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Knowledge And Attitude About Research Methodology And Statistics In Post Graduate Dental Students.

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ABSTRACT

The present study was undertaken to observe the knowledge and attitude about research methodology and statistics in Post graduate dental students. 33 postgraduate dental students including both males and females were included in the study after obtaining the informed consent. The self-administered questionnaire was mailed to the students using Google forms and the responses was collected and analyzed. The knowledge of majority of the students was good in the research methodology. However, none of the students answered correctly to the question related to statistics. 55% of students agreed that research has to be continued for the progress to improve patient outcome. 64% agreed that training in research methodology is mandatory. 79% agreed that PG students must be involved in research. 43% agreed that doctors can undertake research without supervisor. 73% agreed research should be included in the timetable. 64% agreed that they will continue research in future. Our study highlights and recommends the need for hands on training in medical statistics for post graduates apart from regular teaching, which helps them to apply statistics for their own thesis. Majority of students agreed and recommended continuation of research for better patient outcome.

Keywords: Medical statistic, Postgraduate students, Research methodology.

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INTRODUCTION

Research is a journey from known to unknown. The need of research publications has been increased tremendously and in fact research publications are made mandatory for professional growth. The bodies like Medical council, Dental council etc mandates the doctors to publish research papers in indexed journals. As it is required to maintain the quality of the work to get a paper accepted in indexed journal, the authors must be having basic knowledge to conduct a better research. Training in research methodology will be helpful to achieve the fruitful work that is eligible to be published in highly indexed journal. Hence, the training should begin at the undergraduate level itself. If the individual is trained in research methodology that will ensure that he will follow the guidelines in each step of the research from planning to publication. For post graduate students, it is mandatory to conduct research work as a part of the dissertation work as per the university rules. Hence, it is expected that they must have thorough knowledge about the research methodology before they start the work. Earlier studies highlighted the need of knowledge in research methodology for post graduate students(1). Further, knowledge on statistics is essential to conduct any research work scientifically. The role of statistics starts from the design of the study where the samples required should be decided and continues throughout the study to interpret and discuss the results. Though statisticians were available to help the students, the students must have the basic knowledge of statistics to interpret the analysis performed. Earlier studies have recommended that the knowledge in statistics is much needed to the students who are working with the dissertation works (2).The present study was undertaken to observe the knowledge and attitude about research methodology and statistics in Post graduate dental students.

METHODOLOGY

Study design: Cross-sectional study

Study setting: The present study was conducted at Department of Physiology, Vishnu Dental College, Vishnupur, Bhimavaram, West Godavari District, Andhra Pradesh, India.

Study participants: 33 postgraduate dental students including both males and females were included in the study after obtaining the informed consent. The self-administered questionnaire was mailed to the students using Google forms and the responses was collected and analyzed.

Ethical considerations: The study protocol was approved by the institutional research committee of Vishnu Dental College. Informed consent was obtained from all the participants.

Data analysis: Data was analyzed by SPSS 20.0. Data was expressed as frequency and percentage.

RESULTS

Results were presented in table no 1 and 2. The knowledge of majority of the students was good in the research methodology. However, none of the students answered correctly to the question related to statistics. 55% of students agreed that research has to be continued for the progress to improve patient outcome. 64% agreed that training in research methodology is mandatory. 79% agreed that PG students must be involved in research. 43% agreed that doctors can undertake research without supervisor. 73% agreed research should be included in the timetable. 64% agreed that they will continue research in future.

Table 1: Knowledge of postgraduate students in research methodology and statistics. (Data presented was in frequency and percentage)

| S.no | Statement | Correct answer | Wrong answer |
|------|---|----------------|--------------|
| 1 | What is research hypothesis? | 27 (82%) | 6 (18%) |
| 2 | When should consent for a trail be obtained? | 25(76 %) | 8 (24%) |
| 3 | From whom to seek approval for conducting clinical research using new drugs in India? | 28 (85%) | 5 (15%) |
| 4 | What is Medline? | 23 (70%) | 10 (30%) |

| | | | |
|---|--|----------|-----------|
| 5 | What is the highest level of evidence of available literature? | 15 (45%) | 18 (55%) |
| 6 | What is estimated by confidence interval? | 0 (0%) | 33 (100%) |

Table 2: Attitude of postgraduate students in research methodology and statistics. (Data presented was in frequency and percentage).

| S.no | Statement | Strongly agree | Agree | Neutral | Disagree | Strongly Disagree |
|------|---|----------------|---------|---------|----------|-------------------|
| 1 | Patient outcomes improve with continued clinical research | 5(15%) | 18(55%) | 9(27%) | 1(3%) | 0 (0%) |
| 2 | Training in research methodology should be made mandatory for PGs | 7 (21%) | 21(64%) | 5(15%) | 0(0%) | 0 (0%) |
| 3 | PG students must be involved in research | 5 (15%) | 26(79%) | 2(6%) | 0 (0%) | 0 (0%) |
| 4 | Doctors can undertake research without any supervisor/ guide | 1(3%) | 14(43%) | 6(18%) | 9 (27%) | 3 (9%) |
| 5 | Research time should be allotted separately in time table | 5 (15%) | 24(73%) | 3(9%) | 1(3%) | 0(0%) |
| 6 | You will carry out research in future | 2(6%) | 21(64%) | 9(27%) | 1 (3%) | 0(0%) |

DISCUSSION

The study was aimed to assess the knowledge and attitude of the post graduate students on research methodology and statistics. It was observed that majority of students had sound knowledge on research methodology but their knowledge on statistics was poor. Lack of student workshops on research methodology and statistics is one of the reasons for such negative attitudes. This highlights the need of hands on training on statistics. Majority of the students agrees that research should be part and parcel of the carrier. Vijay kumar et al., conducted a study to observe the knowledge of postgraduates in the research methodology. They have observed that there was difference in the opinion of the students regarding the design of the study and highlighted the need of training the students in the research methodology(3).

CONCLUSION

Our study highlights and recommends the need for hands on training in medical statistics for post graduates apart from regular teaching, which helps them to apply statistics for their own thesis. Majority of students agreed and recommended continuation of research for better patient outcome.

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