a vital issue to patients, third-party payers, and governments alike. Today, and within the future, it's necessary to scientifically worth the prices and consequences of drug medical aid.

Economics is concerning trade-offs and decisions between needs, and therefore the inadequacy of resources to satisfy these needs. Once considering economic science, the general public consider the trade-offs between merchandise and services and money; but, the trade-off may additionally be expressed in humanistic terms. We are, therefore, careful to incorporate each resource use and humanistic evaluations of drug medical care inside pharmacoeconomics assessment. Pharmacoeconomics has been outlined as "the description and analysis of the prices of drug therapy to health care

systems and society.” Pharmacoeconomics analysis identifies, measures, and compares the prices (i.e., resources consumed) and consequences (i.e., clinical, economic, humanistic) of pharmaceutical merchandise and services. Inside this framework square measure enclosed the analysis ways associated with cost-minimization, cost-effectiveness, cost–benefit, cost-of-illness, cost-utility, cost consequences, and decision analysis, in addition as quality-of-life and other humanistic assessments.¹⁻³

This is one among the doctor as well as medical postgraduate’s responsibility of aware about pharmacoeconomics and correct justification of attention expenditures for the better treatment.

METHODS

This cross sectional questionnaire study was conducted in Sri Venkateswara Medical College, Tirupati. For this study we gave a questionnaire of 17 questions with multiple choice answers. 100 members of post graduate medical students of various departments were enrolled in this study.

The questionnaire consisted of several parts. The first part pertained to a collection of demographic information of the postgraduates: age, gender, academic year, faculty and awareness of pharmacoeconomics. The questions in the second part of the questionnaire addressed the postgraduates’ knowledge about pharmacoeconomics. Third part of questionnaire assessed the applicable knowledge of pharmacoeconomics. In the last part of this questionnaire evaluated postgraduates’ attitude on pharmacoeconomics.

Statistics

The data was expressed in percentage and was analyzed using descriptive statistics.

RESULTS

Out of 100 residents 27 members from final year students, 32 members from second year students, 25 members from first year students and 16 members rejected to take questionnaire. Data expressed in percentage.

Total 55% of postgraduates felt pharmacoeconomics should include in postgraduate curriculum. 75% of postgraduates wanted to conduct continuous medical education on pharmacoeconomics. Only 11% showed self interest in learning pharmacoeconomics. 21% of postgraduates agreed that need a specialization degree for pharmacoeconomics.

30% of postgraduates agree that clinical department doctors should know about pharmacoeconomics. 16% of postgraduates’ belief that non clinical department doctors

should know about pharmacoeconomics. 44% of postgraduates strongly agree that hospital management doctors should know about pharmacoeconomics. Only 32% of postgraduates have awareness about pharmacoeconomics.

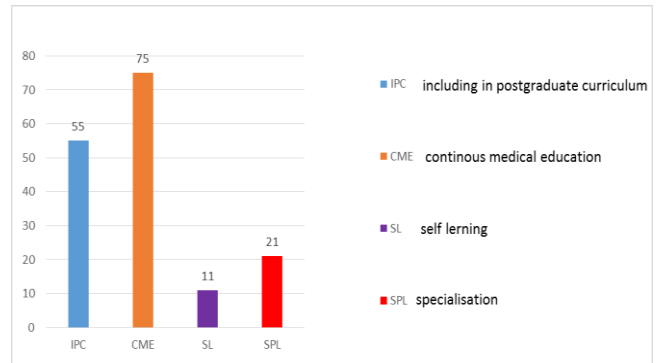


Figure 1: Percentage of postgraduates opinion on different methods of gain knowledge about pharmacoeconomics.

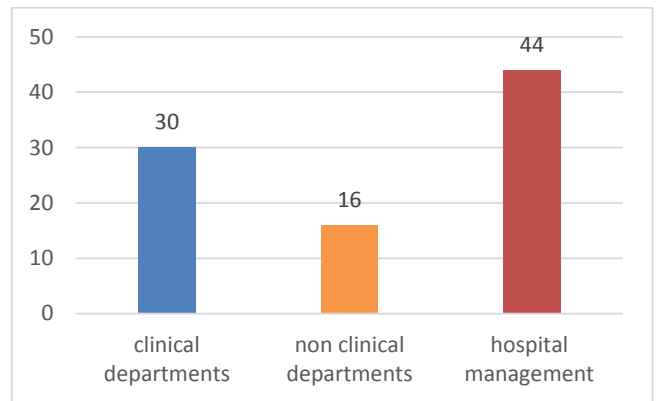


Figure 2: Percentage of postgraduates’ opinion on which department doctors should know about pharmacoeconomics.

Total 65% of postgraduates would like to know about pharmacoeconomics. 45% of residents don’t want know about pharmacoeconomics.

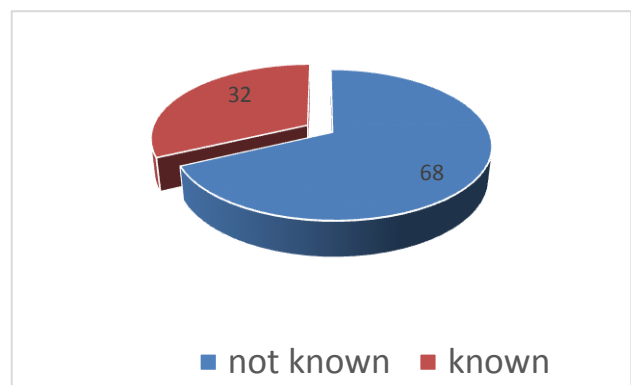


Figure 3: Awareness about pharmacoeconomics.

Table 1: Percentage of correct postgraduates response for the questionnaire.

Questions regarding awareness	% of postgraduates responded correctly
Are you aware of the term “Pharmacoeconomics”?	32
What is Pharmacoeconomics?	35
Do every teaching hospital in India follow Pharmacoeconomic guidelines?	54
Do you think Health economics and Pharmacoeconomics are one and the same?	46
ECH outcomes in Pharmacoeconomics evaluates	26
Questions regarding knowledge	
All are different types of Pharmacoeconomic analysis EXCEPT	38
Following are different types of costs involved in Pharmacoeconomic analysis EXCEPT	29
Transport and care of family of patients are included in-----cost	28
To estimate indirect costs, which technique is typically used	26
Pharmacoeconomic governing body in India is	19
Questions regarding application of pharmacoeconomics	
Most commonly used Pharmacoeconomic analysis is	19
To compare the costs of different brands as well as brand and generic products which Pharmacoeconomic analysis is preferred	15
Pharmacoeconomic methods can be applied for all except	17
Quality Adjusted Life Years (QALY) measured in-----analysis	13
To compare the costs of National Highway project and vaccination programme which Pharmacoeconomic analysis is preferred?	13

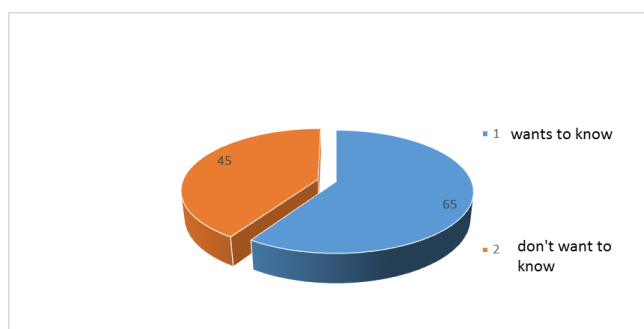


Figure 4: Percentage of residents would like to know about pharmacoeconomics.

DISCUSSION

It is well documented that the emerging discipline of pharmacoeconomics has become adopted worldwide as a health science discipline by the pharmaceutical industry, academic pharmaceutical scientists, pharmacy practitioners and health care professionals.⁴

Active participation among postgraduates in this study was very poor. Among these postgraduates only 32% of residents were having awareness about pharmacoeconomics. Nearly 28% of the postgraduates were having knowledge relating to pharmacoeconomics and around 15% of postgraduates have applicable knowledge about pharmacoeconomics.

Total 65% of postgraduates would like to know about pharmacoeconomics. 55% of postgraduates felt pharmacoeconomics should include in postgraduate curriculum. 75% of postgraduates wanted to conduct continuous medical education on pharmacoeconomics. Only 11% showed self interest in learning pharmacoeconomics. 21% of postgraduates agreed that need a specialization degree for pharmacoeconomics. Our study results were correlate with the Jarinabanu Tahashildar, et all, Jeannette EF et all and Dr. Madhav.K.Savkarei all studies.⁵⁻⁷

30% of postgraduates agreed that clinical department doctors should know about pharmacoeconomics. 16% of postgraduates believed that non clinical department doctors should know about pharmacoeconomics. 44% of postgraduates strongly agreed that hospital management doctors should know about pharmacoeconomics. Among all residents they do not knew the importance of pharmacoeconomics. This clearly showed the residents attitude about pharmacoeconomics. Overall residents were having extremely poor awareness and knowledge regarding pharmacoeconomics.

Hence it's well to incorporate pharmacoeconomics practical exercises in MBBS curriculum to enhance knowledge and interest among students.⁸ By conducting CME and workshops on pharmacoeconomics will enhance their knowledge and applications of pharmacoeconomics in health care profession. Further studies should carried out in doctors and other para

medical staff also to enhance awareness and importance of pharmacoconomics.

CONCLUSION

By conducting this study we concluded that postgraduates had extremely poor awareness and knowledge. Application of pharmacoconomics in health care profession was very limited. Some of these postgraduates showed interest to know about pharmacoconomics. By conducting work shop and CME will enhance their interest and awareness on pharmacoconomics which will help them for application of pharmacoconomics in their health care profession.

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Supplementary Information

Questionnaire

Department: PG:-----yr Age: Sex:

Instruction: select any one option for the following MCQs which is most appropriate according to you and mark it.

Questions

I. Awareness

1. Are you aware of the term “Pharmacoeconomics”? a) Yes b) No
2. What is Pharmacoeconomics?
 - a) Identifying, measuring, and comparing the costs, risks, and benefits of programs, services, or therapies
 - b) It deals with economic survey of drugs in the health care system
 - c) Both are true
 - d) None of the above
3. Do every teaching hospital in India follow Pharmacoeconomic guidelines? a) Yes b) No
4. Do you think Health economics and Pharmacoeconomics are one and the same? a) Yes b) No
5. ECH outcomes in Pharmacoeconomics evaluates
 - a) Economic, Clinical, Healthcare services
 - b) Environmental, Cost, Healthcare services
 - c) Economic, Clinical, Humanistic services
 - d) Environmental, Cost, Humanistic service

II. Knowledge

6. All are different types of Pharmacoeconomic analysis EXCEPT
 - a) Cost-Benefit
 - b) Cost-Utility
 - c) Cost-Comparative
 - d) Cost-Effective
7. Following are different types of costs involved in Pharmacoeconomic analysis EXCEPT
 - a) Direct Cost
 - b) Intangible Cost
 - c) Indirect Cost
 - d) Tangible Cost
8. Transport and care of family of patients are included in-----cost
 - a) Direct
 - b) Intangible
 - c) Indirect
 - d) Tangible

9. To estimate indirect costs, which technique is typically used?

- a) Human benefit
- b) Human capital
- c) Human loss
- d) None of the above

10. Pharmacoeconomic governing body in India is

- a) Pharmacoeconomic Benefits Advisory Committee (PBAS)
- b) National Pharmacoeconomic Pricing Authority (NPPA)
- c) International Society of Pharmacoeconomics and Outcomes Research (ISPOR)
- d) National Institute of Pharmacoeconomic Education and Research (NIPER)

III. Methods of Application

11. Most commonly used Pharmacoeconomic analysis is

- a) Cost-benefit
- b) Cost-minimization
- c) Cost-utility
- d) Cost-effective

12. To compare the costs of different brands as well as brand and generic products which Pharmacoeconomic analysis is preferred

- a) Cost-benefit
- b) Cost-minimization
- c) Cost-comparative
- d) Cost-effective

13. Pharmacoeconomic methods can be applied for all except

- a) Effective formulary management
- b) Individual patient treatment
- c) Medication policy determination
- d) Analysis of cost of drugs only

14. Quality Adjusted Life Years (QALY) measured in-----analysis

- a) Cost-benefit
- b) Cost-minimization
- c) Cost-utility
- d) Cost-effective

15. To compare the costs of National Highway project and vaccination programme which Pharmacoeconomic analysis is preferred?

- a) Cost-benefit
- b) Cost-minimization
- c) Cost-utility
- d) Cost-effective

IV Attitude of student

16. How do you acquire additional knowledge in pharmacoeconomics?

- a) Including it in Postgraduate curriculum
- b) Including it in continuous medical education
- c) Self-involvement and interest

d) Specialization

17. Which department people should know about pharmacoeconomics?

- a) Clinical departments
- b) Non clinical departments
- c) Hospital management department
- d) all