

## Medical Education

### The district residency programme: Perception of postgraduate students at a tertiary care hospital in Jaipur

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#### ABSTRACT

**Background.** The district residency programme (DRP) has been made essential for postgraduates by the National Medical Commission. We studied the perception of postgraduate students about this programme.

**Methods.** A cross-sectional survey was done using a pre-validated questionnaire developed in Google forms. The link to the questionnaire was circulated through existing social media platforms and had questions about knowledge, attitude and practice. Scores were appropriately assigned to the questions. The data were coded numerically, and themes were identified from the data using inductive content analysis.

**Results.** All participants had a negative opinion of the DRP with a mean perception score of 26.6. Two-thirds of the participants believed that the DRP had no positive impact on learning and knowledge of their respective postgraduate subjects. About 55% of them believed that the duration of DRP training should be reduced. Important themes that were obtained from the data were that DRP training was not beneficial for the participants, and perceived barriers in DRP training included lack of accommodation, food, and communication with the parent department during the training.

**Conclusion.** Postgraduate students had a negative perception of the DRP. Upgradation of district hospitals with modern and optimal facilities for patient care, facilities to accommodate students, and provision for communication with the parent department during the DRP, could improve students perception.

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#### INTRODUCTION

Improvement in medical education is a crucial aspect of training health professionals.<sup>1</sup> The National Medical Commission (NMC) has made changes in medical education in India.<sup>1,2</sup> The district residency programme (DRP), announced by the NMC in the year 2020 is now a requisite part of the postgraduate curriculum in India.<sup>3</sup> During the DRP of 3 months the resident would be posted to the district hospital and trained under supervision of the DRP coordinator (DRPC).<sup>4</sup> The district resident in clinical

specialties is expected to undertake the clinical responsibilities assigned such as doing outpatient, inpatient, casualty and night duties while in pre- and para-clinical subjects the district residents would be trained to contribute to diagnostic/laboratory services, forensic services, managerial roles, and public health programmes.<sup>3,5</sup>

The current move of NMC and its utility is a matter of debate among the residents. The 3 months rotational DRP training of the total 3-year postgraduate tenure shortens their period of learning even the basic skills advocated by NMC in their postgraduate curriculum.<sup>6</sup> We aimed to understand the preferences and perception of postgraduate students about the new DRP.

#### METHODS

A cross-sectional study was done in October 2023 by the medical education unit of a government tertiary care teaching hospital in Jaipur after obtaining permission from the research screening committee of the institute.

Participation in the study was voluntary, and the students were enrolled after sharing the participant information sheet (PIS) in English and obtaining informed consent, both digitally.

We included 350 students who had participated in the DRP during their postgraduation.

The study questionnaires were designed based on extensive literature review of the Gazette of India and NMC order enlisting various objectives of DRP training programme. A mixed methods approach was used. The questionnaire was designed to capture perception of the postgraduates on various facets of DRP training. The first 10 questions of the instrument were closed ended to incorporate the quantitative elements into the research while the last 2 questions were open ended to obtain qualitative elements into the research. The questionnaire was assessed by 3 experts from pre-, para- and clinical departments for its validity and reliability and modified accordingly.

Data collection was done using Google forms. The link to the questionnaire was circulated through social media platforms (Department-wise WhatsApp and Telegram groups).

The response to the questionnaire was on a 5-point Likert scale from strongly agree (5) to strongly disagree (1). The possible score ranged from 10 to 50. The overall perception was classified as positive, neutral, or negative if the total score was 80%–100%, 60%–79%, or <60%, respectively.

#### Sample size

Considering the preference for DRP as 40% (based on a pilot study conducted previously), an absolute precision of 15%, and confidence interval of 95%, a sample size of about 270 was calculated. Assuming a response rate of 75% for this study, the final sample of 370 was obtained.

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### Pilot study

A pilot study was done to evaluate the clarity of the questionnaire and feasibility of the study procedures. The questionnaire was shared with 50 randomly selected participants from various clinical and para-clinical departments. The pilot study did not lead to any modification in the questionnaire.

### Statistical analysis

The collected data was entered manually in Microsoft Excel and was analyzed using Statistical Package for Social Sciences (SPSS) version 24. The data of close ended questions was expressed as percentages while the data of open ended questions was compiled into a separate spreadsheet for analysis. The data was coded to avoid bias in the resulting themes. The raw data was read by all the authors independently multiple times to identify the themes using inductive content analysis.

### RESULTS

Of 370 students who participated in the study, 20 provided incompletely filled questionnaires. Hence, these were not considered for analysis. Of the 350 students whose questionnaires were analysed, 259 (74%) were males and 91 (26%) were females. Preclinical, paraclinical and clinical subjects were considered and included Anatomy (4), Biochemistry (11), Physiology (6), Pharmacology (9), Pathology (17), Microbiology (10), Preventive and community medicine (12), Anaesthesiology (46), Dermatology (6), Forensic medicine (3), General medicine (34), General surgery (28), Immunohaematology (5), Obstetrics and Gynaecology (40), Ophthalmology (10), Otolaryngology (7), Orthopaedics (26), Paediatrics (28), Palliative medicine (2), Physical medicine and rehabilitation (6), Psychiatry (10), Radiodiagnosis (12), Radiotherapy (8), and Respiratory medicine (10). Nearly half (49%) of the participants felt that DRP training was not able to train them in monitoring or assessment of National health programmes outcome, or orient them to preventive, curative and other aspects of health services at the district level which were the laid objectives of the DRP in the Gazette. Two-third (66%) of the participants believed that DRP training had no impact on learning and knowledge of their respective postgraduate subject and it was not justified in the postgraduate curriculum as it affected their thesis work and regular postgraduate teaching schedule in their respective departments. More than half (55%) of them felt that the duration of DRP training should be reduced while the overall perception of the participants regarding DRP training was negative, with a mean score of 26.6.

### DISCUSSION

In 2019, a landmark change in the medical curriculum was the introduction of a new competency-based curriculum at both the undergraduate and postgraduate levels.<sup>7</sup> The present postgraduate curriculum is tightly structured—right from when to teach, what to teach, and how to teach. Every new regulation introduced in the curriculum is associated with some teething problems in the beginning; however, with periodic updating of regulations, these can be addressed. Since the DRP was launched recently, studies on the perception of postgraduates regarding this training are lacking.

Our study provides the perception of postgraduate students of a tertiary care centre. Most participants felt that the DRP training had no impact on the learning and knowledge of their subject. It was surprising that nearly three-fifths of the

respondents believed that the competencies prescribed by NMC for various specialties were not addressed during the DRP training. A firm mentor/faculty contact with students is essential during postgraduate training to facilitate the students in learning skills under supervision.<sup>8</sup> However, during the DRP training, the students lacked this guidance. Further, problems related to food and accommodation were issues for most students.

There may be numerous factors that affect postgraduate medical education, including the excessive workload on the faculty due to the poor doctor–patient ratio in India.<sup>9</sup> The new guidelines from NMC announcing DRP training for the postgraduates can add additional burden on the faculty, as 3 years of training is too little time to learn even the basic skills that NMC advocates.<sup>6</sup> Journal clubs had been an integral part of postgraduate teaching as they aroused the interest of students in research and this, in turn, fuelled evidence-based medicine and promoted better learning through discussions and debates.<sup>10</sup> The students believed that they missed this important aspect of learning during their DRP posting.

Our questionnaire had some open-ended questions for the participants to make suggestions regarding the DRP training. The comments were quite revealing: ‘DRP training should be reduced/equally divided among three postgraduate years or eliminated completely’ and ‘DRP training has no significance during postgraduation, it should be compulsory for interns or senior residents’.

Our study suggests that students face many problems during DRP training. These may be overcome by making some changes in the existing pattern of training, for example, shortening the duration of DRP, making telecommunication possible for the students, arranging proper accommodation especially for female students, and assigning important pre-defined objectives and goals during the DRP training. These could include doing open online courses on various topics or writing parts of their thesis.

The main limitation of our study was that it was conducted at a single tertiary care hospital of a city so the responses obtained cannot be generalized. However, the strength is the attempt to understand students perception of the DRP training.

### Conclusion

Our study suggests that postgraduate students do not have a positive perception of the new DRP training. The barriers experienced by most of the students included lack of accommodation, food, and loss of communication with the parent department during the DRP. Upgradation of district hospitals with modern and optimal facilities for patient care, facilities to accommodate students, and provision for telecommunication, could facilitate the DRP training in the future.

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## District Residency Programme: Experience of a pharmacology resident

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The District Residency programme (DRP) was announced by the National Medical Commission (NMC) as per the Postgraduate (PG) Medical Education (Amendment) Regulations in 2020.<sup>1</sup> According to this, all postgraduate students pursuing an MD course in all medical colleges should undergo a compulsory rotation of 3 months in District Hospitals/District Health System as a part of the course curriculum. However, due to the Covid-19 pandemic, DRP was implemented only in the year 2023 for students admitted from the 2021 batch onwards.<sup>2</sup> I was a second year MD Pharmacology resident when I completed the DRP. The intention of this communication is to discuss the benefits and make proactive suggestions to enable future residents to gain more benefits from this programme.

The structure of the DRP in our institution included 6 weeks of district hospital postings and 6 weeks of 'Namma Clinic' (Primary health care setups exclusive to Karnataka, similar to Delhi's Mohalla clinics) postings. Although instructions were given to the states by the NMC to provide accommodation for the students within 2–3 km of their centres,<sup>2</sup> the majority have not yet fulfilled this requirement, plunging the PGs into a struggle to meet this additional expense.

Like any new endeavour, there are merits and demerits for this programme as well. Through this write-up, our goal is to give a balanced view on them.

Among the benefits, the first and important one is the clinical exposure, which adds value as an MBBS graduate. For pharmacology residents, who deal with academics and research for most of their course, DRP helps to refresh clinical skills and knowledge as a primary healthcare physician.

Second, the district health systems offer a variety of clinical scenarios, enabling a resident to understand the real-world. For example, in diabetes, the numbers seeking healthcare seems to be higher than the current data on prevalence. Many do not seek care, unless faced with a complication. This knowledge is important and can be translated into relevant research questions on therapeutics.

Finally, treating a wide range of patients belonging to different special populations (paediatric, geriatric and pregnant women) helps in improving prescribing skills, such as drug dosage calculation; considering co-morbid conditions and appropriateness of prescribed drugs; identifying adverse reactions and drug interactions as well as developing a personal (P drugs) list.

There are areas for improvement in this programme as well. First, a clear set of learning objectives across all colleges were not available. Second, an external posting of 3 months in an already insufficient 3-years course is challenging, especially when there is a very broad PG curriculum to complete. This includes the PG thesis (where data collection is an essential and time-consuming activity), academic presentations, clinical postings, research activities and others. Also, in a district hospital, there is no department by specialty; and the only establishment that can be linked to the speciality is the pharmacy. The role of a 'Pharmacologist', who is a medical doctor is different from that of a 'Pharmacist'. Instead of posting in pharmacy, a pharmacologist in a hospital can be assigned activities such as prescription audit, evaluating adverse drug reactions, reviewing essential drug list, training staff on pharmacovigilance and so on.

In summary, there is a need for NMC to draft a uniform set of learning objectives which precisely describe the role of an MD pharmacology resident in a district hospital. They should also consider shortening the duration of the posting, as 3 months of external posting, weighs down heavily on an already overloaded PG curriculum.

Every year more than 800 graduates take up MD Pharmacology in India.<sup>3</sup> The DRP has been implemented and is in the initial years. This is an opportune time to note the issues mentioned above and consider measures to suitably modify the DRP.

*Conflicts of interest.* None declared

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