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Effect of Introduction of 'Research Orientation Module' in Ayurveda Undergraduates

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ABSTRACT

Background: Research is important to the scientific progress and crucial in health sciences to understand the problems which affect the health of individuals, communities, and health systems. The study by YD Shilpashree observed the reasons for non-involvement of undergraduates in research are lack of motivation and proper knowledge about the research. The Central Council of Indian Medicine (CCIM) in 2016 introduced a subject of Research Methods and Biostatistics in undergraduates of Ayurveda curriculum.¹¹ but, the applied aspect is lacking as students are reading it only for examination purpose.

Objective: This study is designed to introduce the 'Research orientation module' to undergraduate students through the workshop and to assess their perception and improvement in proposal writing.

Methodology: The study will be conducted in two phases. In the first phase, Ayurveda undergraduates will be exposed to the questionnaire to explore their research attitude. In the second phase, 60 students (20 students from each year) will be selected by homogenous sampling method. Consecutive three days (two hours/day) training workshop on Research Methodology will be conducted. Before the workshop, students will be directed to design a short research proposal. Pre-test and post-test will be administered before and after the workshop. On completion of the workshop, the student will be given a month to rewrite the previous proposal. The proposals will be evaluated by a committee of 5 faculties (expert in research) using a performance-checklist.

Conclusion: This study will help to explore basic knowledge of undergraduates about research. It will also assess the improvement in proposal writing skills on their orientation of Research.

Key Words: Research attitude, Research orientation module, Ayurveda undergraduates

INTRODUCTION

Research is an inevitable part of human life. Our daily life is benefitted directly or indirectly through research and developments at various levels. Research has been promoted by the government and many funding agencies to bring out quality research. It is important to scientific progress.¹ Training of medical undergraduate students (including Ayurveda) in research methodology is highly neglected part of the curriculum of all medical sciences. In India, research programs are given the lowest priority.² Poor training in research skills is one of the main factors responsible for the deterioration in the number of medical researchers worldwide.³ Proper

knowledge about research methodology not only helps in improving the problem-solving abilities of the students but also motivates them to choose research as a career in future.⁴

The involvement of undergraduates in research activities is a great way to enhance their basic skills and attitude required for the future research plan.⁵ In Japan, Research-based course is implemented in the undergraduate curriculum of most of the medical schools.⁶ The purpose is to provide the facilities required to develop research skills for professional growth.

Research experience can be helpful to improve students' skills in searching and critically evaluating the literature and writing research papers. It is the responsibility of all medical

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educators to restate the importance of research and inculcate research attitude among UG students.^{7,8}

We motivate the undergraduates for short term studentship (STS) projects, but students don't orient about the basic knowledge of project preparation. So the result is proposals are of substandard quality. Government is encouraging the researcher by providing various grants but very few medical fraternities are aware of it. It may be due to un-exposure to the practical knowledge of research at the undergraduate level. There is a huge scope of research in Ayurveda but the enormous potential group of undergraduates are deprived of research. To the best of our knowledge, no study has been conducted in Ayurveda institutions regarding the effect of the introduction of basic health research orientation to undergraduates

Thus, framing the effective research workshop for undergraduates may create interest, thereby improving the research orientation. Keeping this in mind, this project is planned to evaluate the effect of 'Research orientation module' in Ayurveda undergraduate students.

OBJECTIVE

This study aims to evaluate the effect of 'Research orientation module' in Ayurveda undergraduates. Study is aimed to achieve following objectives,

1. To assess the undergraduate students for their basic understanding of research.
2. To introduce 'Research orientation module' to undergraduate students through the workshop.
3. To assess the perception of students about 'Research orientation module'.
4. To assess its effect on proposal writing skills.

MATERIALS AND METHODS

It is an interventional study. It will be conducted in two phases. Convenience sampling and Purposive (Homogenous) sampling procedure will be used in phase I and phase II respectively.

Phase 1: In this phase, a total of 180 students of 2nd, 3rd and 4th year of BAMS will be selected. The first-year students will be excluded from the study as they are a novice to this field. Participation will be voluntary and institutional ethical approval will be taken before initiation of the study. The students' research attitude will be assessed by the open-ended questionnaire. The domains of the questionnaire will be level of interest in research,

perceived benefits of engaging undergraduate medical students in health research, problems facing in conduction of any projects. The questionnaire will be pretested (for appropriate wording) on a small number of students, who will be comparable with the sample of students but will not be a part of it. The results of pretesting will be used to finalize the questionnaire.

Phase 2: In this phase, 60 students (20 from each year) will be selected by homogenous sampling method (students having a positive attitude towards research). Consecutive three days (two hours/day) training workshop on Research Methodology will be conducted for these 60 students in three batches (20 students in each batch). The module for the workshop will be designed in such a manner that student will be well acquainted with the basic facts of research methodology. Before exposing to the workshop, students will be directed to prepare a short research proposal of their interest. Pre-test and post-test will be administered to all students before and after the workshop. After the workshop, the student will be given a month to rewrite the proposal.

The research proposal will be evaluated by a committee of 5 faculties of research experts excluding researcher using a performance-checklist.

Outcome measures

Pre-test/post-test questionnaire will be prepared to evaluate learning gain. Students' satisfaction of workshop and their performance will be assessed by feedback form and Performance checklist respectively. Figure 1 and Table 1 showed the schematic presentation of study methodology and Table 1 showed the schedule of study

Figure 1: Schematic diagram of Study methodology.

Table 1: Study schedule

Months of study	First month	Second month	Third month	Fourth month	Fifth month	Sixth month	Seventh month
Preparation of questionnaire for Students' assessment and pre-post test							
Students' assessment for Research attitude							
Selection of 60 students							
Proposal writing							
Pretest, Exposure to workshop & Post-test							
Proposal writing							
Proposal evaluation							

Data management and monitoring

Evaluation of interventional method will be done using 'Kirkpatrick's Evaluation method'.⁹ In level I evaluation. Students' perceptions will be evaluated using a close ended questionnaire. The questionnaire will be given by google form. In level 2 evaluations, Pre-test and post-test scores will be compared for learning gain. 'Absolute learning gain' (% post-test score - % pre-test score) will be calculated.

Quantitative data will be analysed using SPSS software (IBM SPSS Statistics 24) while qualitative data of open questions/ responses will be coded using a thematic approach. Common themes will be identified for each open question. These themes will be charted and interpreted.

Ethics and dissemination- This study is approved by the Institutional Ethics Committee of DMIMS (DMIMS (DU/IEC/ Aug-2019/8309) All participants will be asked to read and sign the informed consent. The study results will be disseminated to study participants and published in peer-reviewed publications.

EXPECTED OUTCOMES/RESULTS

This study is planned to assess the research attitude of the students and expose them to the research methodology workshop followed by evaluating their proposal writing skills.

DISCUSSION

Research methodology workshop may be helpful to develop their research interest and improve proposal writing skills. The study conducted by Shilpashree et al. found that a lack of motivation and proper knowledge about the research is an accountable factor for apathy about research.¹⁰ The study conducted abroad suggested that there was a significant improvement in proposal writing in the students after the exposure to research methodology workshop.¹¹ Few of the related

articles were reviewed.¹²⁻¹⁵ Gaikwad et al. focused on interactive E-Learning module in rural medical college.¹⁶ Shrivastava et al. studied about peer teaching to foster learning.¹⁷ Rawekar et al. reviewed on skill learning through early clinical exposure.¹⁸ Sawarkar et al. studied about peer-assisted learning of procedural skill in Ayurveda.¹⁹ Similar related studies on teaching modules and assessments were reported by Shrivastava et al.^{20,21}

CONCLUSION

This study will help to explore basic knowledge of undergraduates about research. It will also assess the improvement in proposal writing skills on their orientation of Research.

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