

## Impact of orientation programs among post-graduate medical students of Rohilkhand Medical College and Hospital, Bareilly: An interventional study

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**Aim:** The aim of the study is to evaluate the impact of orientation programs on post-graduate (PG) medical students of Rohilkhand Medical College and Hospital, Bareilly.

**Methods:** An interventional research study was conducted. This is a 4-year prospective study done on newly admitted PG medical students of Rohilkhand Medical College and Hospital, Bareilly. Google Sheets were used to create the study tools for the research, which consisted of sharing a structured, self-administered questionnaire. The paired *t*-test was used to compare the pre- and post-test mean scores to determine how the PG orientation program affected the participants. At the conclusion of the program, an online feedback form was also made available to gather information about the program's resources, time management, content, effectiveness, and audience learning experience.

**Findings:** The pre-test and post-test had a 100% response rate and the feedback form had a response rate of 85.71%. When the pre- and post-test scores of the new PG students were compared, there was an improvement in the mean score, indicating that the PG orientation program was effective. Using the paired *t*-test, the index study yielded a  $P = 0.04$ , therefore the result is statistically significant as the  $P < 0.05$ . The analysis of the feedback showed that a lot of students strongly agreed with it and found it very useful.

**Conclusion:** By introducing freshmen students to the fundamentals of the institution and hospital, orientation programs for PG medical students play a crucial role in the development of excellent resident doctors. All institutions and organizations in the country should encourage PG orientation programs.

**KEY WORDS:** Medical students, orientation program, post-graduate, resident doctors

## INTRODUCTION

The purpose of student orientation programs is to help new students get used to the academic, cultural, and social atmosphere

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of the institution.<sup>[1]</sup> Introduction to institutional ethical committee, hospital (outdoor patient departments, wards, casualty), laboratories (pathology/microbiology/biochemistry/radiology/blood bank/physiotherapy), medical record department, and hospital management department is of great significance for the newly admitted post-graduate (PG) medical students.

Knowledge, practice, and ethics are the three pillars upon which the medical establishment is built. Medical ethics are the morality and propriety of all medical professional actions, whether they concern statistics, public health, or individual care. Professional courtesies and bedside manners are one aspect of

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medical ethics. Another aspect deals with legal issues associated with recent medical advancements such as euthanasia and medical termination of pregnancy.<sup>[2]</sup> These are the four pillars of medical ethics: Non-maleficence, beneficence, autonomy, and justice. A framework for determining the best course of action in a given circumstance is provided by these four guiding principles. To consistently do what is best for their patients, it is essential for aspiring doctors to have a solid understanding of medical ethics and a moral compass.<sup>[3]</sup> One of the most critical issues in medical treatment right now is consent. There should be a valid consent of the patient for taking or refusing medical treatment.<sup>[4]</sup>

It is expected of a resident doctor to have basic knowledge about X-rays, electrocardiograms, blood collection tubes, emergency drugs, and other medical procedures.<sup>[5]</sup> In addition, a trained resident doctor with good basic clinical skills generally reflects good medical care and vice versa.<sup>[2]</sup> All PGs must be excellent in day-to-day clinical skills and handling emergencies such as inserting an intravenous catheter/nasogastric tube/urinary catheter, phlebotomy, lumbar puncture, thoracentesis, abdominocentesis, blood transfusion, cardiopulmonary resuscitation, and endotracheal intubation.<sup>[5]</sup> Bio-medical Waste Management Rules, 2016, should be strictly implemented by all resident doctors.<sup>[6]</sup>

A resident doctor must be a master in maintaining good medical records. The information needed to identify the patient, make a diagnosis, and provide details about the patient's treatment and progress must all be included in the medical record.<sup>[7]</sup> This applies to records from both inpatient and outpatient settings. The patient's admission marks the beginning of the inpatient record. The patient's complaints, medical history, physical examination details, and treatment plan are all included in the admission record.<sup>[2]</sup> The following are included on the in-patient case sheet: Progress reports, doctor's orders, investigation reports, consent forms, special forms such as labor records, operation notes, and cross-reference forms, and a summary of the discharge.

Paper publication, poster and oral presentation, thesis submission, and basic course in biomedical research are compulsory criteria set up by the National Medical Commission, India, for all medical and dental PG students.<sup>[8]</sup> Case presentation, seminar, and journal club are an essential component of PG training everywhere. PGs and faculty benefit from staying up-to-date on recent developments. In addition, it encourages residents to improve their presentation skills, which would be useful in the workplace when giving talks or presenting papers.<sup>[2]</sup>

The institution puts together a PG orientation program to make the transition from undergraduate life to post-graduation life easier. Medical education is imparted to the new PGs. A pre-test is given at the beginning of the program and a post-test at the end. Participants provided feedback and a closing ceremony with certificate distribution was held. An interventional prospective survey was carried out for 4 academic years. Research studies on the impact of the orientation programs on PG students are very few, thus the need for this study.

## Aim

The aim of the study is to evaluate the impact of orientation programs on PG medical students of Rohilkhand Medical College and Hospital, Bareilly.

## Objectives

- To impart basic knowledge and skills for the management of patients to PG medical students
- To compare the pre- and post-test mean scores at the beginning and end of the program
- To collect the feedback of PG medical students about the orientation program.

## MATERIALS AND METHODS

An interventional research study was conducted after taking clearance from the Institutional Ethics Committee of Rohilkhand Medical College and Hospital, Bareilly, Uttar Pradesh. PG medical students from the various clinical and paraclinical departments of Rohilkhand Medical College and Hospital, Bareilly, participated in the institutional PG orientation programs. Senior doctors and faculties of the institution led many sessions of the programs. This program was attended by 277 PG students in a total of 4 consecutive years. This is a 4-year prospective study done on newly admitted PG medical students of Rohilkhand Medical College and Hospital, Bareilly.

Google Sheets were used to create the study tools for the research, which consisted of sharing a structured, self-administered questionnaire. There were two parts to the questionnaire: Sections A and B; Part A contained the individual's basic information, while Part B contained assessment questions. At the beginning of the program, a pre-test was administered, while at the end, a post-test was administered. The students' knowledge gained through the application of the orientation program was compared using the pre- and post-test scores. The paired *t*-test was used to compare the pre- and post-test mean scores to determine how the PG orientation program affected the participants. At the conclusion of the program, an online feedback form was also made available to gather information about the program's resources, time management, content, effectiveness, and audience learning experience. There were both closed-ended and open-ended questions on the feedback form.

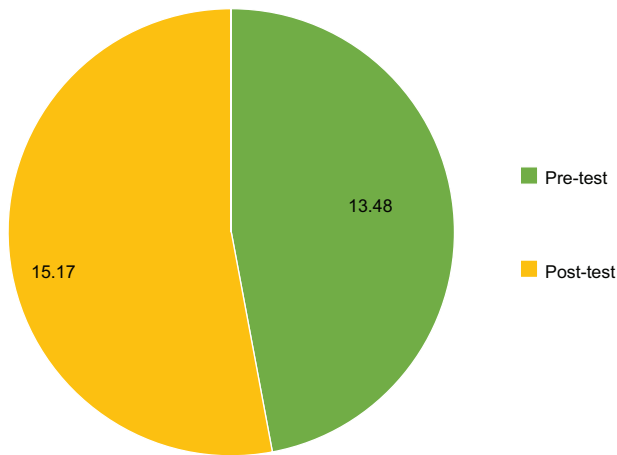
Google Sheets were used to extract the data. In an MS Excel spreadsheet, the data were further entered, compiled, and analyzed. Frequencies and percentages were used to describe the respondent profiles. In accordance with the purpose of the study, tables and figures were used to present the findings.

## RESULTS

The survey sheets including questionnaire and feedback forms were shared with 277 PG medical students. These were the records that were received: The pre-test and post-test had a

**Table 1a: Feedback form.**

Topics	Neutral	Agree	Strongly agree	Disagree	Strongly disagree
Effectiveness of the program	9 (3.84%)	85 (35.89%)	140 (58.97%)	0 (0.00%)	3 (1.28%)
Contents of the sessions	18 (7.69%)	116 (48.71%)	103 (43.58%)	0 (0.00%)	0 (0.00%)
Time management of the program	119 (50.00%)	109 (46.15%)	6 (2.56%)	3 (1.28%)	0 (0.00%)
Resource materials provided	9 (3.84%)	97 (41.02%)	131 (55.12%)	0 (0.00%)	0 (0.00%)



**Figure 1a:** Pre-test and post-test mean scores

100% response rate and the feedback form had a response rate of 85.71% (237 people). The mean scores of the pre-test and post-test were calculated and compared using paired t-test. Figure 1a shows that the mean score for the pre-test was 13.48, while the mean score for the post-test was 15.17 (total marks of the test = 20). When the pre- and post-test scores of the new PG students were compared, there was an improvement in the mean score, indicating that the PG orientation program was effective. Using the paired *t*-test, the index study yielded a *P* = 0.04, therefore the result is statistically significant as the *P* < 0.05.

At the conclusion of the program, students were given access to an online feedback form with both closed-ended and open-ended questions to provide feedback on the program from their perspective. The program’s efficacy, the content of the sessions, the program’s time management, including allotting time for the sessions, and the resource materials provided were the highlights of the feedback form (Table 1a). Because the program was well planned and well organized to maximize learning, a majority of students (58.97%) were satisfied and strongly agreed with its efficacy. Most of the students were satisfied with the sessions’ content. The amount of time allotted to each session was appropriate according to 46.15% of students; however, the program’s time management was viewed favorably by 50% of the audience. The freshmen students strongly supported (55.12%) the usefulness of the orientation program’s resource materials.

**DISCUSSION**

In Rohilkh and Medical College and Hospital, Bareilly, a PG orientation programs are held for new students. Similar programs

are carried out in other establishments as well, including Bharati Vidyapeeth Medical College and Hospital, Sangli, VSPM’s Dental College and Research Centre, Nagpur, etc.<sup>[9,10]</sup> To evaluate the students, a pre- and post-tests were administered at the beginning and end of the programs; these kinds of tests were taken on the 1<sup>st</sup> and last days of the PG orientation program at Adichunchanagiri Institute of Medical Sciences, Nagara.<sup>[11]</sup> In this study, feedback forms were handed out at the end of the orientation program and study participants received certificates and credit hours for attending the various sessions. In the same manner, feedback was taken and certificates were provided at the end of program in other institutions.<sup>[11]</sup> The PG orientation program’s highlights include introducing students to fundamental clinical knowledge and skills, hospital operations, emergency procedures, biomedical waste management rules 2016, notifiable disease documentation, and writing medical records (e.g., a summary of the discharge, informed written consent, birth certificate, death certificate, and medicolegal cases). Other medical schools, such as Sri Ramachandra Medical College and Research Institute, Chennai, have put on similar events.<sup>[12]</sup>

In this study, the mean score for the pre-test was 13.48 and the mean score for the post-test was 15.17 out of a total of 20 marks. As a result, new PGs showed signs of improvement at the end of the orientation program sessions. The paired t-test yielded a *P* = 0.04, which is statistically significant because it is <0.05. Contrary to the findings of this study, there has never been a study in the nearby area that examines the impact of the PG orientation program on the knowledge and skills of new students by providing a variety of training sessions.

The analysis of the feedback showed that a lot of students strongly agreed with it and found it very useful (58.97%). The majority of students found the sessions’ content very informative. 46.15% of students thought that there was enough time for each session. The freshmen students strongly supported (55.12%) the usefulness of the orientation program’s resource materials. Our findings are comparable to those of Kulkarni *et al.*, who found that 90.8% of undergraduates, 100% of interns, and 84.6% of PGs gave the professionalism session an excellent rating; the session was negative for 1.5% of undergraduates.<sup>[13]</sup>

**CONCLUSION**

By introducing freshmen students to the fundamentals of the institution and hospital, orientation programs for PG medical students play a crucial role in the development of excellent resident doctors. In the medical field, doctors frequently confront

moral questions and ethical dilemmas. They are provided with a framework of medical ethics that will assist them in making decisions that are both ethical and beneficial to the patient. Case presentation, seminar, and journal club are all essential components of PG training everywhere. Keeping up with the latest developments benefits both faculties and PGs. In addition, it encourages residents to improve their presentation skills, which would be useful when delivering papers or speeches at conferences or in the workplace. Medical records maintenance and the revision of basic and emergency procedures contribute to the smooth operation of the hospital by newly hired resident doctors and help in the prevention of medical negligence. The session on biomedical waste management aids in the prevention of health hazards and pollution. Feedback is useful for evaluating the program and welcoming suggestions and other inputs, while pre- and post-tests aid in the evaluation of the program's efficacy. All institutions and organizations in the country should encourage PG orientation programs.

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