

Implementation of District Residency Programme (drp) on skill development, challenges faced, and feedback given by resident doctors (pgs) in a tertiary teaching hospital in southern odisha: a cross-sectional study.

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ABSTRACT

Background:

The District Residency Programme (DRP), mandated by the National Medical Commission under Competency-Based Medical Education, aims to provide postgraduate medical residents with district-level healthcare exposure while strengthening healthcare delivery at peripheral institutions. However, evidence regarding residents' educational experiences and challenges remains limited, particularly in Odisha.

Objectives:

To assess perceived cognitive and psychomotor competency acquisition among District Residents and evaluate challenges, satisfaction, and feedback regarding DRP implementation.

Materials and Methods:

This questionnaire-based cross-sectional study included postgraduate residents from the 2021–2023 batches of MKCG Medical College and Hospital, Berhampur, who had completed DRP postings at designated healthcare institutions across Odisha. Data were collected using a validated, pilot-tested, 27-item questionnaire assessing participant characteristics, competency acquisition, challenges, and feedback. Categorical data were summarized as frequencies and percentages, and associations were assessed using appropriate categorical tests, with $p < 0.05$ considered statistically significant.

Results:

Among 100 participants, 56% were male, 44% were aged 25–30 years, and 47% were posted at District Headquarters Hospitals. Although 67% reported clinical involvement throughout the three-month posting, specialty-specific skill acquisition was limited. Academic continuity was affected by reduced opportunities for specialty study, research activities, and interaction with postgraduate guides. Seventy percent incurred expenses for basic amenities themselves. Postgraduate discipline was significantly associated with specialty-specific competency acquisition, safety, and overall satisfaction. Place of posting was significantly associated with availability of basic amenities ($p = 0.042$) and responsibility for related expenditure ($p = 0.002$). Overall satisfaction was predominantly neutral (56%).

Conclusion:

The DRP provides valuable clinical exposure but requires improvements in specialty-specific training, academic continuity, infrastructure, safety, supervision, and grievance redressal.

Recommendation:

Structured specialty-specific supervision, regular academic linkage with parent institutions, adequate basic amenities, resident-safety measures, functional grievance-redressal mechanisms, and periodic resident feedback should be incorporated to strengthen DRP implementation.

Keywords: District Residency Programme; Postgraduate Medical Education; Competency-Based Medical Education; District Residents; Clinical Competency; Medical Residents; Resident Satisfaction.

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INTRODUCTION

The National Medical Commission (NMC) has mandated a compulsory three-month District Residency Programme (DRP) for postgraduate medical residents from the 2021 admission batch onwards. The programme is undertaken during the second year of postgraduate residency and is a mandatory requirement for eligibility to appear in the final MD/MS examination under the Competency-Based Medical Education (CBME) framework [1-3]. During this period, postgraduate residents posted at designated district health facilities are referred to as "District Residents."

The primary objective of the DRP is to expose postgraduate medical residents to healthcare delivery at the district level and provide them with practical experience of functioning within different levels of the public healthcare system. A secondary objective is to strengthen the availability of trained medical manpower at district hospitals, thereby contributing to the provision of accessible and quality healthcare services to the community.

The programme provides an opportunity for postgraduate residents to integrate learning with service delivery in a healthcare setting that is closer to the community. Such exposure is expected to enhance their understanding of the local burden and patterns of disease, functioning of national health programmes, referral pathways, and organization of district-level healthcare services. Furthermore, working in settings with relatively limited resources may facilitate the development of clinical decision-making, leadership, teamwork, communication, empathy, resource management, and problem-solving abilities. It may also encourage residents to develop context-appropriate and innovative approaches to patient care while working within the constraints of available healthcare resources.

In accordance with the NMC mandate, the District Residency Programme was implemented for postgraduate residents of MKCG Medical College and Hospital, Berhampur, beginning with the 2021 postgraduate admission batch, with residents being posted to designated district hospitals and healthcare institutions across the state. As the programme has now been operational for several batches, systematic evaluation of residents' experiences and feedback is important. Assessment of their perceptions can help identify the strengths of the programme as well as operational, academic, administrative, and infrastructural limitations encountered during district postings. Such evidence may facilitate appropriate modifications and strengthen the effectiveness of the DRP. It may also provide useful information to institutional administrators, programme coordinators, policymakers, and other stakeholders for planning and improving subsequent cycles of district residency.

Recent reports and SWOT-based evaluations of the DRP have highlighted several concerns, including inadequate basic amenities, limited opportunities for specialty-specific

training, and gaps in communication and coordination between district hospitals and parent teaching institutions [4-5]. However, despite the nationwide implementation of the programme, published evidence evaluating the experiences of District Residents remains limited. A thorough review of the available literature indicates that relatively few studies have systematically evaluated the DRP in India, while evidence from Odisha is particularly scarce. Consequently, the challenges encountered by postgraduate residents, the competencies acquired during district postings, and their overall perceptions of the programme have not been comprehensively characterized in this setting.

Against this background, the present study was undertaken to evaluate the experiences of postgraduate medical residents participating in the District Residency Programme. Specifically, the study aims to assess residents' perceived acquisition of cognitive and psychomotor competencies during their district postings, identify the challenges encountered while delivering healthcare services at district hospitals, and analyse their perceptions and opinions regarding the organization and implementation of the District Residency Programme. The findings are expected to provide context-specific evidence that may assist concerned authorities and stakeholders in identifying areas requiring improvement and in strengthening the academic, clinical, and operational effectiveness of the DRP.

MATERIALS AND METHODS

Study Design and Setting

The present study was designed as an institution-based, questionnaire-based, cross-sectional study conducted among postgraduate medical residents of MKCG Medical College and Hospital (MKCG MCH), Berhampur, Odisha, India. The study was conducted over a period of four months, from September 2025 to December 2025.

The study was undertaken to assess the experiences of postgraduate medical residents who had completed the mandatory three-month District Residency Programme (DRP) at designated district-level healthcare institutions across Odisha. Particular emphasis was placed on the perceived acquisition of cognitive and psychomotor competencies, challenges encountered during district residency, grievance-redressal mechanisms, and residents' opinions and feedback regarding the programme.

Study Population

The source population consisted of postgraduate medical residents of MKCG Medical College and Hospital, Berhampur, belonging to the 2021, 2022, and 2023 postgraduate admission batches and representing various clinical, diagnostic, therapeutic, and allied disciplines.

A total of 270 postgraduate residents who had completed their mandatory District Residency Programme at various designated hospitals across Odisha constituted the eligible study population.

Eligibility Criteria

Postgraduate residents belonging to the 2021–2023 admission batches of MKCG Medical College and Hospital who had completed their mandatory District Residency Programme and were available during the study period were considered eligible for participation.

Residents who could not be contacted during the period of data collection, those who declined or refused to participate, and residents who had participated in the pilot testing of the questionnaire were excluded from the final study.

Sampling and Recruitment of Participants

All eligible postgraduate residents from the three batches who had completed their District Residency Programme were approached for participation. Thus, an attempt was made to achieve complete enumeration of the eligible study population rather than selecting a sample from it.

The questionnaire was administered electronically using Google Forms. The link to the questionnaire was circulated to eligible residents through appropriate electronic and social-media communication platforms. Participation was entirely voluntary, and submission of responses was undertaken only after obtaining informed consent.

Development and Validation of the Study Questionnaire

Data were collected using a pre-designed, semi-structured questionnaire developed specifically for the objectives of the present study. The questionnaire was designed to obtain information regarding residents' demographic and academic characteristics, experiences during district residency, perceived acquisition of cognitive and psychomotor competencies, challenges encountered during the programme, grievance-redressal mechanisms, and opinions and feedback regarding future implementation of the DRP.

The initial questionnaire was subjected to content validation by a group of medical faculty members representing different disciplines. The experts evaluated the items with respect to their relevance, clarity, comprehensibility, and appropriateness for addressing the objectives of the study. Necessary modifications were incorporated based on the feedback received during the validation process.

The final questionnaire consisted of **27 items**, distributed across four principal domains:

Part I – Baseline and demographic characteristics:

This section collected relevant demographic and academic information regarding the participating postgraduate residents, including their postgraduate discipline/category

and characteristics related to their District Residency Programme posting.

Part II – Acquisition of cognitive and psychomotor competencies:

This section assessed residents' perceptions regarding the knowledge, clinical exposure, practical skills, and psychomotor competencies acquired during their District Residency Programme. The competencies assessed were relevant to the nature of the postgraduate disciplines, including allied, diagnostic, and therapeutic branches.

Part III – Challenges and grievance redressal:

This section assessed the difficulties experienced by residents during their district postings, including relevant academic, clinical, administrative, infrastructural, logistical, and communication-related challenges. It also obtained information regarding the availability and effectiveness of mechanisms for addressing grievances during the programme.

Part IV – Opinions and feedback:

This section obtained residents' overall perceptions of the District Residency Programme and their feedback and suggestions regarding potential modifications and improvements for future implementation.

The questionnaire predominantly consisted of closed-ended items to facilitate uniformity of responses and quantitative analysis.

Pilot Testing

Prior to initiation of the main study, the questionnaire was pilot-tested among 20 postgraduate residents representing different disciplines. The pilot testing was undertaken to assess the comprehensibility, clarity, feasibility, sequence, and practical applicability of the questionnaire and to identify any ambiguity in individual items.

Appropriate modifications were made, wherever necessary, on the basis of observations obtained during pilot testing. The 20 postgraduate residents who participated in the pilot study were subsequently excluded from the final study population to avoid duplication and potential response bias.

Assessment and Coding of Competency Acquisition

The acquisition of cognitive and psychomotor competencies was assessed using responses to the relevant questionnaire items. For dichotomous competency items, responses were coded numerically as: **No = 0, Yes = 1**.

Competencies were evaluated with consideration of the nature of the postgraduate discipline, including allied, diagnostic, and therapeutic branches, as applicable. The binary coding facilitated quantitative assessment and comparison of competency acquisition across different categories of postgraduate disciplines and DRP posting characteristics.

Measures to Minimize Bias

Potential sources of selection, response, recall, and measurement bias were considered during study design and data collection. An attempt was made to approach all eligible postgraduate residents who had completed the DRP rather than selecting participants through convenience sampling. Participation was voluntary, and responses were collected anonymously to reduce social-desirability and reporting bias. A standardized questionnaire was administered electronically to all participants. The questionnaire underwent expert content validation and pilot testing before final administration to improve clarity and reduce measurement error. Residents who participated in pilot testing were excluded from the final study to prevent duplicate participation. The electronic dataset was subsequently checked for completeness, consistency, and duplication before analysis. Nevertheless, because participation was voluntary and DRP experiences were self-reported retrospectively, non-response and recall bias could not be completely eliminated.

Data Collection Procedure

After obtaining ethical approval, eligible postgraduate residents were approached electronically and provided with information regarding the objectives and procedures of the study. The Google Form contained the participant information and informed-consent component before presentation of the study questionnaire.

Participants were informed that participation was voluntary and that they were free to decline participation or withdraw before submitting the questionnaire without any academic or administrative consequences. Only participants who provided informed consent proceeded to complete the questionnaire.

Completed responses were collected electronically and subsequently exported to a Microsoft Excel spreadsheet for data cleaning, coding, and analysis. The dataset was checked for completeness, consistency, and duplication before statistical analysis.

Confidentiality and Data Protection

Confidentiality and anonymity of participants were maintained throughout the study. The questionnaire was designed to avoid unnecessary personally identifiable

information, and the responses were used exclusively for the stated research objectives. Data were handled in a manner that prevented identification of individual residents in the analysis, interpretation, and reporting of the findings.

Ethical Considerations

The study protocol was reviewed and approved by the Institutional Ethics Committee (IEC) of MKCG Medical College and Hospital, Berhampur, Odisha, with **IEC Approval No. 277, dated 09 April 2025**.

Before participation, all eligible residents were provided with information regarding the purpose and procedure of the study, voluntary nature of participation, confidentiality and anonymity of their responses, and their right to decline participation or withdraw without any adverse consequences. Electronic informed consent was obtained from each participant before accessing and completing the Google Form.

STATISTICAL ANALYSIS

The collected data were exported from Google Forms to Microsoft Excel for data entry, coding, cleaning, and preparation for statistical analysis. Statistical analyses were subsequently performed using **SPSS** statistical software. Categorical variables, including demographic and academic characteristics, DRP posting characteristics, competency acquisition, challenges encountered, grievance-redressal experiences, and feedback responses, were summarized using **frequencies (n) and percentages (%)**. For dichotomous items assessing acquisition of cognitive or psychomotor competencies, responses were coded as **0 for “No” and 1 for “Yes.”** The distribution of these responses was examined overall and, where appropriate, according to categories of postgraduate disciplines and DRP posting characteristics. Associations between categorical variables—such as postgraduate discipline/category or DRP posting area and the acquisition of specific competencies, challenges encountered, grievance-redressal experiences, or feedback responses—were assessed using the **Pearson Chi-square test**. **Fisher’s exact test** was used where the assumptions of the Chi-square test were not satisfied, particularly when expected cell frequencies were small. All statistical tests were two-tailed, and a **p-value <0.05 was considered statistically significant**.

Table 1 Sociodemographic and DRP Posting Characteristics of Study Participants

Variable	Category	Frequency, n	Percentage, %
Age Group	25–30	44	44
	31–35	38	38
	36–40	11	11
	>41	7	7
Gender	Female	44	44
	Male	56	56
Marital Status	Married	58	58
	Unmarried	42	42
Quarter of DRP Posting	First	36	36
	Second	23	23
	Third	25	25
	Fourth	16	16
PG Discipline	Medical	80	80
	Surgical	20	20
Discipline	Allied	50	50
	Diagnostic	19	19
	Therapeutic/Preventive	31	31
Place of Posting in DRP	CHC and below	5	5
	DHH	47	47
	Medical College	37	37
	SDH	11	11
Place of Posting as per State and District of Posting	Other district, same state, non-teaching hospital	36	36
	Other district, same state, teaching hospital	24	24
	Same district, same state, non-teaching hospital	26	26
	Same district, same state, teaching hospital	14	14

Note. N = 100. Percentages are calculated using the total study sample as the denominator. DRP = District Residency Programme; PG = postgraduate; CHC = Community Health Centre; DHH = District Headquarters Hospital; SDH = Sub-Divisional Hospital.

The table no-1 depicted that the largest proportion belonged to the **25–30 years age group (44%)**, followed by 31–35 years (38%), 36–40 years (11%), and >41 years (7%). **Male participants constituted 56%**, while females accounted for 44%. Regarding marital status, **58% were married**, and 42% were unmarried. With respect to the **quarter of DRP posting**, 36% were posted during the first quarter, followed by the third (25%), second (23%), and fourth quarters (16%). Most participants belonged to **medical PG disciplines (80%)**, while 20% were from surgical disciplines. Based on discipline classification, **50% belonged to allied disciplines**, 31% to

therapeutic/preventive disciplines, and 19% to diagnostic disciplines. Regarding the **place of DRP posting**, nearly half of the participants were posted at **District Headquarters Hospitals (DHHs) (47%)**, followed by medical colleges (37%), Sub-Divisional Hospitals (SDHs) (11%), and CHCs or lower-level facilities (5%). In terms of geographical and institutional placement, the largest proportion (**36%**) were posted in **non-teaching hospitals in another district within the same state**, followed by non-teaching hospitals in the same district (26%), teaching hospitals in another district (24%), and teaching hospitals in the same district (14%).

Table 2 Association Between Psychomotor Skill Acquired and Postgraduate Discipline

Question	Variable / Response	Allied, n (%)	Diagnostic, n (%)	Therapeutic/Preventive, n (%)	Pearson χ^2	p
1. Involvement in Patient Care	1–3 months	6 (12.0)	2 (10.5)	0 (0.0)	4.817	0.567
	3 months	32 (64.0)	13 (68.4)	22 (71.0)		
	< 1 month	6 (12.0)	2 (10.5)	3 (9.7)		
	Never	6 (12.0)	2 (10.5)	6 (19.4)		
2a. Subject-specific skill acquired enhanced: Teaching activities in allied branch	No	45 (91.8)	10 (52.6)	31 (100.0)	25.271	< .001
	Yes	4 (8.2)	9 (47.4)	0 (0.0)		
2b. Subject-specific skill acquired enhanced: Laboratory services in diagnostic branch	Maybe	1 (2.0)	0 (0.0)	0 (0.0)	21.563	< .001
	No	35 (71.4)	17 (89.5)	10 (32.3)		
	Yes	13 (26.5)	2 (10.5)	21 (67.7)		
2c. Subject-specific skill acquired enhanced: Speciality-level posting in preventive/therapeutic branch	No	23 (46.9)	16 (84.2)	24 (77.4)	11.924	0.003
	Yes	26 (53.1)	3 (15.8)	7 (22.6)		
3. Subject-specific guide availability in posted hospital compared with teaching hospital	Bad	11 (22.0)	5 (26.3)	12 (38.7)	13.392	0.099
	Best	14 (28.0)	2 (10.5)	1 (3.2)		
	Fair good	15 (30.0)	9 (47.5)	15 (48.4)		
	Less than good	9 (18.0)	3 (15.8)	3 (9.7)		
	Same	1 (2.0)	0 (0.0)	0 (0.0)		
4. Cross-disciplinary/inter-departmental colleague availability of residents in district hospital compared with teaching hospital	Higher	3 (6.0)	0 (0.0)	0 (0.0)	8.421	0.209
	Lower	17 (34.0)	9 (47.4)	15 (48.4)		
	Same	13 (26.0)	8 (42.1)	8 (25.8)		
	Can't say	17 (34.0)	2 (10.5)	8 (25.8)		
5. Involvement in National Health Programmes	All	7 (14.0)	1 (5.3)	6 (19.4)	4.981	0.760
	Never	14 (28.0)	8 (42.1)	8 (25.8)		
	Not necessary	4 (8.0)	2 (10.5)	3 (9.7)		
	Not necessary to attend	1 (2.0)	1 (5.3)	0 (0.0)		
	To some extent	24 (48.0)	7 (36.8)	14 (45.2)		

Note. Values are presented as n (%). Pearson's chi-square test was used to assess associations between response categories and postgraduate discipline. p values < .05 were considered statistically significant.

DRP = District Residency Programme.

The table no- 2 demonstrated the association between postgraduate discipline and psychomotor skills acquired during the District Residency Programme (DRP). Most residents across all disciplines were involved in patient care for the entire three-month period, with no significant difference among allied, diagnostic, and therapeutic/preventive disciplines (p=0.567). However, **subject-specific skill acquisition differed significantly across disciplines**. Teaching-related skill acquisition

showed a significant association with discipline ($\chi^2=25.271$, $p<0.001$), as did laboratory-related skill acquisition ($\chi^2=21.563$, $p<0.001$) and specialty-level preventive/therapeutic posting ($\chi^2=11.924$, $p=0.003$). In contrast, the availability of subject-specific guides (p=0.099), cross-disciplinary/inter-departmental colleagues (p=0.209), and involvement in National Health Programmes (p=0.760) did not differ significantly across disciplines.

Table 3 Association of Discipline with Knowledge Acquired During DRP Posting

Variable	Response	Allied, n = 50	Diagn ostic, n = 19	Therap eutic/Pr eventive , n = 31	Pears on χ^2	p
Time available to study subject/speciality	Less than teaching hospital	11 (22.0)	11 (57.9)	13 (41.9)	22.834	< .001
	More than teaching hospital	9 (18.0)	4 (21.1)	5 (16.1)		
	Never get time	4 (8.0)	3 (15.8)	8 (25.8)		
	Same	26 (52.0)	1 (5.3)	5 (16.1)		
Time available to write parts of thesis	Less than teaching hospital	16 (32.0)	6 (31.6)	7 (22.6)	3.611	0.729
	More than teaching hospital	10 (20.0)	4 (21.1)	5 (16.1)		
	Never	8 (16.0)	3 (15.8)	10 (32.3)		
	Same	16 (32.0)	6 (31.6)	9 (29.0)		
Involvement in research paper writing/journal reading/online webinars	Less than teaching hospital	13 (26.0)	10 (52.6)	6 (19.4)	13.716	0.033
	More than teaching hospital	7 (14.0)	2 (10.5)	0 (0.0)		
	Never	10 (20.0)	2 (10.5)	11 (35.5)		
	Same	20 (40.0)	5 (26.3)	14 (45.2)		

Variable	Response	Allied, n = 50	Diagn ostic, n = 19	Therap eutic/Pr eventive , n = 31	Pears on χ^2	p
Continuous contact with guides/teachers for clearing doubts	Always	7 (14.0)	1 (5.3)	1 (3.2)	9.028	0.340
	Emergency situation	5 (10.0)	3 (15.8)	4 (12.9)		
	Left to deal on own	0 (0.0)	0 (0.0)	1 (3.2)		
	Never	10 (20.0)	8 (42.1)	9 (29.0)		
	Sometimes	28 (56.0)	7 (36.8)	16 (51.6)		
Involvement in departmental activities/seminar/journal and log-book maintenance	All activities involved	15 (30.0)	9 (47.4)	4 (12.9)	14.597	0.147
	Never	17 (34.0)	7 (36.8)	17 (54.8)		
	Posted 600 km away/cannot attend	0 (0.0)	0 (0.0)	1 (3.2)		
	Same	3 (6.0)	0 (0.0)	0 (0.0)		
	Some skipped due to workload	11 (22.0)	2 (10.5)	8 (25.8)		
	Some skipped intentionally	4 (8.0)	1 (5.3)	1 (3.2)		

Note. Values are presented as n (%). Pearson's chi-square test was used to assess the association between postgraduate discipline and responses regarding knowledge-related opportunities during DRP posting. p-values < .05 were considered statistically significant. DRP = District Residency Programme.

The table no- 3 showed the association between postgraduate discipline and **knowledge-related and academic opportunities during DRP posting**. A statistically significant difference was observed in the **time available to study the resident's own subject/specialty** across disciplines ($\chi^2=22.834$, $p<0.001$). While 52.0% of allied residents reported having the same study time as in the teaching hospital, 57.9% of diagnostic residents reported having less time, and 25.8% of therapeutic/preventive residents reported getting no time for specialty study.

Similarly, **involvement in research paper writing, journal reading, and online webinars** differed significantly among

disciplines ($\chi^2=13.716$, $p=0.033$). More than half (52.6%) of diagnostic residents reported less involvement than in their teaching hospital, whereas 35.5% of therapeutic/preventive residents reported no involvement.

In contrast, no significant discipline-wise differences were observed for **time available for thesis writing** ($p=0.729$), **continuous contact with guides/teachers for clearing doubts** ($p=0.340$), or **participation in departmental academic activities, seminars, journals, and log-book maintenance** ($p=0.147$).

Table 4 Association of Discipline with DRP Experience and Overall Satisfaction

Variable	Response	Allied, (n = 50)	Diagnostic, (n = 19)	Therapeutic/Preventive, (n = 31)	Pearson χ^2	p
Availability of basic amenities	Bad	7 (14.0)	5 (26.3)	10 (32.3)	8.839	0.356
	Best	6 (12.0)	2 (10.5)	1 (3.2)		
	Good	13 (26.0)	4 (21.1)	3 (9.7)		
	Okay	24 (48.0)	8 (42.1)	17 (54.8)		
Who bore the expenditure	Posted college/hospital	17 (34.0)	4 (21.1)	5 (16.1)	4.715	0.328
	Self	31 (62.0)	15 (78.9)	24 (77.4)		
	Teaching hospital	2 (4.0)	0 (0.0)	2 (6.5)		
Feeling of safety	No threat at all	31 (62.0)	9 (47.4)	3 (9.7)	42.910	< .001
	Hostel/security threat	1 (2.0)	3 (15.8)	2 (6.5)		
	Threat from patients/caregivers	4 (8.0)	1 (5.3)	18 (58.1)		
	Threat from political party/hospital administration	6 (12.0)	3 (15.8)	6 (19.4)		
	Threat from seniors/other healthcare staff	8 (16.0)	3 (15.8)	2 (6.5)		
Access to grievance redressal	After some time, delayed	3 (6.0)	0 (0.0)	1 (3.2)	9.850	0.454
	Always in stipulated time	7 (14.0)	1 (5.3)	0 (0.0)		
	Always, but delayed	6 (12.0)	1 (5.3)	5 (16.1)		
	Not encountered during posting	16 (32.0)	8 (42.1)	12 (38.7)		
	Committee not formed	10 (20.0)	7 (36.8)	9 (29.0)		
	Only serious matters; always delayed	8 (16.0)	2 (10.5)	4 (12.9)		
Feeling of isolation from parent institute	Always	14 (28.0)	5 (26.3)	13 (41.9)	3.828	0.642
	Never	11 (22.0)	5 (26.3)	6 (19.4)		
	Sometimes	24 (48.0)	8 (42.1)	10 (32.3)		
	Can't say	1 (2.0)	1 (5.3)	2 (6.5)		

Variable	Response	Allied, (n = 50)	Diagnostic, (n = 19)	Therapeutic/Preventive, (n = 31)	Pearson χ^2	p
Perception of working culture/learning domain in successive DRP batches	Can't say	7 (14.0)	5 (26.3)	10 (32.3)	8.550	0.200
	Increase negatively	10 (20.0)	5 (26.3)	10 (32.3)		
	Increase positively	12 (24.0)	2 (10.5)	3 (9.7)		
	Same	21 (42.0)	7 (36.8)	8 (25.8)		
Compliance/enthusiasm toward DRP	Decrease	13 (26.0)	8 (42.1)	6 (19.4)	7.796	0.253
	Increased	7 (14.0)	3 (15.8)	2 (6.5)		
	Remain enthusiastic till last	15 (30.0)	3 (15.8)	7 (22.6)		
	Somewhat managed	15 (30.0)	5 (26.3)	16 (51.6)		
Opinion regarding 3-month duration of DRP posting	Should be lessened	11 (22.0)	6 (31.6)	14 (45.2)	9.508	0.301
	Remained same	24 (48.0)	5 (26.3)	10 (32.3)		
	Can't say	10 (20.0)	6 (31.6)	6 (19.4)		
	Should be increased	5 (10.0)	2 (10.5)	1 (3.2)		
Feedback after return from DRP training	Nearby centre to teaching hospital	3 (6.0)	1 (5.3)	0 (0.0)	16.795	0.267
	Extra fees/TA-DA	11 (22.0)	5 (26.3)	8 (25.8)		
	Industry exposure	1 (2.0)	0 (0.0)	2 (6.5)		
	Flexible choice: SDH/CHC/DHH/teaching hospital	16 (32.0)	5 (26.3)	6 (19.4)		
	Safety issues addressed promptly	2 (4.0)	1 (5.3)	1 (3.2)		
	Same branch preferred	1 (2.0)	2 (10.5)	0 (0.0)		
	Nearby centre in same city	16 (32.0)	5 (26.3)	14 (45.2)		
Overall satisfaction	Dissatisfied	0 (0.0)	0 (0.0)	7 (22.6)	20.940	0.002
	Highly dissatisfied	6 (12.0)	5 (26.3)	6 (19.4)		
	Highly satisfied	10 (20.0)	5 (26.3)	6 (19.4)		
	Neutral	34 (68.0)	9 (47.4)	12 (38.7)		

Note. Values are presented as n (%). Pearson's chi-square test was used to assess associations between postgraduate discipline and DRP experience/satisfaction responses. p-values < .05 were considered statistically significant. DRP = District Residency Programme; TA-DA = travelling allowance/dearness

allowance; SDH = Sub-Divisional Hospital; CHC = Community Health Centre; DHH = District Headquarters Hospital.

Table No. 4 represents the association between postgraduate discipline and DRP experience, challenges, feedback, and overall satisfaction. Most aspects of the DRP experience, including availability of basic amenities ($p=0.356$), responsibility for expenditure ($p=0.328$), access to grievance redressal ($p=0.454$), feeling of isolation from the parent institution ($p=0.642$), perceived changes in working/learning culture ($p=0.200$), compliance or enthusiasm toward DRP ($p=0.253$), opinion regarding the three-month duration ($p=0.301$), and feedback after completion of DRP ($p=0.267$) did not differ significantly across postgraduate disciplines. Notably, the majority of

residents bore the expenditure themselves, ranging from 62.0% among allied to 78.9% among diagnostic and 77.4% among therapeutic/preventive residents.

However, feelings of safety differed significantly according to postgraduate discipline ($\chi^2=42.910$, $p<0.001$). While 62.0% of allied and 47.4% of diagnostic residents reported no threat, only 9.7% of therapeutic/preventive residents reported feeling completely safe. In contrast, 58.1% of therapeutic/preventive residents reported threats from patients or caregivers, indicating greater safety concerns in this group.

Table 5 Association of Quarter of DRP Posting with Psychomotor Skill Acquired

Question	Variable Response	First quarter, n (%)	Second quarter, n (%)	Third quarter, n (%)	Fourth quarter, n (%)	p
1. Involvement in Patient Care	1–3 months	4 (11.1)	3 (13.0)	1 (4.0)	0 (0.0)	0.009 *
	3 months	20 (55.6)	18 (78.3)	19 (76.0)	10 (62.5)	
	< 1 month	9 (25.0)	1 (4.3)	1 (4.0)	0 (0.0)	
	Never	3 (8.3)	1 (4.3)	4 (16.0)	6 (37.5)	
2a. Subject-specific skill acquired/enhanced: Teaching activities in allied branch	No	31 (86.1)	20 (87.0)	22 (88.0)	13 (86.7)	1.000
	Yes	5 (13.9)	3 (13.0)	3 (12.0)	2 (13.3)	
2b. Subject-specific skill acquired/enhanced: Laboratory services in diagnostic branch	Maybe	0 (0.0)	0 (0.0)	1 (4.0)	0 (0.0)	0.228
	No	21 (58.3)	14 (60.9)	14 (56.0)	13 (86.7)	
	Yes	15 (41.7)	9 (39.1)	10 (40.0)	2 (13.3)	
2c. Subject-specific skill acquired/enhanced: Specialty-level posting in preventive/therapeutic branch	No	25 (69.4)	10 (43.5)	17 (68.0)	11 (73.3)	0.146
	Yes	11 (30.6)	13 (56.5)	8 (32.0)	4 (26.7)	
3. Subject-specific guide availability in posted hospital compared with teaching hospital	Fair good	12 (33.4)	6 (26.0)	11 (44.0)	10 (62.5)	0.072
	Bad	6 (16.7)	11 (47.8)	7 (28.0)	4 (25.0)	
	Best	11 (30.6)	2 (8.7)	3 (12.0)	1 (6.2)	

Question	Variable Response	First quarter, n (%)	Second quarter, n (%)	Third quarter, n (%)	Fourth quarter, n (%)	p
	Less than good	7 (19.4)	4 (17.4)	3 (12.0)	1 (6.2)	
	Same	0 (0.0)	0 (0.0)	1 (4.0)	0 (0.0)	
4. Cross-disciplinary/inter-departmental colleague availability of residents in district hospital compared with teaching hospital	Higher	1 (2.8)	1 (4.3)	1 (4.0)	0 (0.0)	0.021 *
	Lower	13 (36.1)	13 (56.5)	5 (20.0)	10 (62.5)	
	Same	13 (36.1)	7 (30.4)	7 (28.0)	2 (12.5)	
	Can't say	9 (25.0)	2 (8.7)	12 (48.0)	4 (25.0)	
5. Involvement in National Health Programmes	All	7 (19.4)	4 (17.4)	3 (12.0)	0 (0.0)	0.392
	Never	10 (27.8)	5 (21.7)	9 (36.0)	6 (37.5)	
	Not necessary	4 (11.1)	3 (13.0)	0 (0.0)	2 (12.5)	
	Not necessary to attend	0 (0.0)	1 (4.3)	0 (0.0)	1 (6.2)	
	To some extent	15 (41.7)	10 (43.5)	13 (52.0)	7 (43.8)	

Note. Values are presented as n (%). DRP = District Residency Programme. *p < .05. p values are reproduced from the supplied analysis; the statistical test was not specified in the source table.

The table no- 5 displayed that the association between the quarter of DRP posting and psychomotor skill-related experiences of postgraduate residents. Involvement in patient care differed significantly across the four quarters (p=0.009). Complete three-month patient-care involvement was highest among residents posted in the second (78.3%) and third (76.0%) quarters, compared with the first (55.6%) and fourth (62.5%) quarters. Notably, 37.5% of residents posted in the fourth quarter reported no patient-care involvement. A statistically significant association was also observed between the quarter of posting and cross-

disciplinary/inter-departmental colleague availability (p=0.021). Lower colleague availability was reported most frequently during the fourth (62.5%) and second (56.5%) quarters, indicating variation in interdisciplinary support across posting periods. In contrast, the quarter of DRP posting was not significantly associated with subject-specific teaching skill acquisition (p=1.000), laboratory-related skill acquisition (p=0.228), specialty-level preventive/therapeutic exposure (p=0.146), availability of a subject-specific guide (p=0.072), or involvement in National Health Programmes (p=0.392).

Table 6 Association Between Quarter of DRP Posting and Knowledge Acquired During DRP Posting

Question / Variable	Response	First,n (%)	Second, n (%)	Third,n (%)	Fourth,n (%)	p
1. Involvement in departmental activities/seminar/journal through online mode and maintenance of logbook	All activities involved	12 (33.3)	5 (21.7)	10 (40.0)	1 (6.2)	0.324

Question / Variable	Response	First,n (%)	Second,n (%)	Third,n (%)	Fourth,n (%)	p
	Never	13 (36.1)	9 (39.1)	8 (32.0)	11 (68.8)	
	Posted 600 km away, cannot attend	0 (0.0)	0 (0.0)	1 (4.0)	0 (0.0)	
	Same	1 (2.8)	2 (8.7)	0 (0.0)	0 (0.0)	
	Some skipped due to workload	7 (19.4)	5 (21.7)	5 (20.0)	4 (25.0)	
	Some skipped intentionally	3 (8.3)	2 (8.7)	1 (4.0)	0 (0.0)	
2. Continuous contact with guides/teachers for clearing doubts	Always	4 (11.1)	2 (8.7)	3 (12.0)	0 (0.0)	0.191
	Emergency situation	2 (5.6)	6 (26.1)	4 (16.0)	0 (0.0)	
	It never worked out that way; left to deal on my own	0 (0.0)	0 (0.0)	1 (4.0)	0 (0.0)	
	Never	8 (22.2)	6 (26.1)	6 (24.0)	7 (43.8)	
	Sometimes	22 (61.1)	9 (39.1)	11 (44.0)	9 (56.2)	
3. Involvement in research paper writing, journal reading and online webinars/activities compared with teaching hospital	Less than teaching hospital	13 (36.1)	8 (34.8)	5 (20.0)	3 (18.8)	0.095
	More than teaching hospital	4 (11.1)	3 (13.0)	1 (4.0)	1 (6.2)	
	Never	5 (13.9)	9 (39.1)	6 (24.0)	3 (18.8)	
	Same	14 (38.9)	3 (13.0)	13 (52.0)	9 (56.2)	
4. Time available to write parts of thesis compared with teaching hospital	Less than teaching hospital	14 (38.9)	8 (34.8)	4 (16.0)	3 (18.8)	0.067
	More than teaching hospital	6 (16.7)	6 (26.1)	6 (24.0)	1 (6.2)	
	Never	8 (22.2)	5 (21.7)	2 (8.0)	6 (37.5)	
	Same	8 (22.2)	4 (17.4)	13 (52.0)	6 (37.5)	
5. Time available to study own subject/speciality compared with teaching hospital	Less than teaching hospital	12 (33.3)	6 (26.1)	9 (36.0)	8 (50.0)	0.335
	More than teaching hospital	11 (30.6)	4 (17.4)	3 (12.0)	0 (0.0)	
	Never get time	5 (13.9)	4 (17.4)	4 (16.0)	2 (12.5)	
	Same	8 (22.2)	9 (39.1)	9 (36.0)	6 (37.5)	

Note. Values are presented as n (%). DRP = District Residency Programme. p values are reproduced from the supplied analysis; $p < .05$ was considered statistically significant. None of the reported associations in this table reached statistical significance.

The table no- 6 depicted that the association between the quarter of DRP posting and knowledge-related and academic activities during the programme. None of the assessed variables showed a statistically significant association with the quarter of posting (all $p > 0.05$). Participation in departmental activities, seminars, journals through online mode, and logbook maintenance did not differ significantly across quarters ($p = 0.324$), although non-participation was highest among residents posted in the fourth quarter (68.8%). Similarly, continuous contact with guides or teachers showed no significant variation

($p = 0.191$); contact was most commonly reported as occurring only “sometimes” across most quarters. Involvement in research paper writing, journal reading, and online webinars was also not significantly associated with the quarter of posting ($p = 0.095$). Likewise, differences in time available for thesis work approached but did not reach statistical significance ($p = 0.067$). Time available to study the resident’s own subject/specialty also showed no significant quarter-wise variation ($p = 0.335$), although 50.0% of fourth-quarter residents reported having less study time than at their teaching hospital.

Table 7 Association of Quarter of DRP Posting with Satisfaction, Feedback, Compliance, Safety, and Basic Amenities

Question / Variable	Response	First,n (%)	Second, n (%)	Third, n (%)	Fourth, n (%)	P
1. Overall satisfaction	Dissatisfied	3 (8.3)	1 (4.3)	3 (12.0)	0 (0.0)	0.928
	Highly dissatisfied	6 (16.7)	3 (13.0)	6 (24.0)	2 (12.5)	
	Highly satisfied	8 (22.2)	5 (21.7)	4 (16.0)	4 (25.0)	
	Neutral	19 (52.8)	14 (60.9)	12 (48.0)	10 (62.5)	
2. Feedback after return from DRP training	There should be an option to choose a nearby center to the teaching hospital†	3 (8.3)	1 (4.3)	0 (0.0)	0 (0.0)	0.712
	Extra fees paid / TA, DA availed	10 (27.8)	4 (17.4)	5 (20.0)	5 (31.2)	
	Industry exposure can be added as an option	0 (0.0)	1 (4.3)	2 (8.0)	0 (0.0)	
	Posting should be flexible to choose SDH, CHC, DHH, teaching hospital as DRP	6 (16.7)	9 (39.1)	8 (32.0)	4 (25.0)	
	Safety issues must be addressed as soon as possible	2 (5.6)	1 (4.3)	1 (4.0)	0 (0.0)	
	Same branch will help	1 (2.8)	0 (0.0)	0 (0.0)	2 (12.5)	
	There should be an option to choose a nearby center in the same city as the teaching hospital	14 (38.9)	7 (30.4)	9 (36.0)	5 (31.2)	
3. Opinion regarding duration of 3-month DRP posting	Should be lessened†	11 (30.6)	9 (39.1)	6 (24.0)	5 (31.2)	0.895
	Remain same	15 (41.7)	7 (30.4)	11 (44.0)	6 (37.5)	
	Can't say	8 (22.2)	4 (17.4)	5 (20.0)	5 (31.2)	
	Should be increased	2 (5.6)	3 (13.0)	3 (12.0)	0 (0.0)	
4. Compliance/enthusiasm toward DRP	Decrease	16 (44.4)	8 (34.8)	3 (12.0)	0 (0.0)	0.002 *
	Increased	5 (13.9)	3 (13.0)	4 (16.0)	0 (0.0)	
	Remain enthusiastic till last	9 (25.0)	5 (21.7)	7 (28.0)	4 (25.0)	

Question / Variable	Response	First, n (%)	Second, n (%)	Third, n (%)	Fourth, n (%)	P
	Somewhat managed	6 (16.7)	7 (30.4)	11 (44.0)	12 (75.0)	
Page 17 Working culture/learning domain of DRP programme in successive batches	Can't say	9 (25.0)	3 (13.0)	4 (16.0)	6 (37.5)	0.281
	Increase negatively	11 (30.6)	5 (21.7)	6 (24.0)	3 (18.8)	
	Increase positively	8 (22.2)	4 (17.4)	5 (20.0)	0 (0.0)	
	Same	8 (22.2)	11 (47.8)	10 (40.0)	7 (43.8)	
6. Feeling of isolation from parent institute	Always	12 (33.3)	7 (30.4)	9 (36.0)	4 (25.0)	0.265
	Never	13 (36.1)	2 (8.7)	5 (20.0)	2 (12.5)	
	Sometimes	10 (27.8)	13 (56.5)	10 (40.0)	9 (56.2)	
	Can't say	1 (2.8)	1 (4.3)	1 (4.0)	1 (6.2)	
7. Access to grievance redressal among those facing threat in DRP	After some time, delayed	1 (2.8)	2 (8.7)	0 (0.0)	1 (6.2)	0.483
	Always within the stipulated time	4 (11.1)	0 (0.0)	3 (12.0)	1 (6.2)	
	Always, but delayed	5 (13.9)	3 (13.0)	4 (16.0)	0 (0.0)	
	Not come across during posting	11 (30.6)	8 (34.8)	8 (32.0)	9 (56.2)	
	Committee has not been formed	8 (22.2)	7 (30.4)	6 (24.0)	5 (31.2)	
	Only on serious matters, always delayed	7 (19.4)	3 (13.0)	4 (16.0)	0 (0.0)	
8. Feeling of safety	No threat at all	17 (47.2)	9 (39.1)	12 (48.0)	5 (31.2)	0.695
	Threat/security problem in hostel stay	1 (2.8)	3 (13.0)	0 (0.0)	2 (12.5)	
	Threats from patients and caregivers received in hospital	9 (25.0)	6 (26.1)	6 (24.0)	2 (12.5)	
	Threat from political party/hospital administration in hospital	5 (13.9)	2 (8.7)	4 (16.0)	4 (25.0)	

Question / Variable	Response	First, n (%)	Second, n (%)	Third, n (%)	Fourth, n (%)	p
Page Charges for the above borne by	Threat from seniors/other healthcare staff working in district hospital	4 (11.1)	3 (13.0)	3 (12.0)	3 (18.8)	0.180
	Posted college/hospital	13 (36.1)	5 (21.7)	7 (28.0)	1 (6.2)	
	Self	22 (61.1)	18 (78.3)	16 (64.0)	14 (87.5)	
	Teaching hospital	1 (2.8)	0 (0.0)	2 (8.0)	1 (6.2)	
10. Availability of basic amenities (food, water, stay/accommodation, electricity, internet)	Bad	5 (13.9)	5 (21.7)	4 (16.0)	8 (50.0)	0.151

Note. Values are presented as n (%). DRP = District Residency Programme; TA = travelling allowance; DA = dearness allowance; SDH = Sub-Divisional Hospital; CHC = Community Health Centre; DHH = District Headquarters Hospital. *p < .05. †Symbol retained from the source table; its specific meaning was not provided. The source supplied only the “Bad” response category for Item 10; no unreported categories were added.

The table no -7 showed that the association between the quarter of DRP posting and residents’ satisfaction, feedback, compliance, safety, and other programme-related experiences. Overall satisfaction did not differ significantly across the four quarters (p=0.928), with a neutral response predominating in every quarter (48.0–62.5%). Similarly, residents’ feedback regarding modification of the programme (p=0.712) and their opinion regarding the three-month duration of DRP (p=0.895) showed no significant quarter-wise differences.

A statistically significant association was observed between the quarter of posting and compliance/enthusiasm toward DRP (p=0.002). Decreased enthusiasm was reported more frequently during the first (44.4%) and second (34.8%) quarters, whereas 75.0% of fourth-quarter residents reported that they had “somewhat managed” the programme. This

indicates significant variation in residents’ compliance/enthusiasm across the successive quarters.

No significant quarter-wise differences were observed in perceptions of working culture/learning environment (p=0.281), isolation from the parent institution (p=0.265), access to grievance redressal (p=0.483), feeling of safety (p=0.695), or responsibility for expenditure (p=0.180). Nevertheless, self-payment of expenses was common across all quarters, ranging from 61.1% to 87.5%.

For basic amenities, the available data show that a “Bad” rating was most frequent in the fourth quarter (50.0%); however, interpretation is limited because the supplied table contains only the “Bad” response category for this item. Therefore, the reported p-value (p=0.151) should not be interpreted without confirming the omitted response categories.

Table 8 Association Between Place of DRP Posting and Psychomotor Skill Acquired

Question / Variable	Response	CHC and below, n (%)	DHH, n (%)	Medical college, n (%)	SDH, n (%)	Exact Monte Carlo p
Page 19						
1. Involvement in patient care irrespective of clinical/non-clinical discipline	1–3 months	0 (0.0)	4 (8.5)	3 (8.1)	1 (9.1)	0.137
	3 months	4 (80.0)	36 (76.6)	20 (54.1)	7 (63.6)	
	< 1 month	0 (0.0)	2 (4.3)	9 (24.3)	0 (0.0)	
	Never	1 (20.0)	5 (10.6)	5 (13.5)	3 (27.3)	
2a. Subject-specific skill acquired/enhanced: Teaching activities in allied branch	No	4 (80.0)	42 (91.3)	30 (81.1)	10 (90.9)	0.408
	Yes	1 (20.0)	4 (8.7)	7 (18.9)	1 (9.1)	
2b. Subject-specific skill acquired/enhanced: Laboratory services in diagnostic branch	Maybe	0 (0.0)	1 (2.2)	0 (0.0)	0 (0.0)	0.897
	No	4 (80.0)	28 (60.9)	24 (64.9)	6 (54.5)	
	Yes	1 (20.0)	17 (37.0)	13 (35.1)	5 (45.5)	
2c. Subject-specific skill acquired/enhanced: Speciality-level posting in preventive/therapeutic branch	No	4 (80.0)	33 (71.7)	19 (51.4)	7 (63.6)	0.256
	Yes	1 (20.0)	13 (28.3)	18 (48.6)	4 (36.4)	
3. Subject-specific guide availability in posted hospital compared with teaching hospital	Fair good	3 (60.0)	19 (40.4)	12 (32.4)	5 (45.5)	0.018*
	Bad	1 (20.0)	17 (36.2)	5 (13.5)	5 (45.5)	
	Best	0 (0.0)	6 (12.8)	11 (29.7)	0 (0.0)	
	Less than good	1 (20.0)	5 (10.6)	9 (24.3)	0 (0.0)	
	Same	0 (0.0)	0 (0.0)	0 (0.0)	1 (9.1)	
4. Cross-disciplinary/inter-departmental colleague availability compared with teaching hospital	Higher	0 (0.0)	0 (0.0)	3 (8.1)	0 (0.0)	0.894
	Lower	2 (40.0)	20 (42.6)	14 (37.8)	5 (45.5)	
	Same	2 (40.0)	15 (31.9)	9 (24.3)	3 (27.3)	

Question / Variable	Response	CHC and below, n (%)	DHH, n (%)	Medical college, n (%)	SDH, n (%)	Exact Monte Carlo p
	Can't say	1 (20.0)	12 (25.5)	11 (29.7)	3 (27.3)	
	All	1 (20.0)	9 (19.1)	4 (10.8)	0 (0.0)	0.611
	Never	1 (20.0)	16 (34.0)	10 (27.0)	3 (27.3)	
	Not necessary	1 (20.0)	5 (10.6)	3 (8.1)	0 (0.0)	
	Not necessary to attend	0 (0.0)	1 (2.1)	1 (2.7)	0 (0.0)	
	To some extent	2 (40.0)	16 (34.0)	19 (51.4)	8 (72.7)	

Note. Values are presented as n (%). Exact/Monte Carlo p-values are reproduced from the supplied analysis. DRP = District Residency Programme; CHC = Community Health Centre; DHH = District Headquarters Hospital; SDH = Sub-Divisional Hospital. *p < .05.

The table no-8 displayed that the association between the place of DRP posting and psychomotor skill-related experiences of postgraduate residents. Most residents reported involvement in patient care for the entire three-month period, particularly those posted at CHC and below (80.0%) and DHH (76.6%), compared with medical colleges (54.1%) and SDH (63.6%). However, the association between place of posting and duration of patient-care involvement was not statistically significant (p=0.137). The place of posting was also not significantly associated with teaching-related skill enhancement (p=0.408), laboratory-related skill acquisition (p=0.897), specialty-level preventive/therapeutic exposure (p=0.256), cross-

disciplinary/inter-departmental colleague availability (p=0.894), or involvement in National Health Programmes (p=0.611).

In contrast, a statistically significant association was observed between place of DRP posting and availability of a subject-specific guide (p=0.018). The highest proportion rating guide availability as “Best” was observed among residents posted at medical colleges (29.7%), whereas none of those posted at CHC and below or SDH selected this response. A “Bad” rating was comparatively frequent among residents posted at SDH (45.5%) and DHH (36.2%).

Table 9 Association Between Place of DRP Posting and Academic/Research Activities During DRP

.5	Response	CHC and below, n (%)	DHH, n (%)	Medical college, n (%)	SDH, n (%)	P
1. Time available to study own subject/specialty compared with teaching hospital	Less than teaching hospital	1 (20.0)	14 (29.8)	15 (40.5)	5 (45.5)	0.517
	More than teaching hospital	1 (20.0)	6 (12.8)	9 (24.3)	2 (18.2)	
	Never get time	2 (40.0)	9 (19.1)	3 (8.1)	1 (9.1)	
	Same	1 (20.0)	18 (38.3)	10 (27.0)	3 (27.3)	
2. Time available to write parts of thesis compared with teaching hospital	Less than teaching hospital	2 (40.0)	18 (38.3)	8 (21.6)	1 (9.1)	0.488
	More than teaching hospital	1 (20.0)	7 (14.9)	9 (24.3)	2 (18.2)	
	Never	0 (0.0)	8 (17.0)	10 (27.0)	3 (27.3)	
	Same	2 (40.0)	14 (29.8)	10 (27.0)	5 (45.5)	
3. Involvement in research paper writing, journal reading, and online webinars/activities compared with teaching hospital	Less than teaching hospital	1 (20.0)	15 (31.9)	9 (24.3)	4 (36.4)	0.607
	More than teaching hospital	0 (0.0)	3 (6.4)	6 (16.2)	0 (0.0)	
	Never	0 (0.0)	13 (27.7)	7 (18.9)	3 (27.3)	
	Same	4 (80.0)	16 (34.0)	15 (40.5)	4 (36.4)	
4. Continuous contact with guides/teachers for clearing doubts	Always	0 (0.0)	5 (10.6)	4 (10.8)	0 (0.0)	0.848
	Emergency situation	1 (20.0)	5 (10.6)	4 (10.8)	2 (18.2)	
	It never worked out that way; I was left to deal with it on my own	0 (0.0)	1 (2.1)	0 (0.0)	0 (0.0)	
	Never	1 (20.0)	15 (31.9)	10 (27.0)	1 (9.1)	
	Sometimes	3 (60.0)	21 (44.7)	19 (51.4)	8 (72.7)	
5. Involvement in departmental activities/seminar/journal through online mode and maintenance of logbook	All involved	1 (20.0)	9 (19.1)	17 (45.9)	1 (9.1)	0.293
	Never	4 (80.0)	20 (42.6)	12 (32.4)	5 (45.5)	

.5	Response	CHC and below, n (%)	DHH, n (%)	Medical college, n (%)	SDH, n (%)	p
	Posted 600 km away, cannot attend	0 (0.0)	1 (2.1)	0 (0.0)	0 (0.0)	
	Same	0 (0.0)	2 (4.3)	1 (2.7)	0 (0.0)	
	Some skipped due to workload	0 (0.0)	12 (25.5)	5 (13.5)	4 (36.4)	
	Some skipped intentionally	0 (0.0)	3 (6.4)	2 (5.4)	1 (9.1)	

Note. Values are presented as n (%). DRP = District Residency Programme; CHC = Community Health Centre; DHH = District Headquarters Hospital; SDH = Sub-Divisional Hospital. p values are reproduced from the supplied analysis; $p < .05$ was considered statistically significant. None of the reported associations reached statistical significance.

The Table no-9 represented the association between the place of DRP posting and academic/research-related activities during the programme. None of the assessed academic variables showed a statistically significant association with the place of posting (all $p > 0.05$).

The time available to study the resident's own subject/specialty did not differ significantly across posting locations ($p = 0.517$), although residents posted at SDH (45.5%) and medical colleges (40.5%) more frequently reported having less study time than at their teaching hospital. Similarly, time available for thesis-related work showed no significant association with place of posting ($p = 0.488$).

Participation in research paper writing, journal reading, and online webinars/academic activities was also comparable across posting locations ($p = 0.607$). Continuous contact with guides or teachers for clearing doubts showed no significant variation ($p = 0.848$), with "sometimes" being the most frequent response at most locations.

Likewise, involvement in departmental activities, seminars, journals through online mode, and logbook maintenance was not significantly associated with place of posting ($p = 0.293$). However, participation in all such activities was numerically higher among residents posted at medical colleges (45.9%), while non-participation was reported by 80.0% of those posted at CHC and below.

Table 10 Association Between Place of DRP Posting and Satisfaction, Feedback, Compliance, Safety, and Basic Amenities

Question / Variable	Response	CHC below, (%)	and n	DHH, n (%)	Medical college, n (%)	SDH, n (%)	p
1. Availability of basic amenities (food, water, stay/accommodation, electricity, internet)	Bad	2 (40.0)		14 (29.8)	2 (5.4)	4 (36.4)	0.042*
	Best	0 (0.0)		6 (12.8)	3 (8.1)	0 (0.0)	
	Good	0 (0.0)		6 (12.8)	13 (35.1)	1 (9.1)	
	Okay	3 (60.0)		21 (44.7)	19 (51.4)	6 (54.5)	

Question / Variable	Response	CHC below, (%)	and n	DHH, n (%)	Medical college, n (%)	SDH, n (%)	p
2. Charges for the above borne by	Posted college/hospital	1 (20.0)		5 (10.6)	18 (48.6)	2 (18.2)	0.002*
	Self	4 (80.0)		38 (80.9)	19 (51.4)	9 (81.8)	
	Teaching hospital	0 (0.0)		4 (8.5)	0 (0.0)	0 (0.0)	
3. Feeling of safety	No threat at all	1 (20.0)		19 (40.4)	18 (48.6)	5 (45.5)	0.426
	Threat/security problem in hostel stay	0 (0.0)		3 (6.4)	1 (2.7)	2 (18.2)	
	Threats from patients and caregivers received in hospital	2 (40.0)		13 (27.7)	7 (18.9)	1 (9.1)	
	Threat from political party/hospital administration in hospital	2 (40.0)		8 (17.0)	4 (10.8)	1 (9.1)	
	Threat from seniors/other healthcare staff working in the district hospital	0 (0.0)		4 (8.5)	7 (18.9)	2 (18.2)	
4. Access to grievance redressal among those who faced threat in DRP	After some time, delayed	0 (0.0)		2 (4.3)	2 (5.4)	0 (0.0)	0.561
	Always within the stipulated time	0 (0.0)		2 (4.3)	5 (13.5)	1 (9.1)	
	Always, but delayed	1 (20.0)		3 (6.4)	7 (18.9)	1 (9.1)	
	Not come across during posting	2 (40.0)		16 (34.0)	12 (32.4)	6 (54.5)	
	Committee has not been formed	1 (20.0)		14 (29.8)	8 (21.6)	3 (27.3)	
	Only on serious matters, always delayed	1 (20.0)		10 (21.3)	3 (8.1)	0 (0.0)	
5. Feeling of isolation from parent institute	Always	0 (0.0)		13 (27.7)	16 (43.2)	3 (27.3)	0.665
	Never	2 (40.0)		11 (23.4)	6 (16.2)	3 (27.3)	
	Sometimes	3 (60.0)		21 (44.7)	13 (35.1)	5 (45.5)	
	Can't say	0 (0.0)		2 (4.3)	2 (5.4)	0 (0.0)	
6. Working culture/learning domain of DRP programme in successive batches	Can't say	3 (60.0)		9 (19.1)	8 (21.6)	2 (18.2)	0.789
	Increase negatively	1 (20.0)		14 (29.8)	7 (18.9)	3 (27.3)	

Question / Variable	Response	CHC below, (%)	and n DHH, n (%)	Medical college, n (%)	SDH, n (%)	p
	Increase positively	0 (0.0)	8 (17.0)	8 (21.6)	1 (9.1)	
	Same	1 (20.0)	16 (34.0)	14 (37.8)	5 (45.5)	
7. Compliance/enthusiasm toward DRP	Decrease	0 (0.0)	6 (12.8)	17 (45.9)	4 (36.4)	0.002*
	Increased	0 (0.0)	6 (12.8)	6 (16.2)	0 (0.0)	
	Remain enthusiastic till last	1 (20.0)	14 (29.8)	9 (24.3)	1 (9.1)	
	Somewhat managed	4 (80.0)	21 (44.7)	5 (13.5)	6 (54.5)	
8. Opinion regarding duration of 3-month DRP posting	Remained same	3 (60.0)	14 (29.8)	15 (40.5)	7 (63.6)	0.266
	Should lessened	2 (40.0)	14 (29.8)	14 (37.8)	1 (9.1)	
	Can't say	0 (0.0)	13 (27.7)	6 (16.2)	3 (27.3)	
	Should increased	0 (0.0)	6 (12.8)	2 (5.4)	0 (0.0)	
9. Feedback after return from DRP training	There should be an option to choose nearby center to teaching hospital	0 (0.0)	1 (2.1)	2 (5.4)	0 (0.0)	0.906
	Extra fees paid / TA, DA availed	3 (60.0)	10 (21.3)	9 (24.3)	2 (18.2)	
	Industry exposure can be added as option	0 (0.0)	2 (4.3)	1 (2.7)	0 (0.0)	
	Posting should be flexible to choose SDH, CHC, DHH, teaching hospital as DRP	1 (20.0)	11 (23.4)	12 (32.4)	3 (27.3)	
	Safety issues must be addressed as soon as possible	0 (0.0)	1 (2.1)	2 (5.4)	1 (9.1)	
	Same branch will help	0 (0.0)	2 (4.3)	1 (2.7)	0 (0.0)	
	There should option to choose nearby center in the same city as the teaching hospital	1 (20.0)	20 (42.6)	9 (24.3)	5 (45.5)	
	There should be an option to choose a center near the teaching hospital	0 (0.0)	0 (0.0)	1 (2.7)	0 (0.0)	
10. Overall satisfaction	Dissatisfied	0 (0.0)	3 (6.4)	2 (5.4)	2 (18.2)	0.424

Question / Variable	Response	CHC below, (%)	and n	DHH, n (%)	Medical college, n (%)	SDH, n (%)	p
Page 25	Highly dissatisfied	0 (0.0)		8 (17.0)	8 (21.6)	1 (9.1)	
	Highly satisfied	0 (0.0)		14 (29.8)	6 (16.2)	1 (9.1)	
	Neutral	5 (100.0)		22 (46.8)	21 (56.8)	7 (63.6)	

Note. Values are presented as n (%). DRP = District Residency Programme; CHC = Community Health Centre; DHH = District Headquarters Hospital; SDH = Sub-Divisional Hospital; TA = travelling allowance; DA = dearness allowance. * $p < .05$. The duplicate feedback response and the wording of Items 8 and 9 were retained as supplied.

Table 10 displayed the association between the place of DRP posting and residents' satisfaction, feedback, compliance, safety, and basic amenities. A statistically significant association was observed between the place of posting and availability of basic amenities ($p=0.042$). A "Bad" rating was more frequent among residents posted at CHC and below (40.0%), SDH (36.4%), and DHH (29.8%), whereas only 5.4% of those posted at medical colleges rated the amenities as bad.

The source of expenditure for basic amenities also differed significantly according to place of posting ($p=0.002$). Most residents at CHC and below (80.0%), DHH (80.9%), and SDH (81.8%) bore the expenses themselves, compared with 51.4% at medical colleges, where 48.6% reported that expenses were borne by the posting institution.

A significant association was also observed between place of posting and compliance/enthusiasm toward DRP ($p=0.002$). Decreased enthusiasm was reported more frequently among residents posted at medical colleges (45.9%) and SDH (36.4%), whereas 80.0% of those posted at CHC and below reported that they "somewhat managed" the programme.

In contrast, place of posting was not significantly associated with feeling of safety ($p=0.426$), grievance redressal ($p=0.561$), isolation from the parent institution ($p=0.665$), perceived working/learning culture ($p=0.789$), opinion regarding the three-month duration ($p=0.266$), feedback after DRP ($p=0.906$), or overall satisfaction ($p=0.424$). Neutral satisfaction predominated across all posting locations.

DISCUSSION

The present study evaluated the experiences of postgraduate residents from three consecutive batches (2021–2023) of MKCG Medical College and Hospital (MKCG MCH), Berhampur, who had completed the mandatory District Residency Programme (DRP) at various designated hospitals. The findings provide important insights into the

multifaceted impact of the DRP, particularly with respect to residents' demographic characteristics, acquisition of knowledge and clinical skills, continuity of academic activities, availability of basic amenities, safety and grievance redressal, and overall perceptions of the programme. Although the DRP provides valuable exposure to district-level healthcare delivery, the present findings also identify several academic, infrastructural, administrative, and operational gaps that may limit achievement of its intended objectives.

Socio-demographic Characteristics

In the present study, male postgraduate residents constituted a greater proportion of respondents than females. Similar observations were reported by Kopal et al. and Vaishnavi et al., who also documented a predominance of male respondents in their evaluations of the DRP [6,7]. This finding may reflect the underlying sex distribution of postgraduate trainees in the respective institutions as well as possible differences in response patterns across studies. Therefore, male predominance among respondents should be interpreted primarily in the context of the composition of the eligible study population rather than as an inherent characteristic of the DRP.

The mean age of participants in the present study was comparable to that reported by Vaishnavi et al., where the mean age was approximately 28.2 years. This is consistent with the usual age at which postgraduate medical trainees undertake residency programmes in India. Exposure to district-level healthcare at this relatively early stage of professional development may provide an opportunity to strengthen clinical independence, adaptability, leadership, communication, and decision-making abilities in healthcare environments that differ considerably from tertiary teaching institutions.

In the present study, residents belonging to allied disciplines constituted the largest proportion of respondents. However, considerable variation in specialty-wise participation has been observed in previous studies. Ankit et al. reported a higher response from diagnostic specialties [8], whereas Khilnani et al. observed greater participation from surgical branches. In contrast, Kopal et al. reported a predominance of residents from medical specialties. These variations are likely to reflect differences in institutional specialty distribution, batch composition, DRP deployment patterns, and response rates across individual studies. They also emphasize the importance of considering specialty-specific requirements while evaluating the effectiveness of the DRP.

Acquisition of Knowledge and Specialty-specific Skills

One of the major findings of the present study was the relatively limited acquisition of specialty-specific skills during district residency. More than two-thirds of District Residents reported inadequate enhancement of skills specifically related to their postgraduate discipline. This finding is important because competency development constitutes a fundamental component of postgraduate medical training.

Similar concerns have been reported by Khilnani AK et al., Jain S et al., and Garg S et al., where nearly half of the postgraduate residents reported inadequate opportunities for acquiring specialty-specific competencies during their DRP postings [9,10]. Khilnani et al. also demonstrated statistically significant differences in specialty-specific learning experiences among medical and surgical branches ($p < 0.02$), while Raj et al. reported a significant association ($p = 0.03$). These observations are consistent with the findings of the present study and indicate that the educational value of district residency may not be uniform across postgraduate specialties.

The disparity may be explained by differences in patient profiles, available diagnostic and therapeutic facilities, case volume, specialty-specific infrastructure, and availability of appropriately trained supervisors at district hospitals. While district hospitals may provide extensive exposure to common clinical conditions and general healthcare delivery, the opportunities for highly specialized procedures or discipline-specific competencies may be comparatively limited. Consequently, the educational benefit of DRP may vary considerably between medical, surgical, diagnostic, allied, and non-clinical specialties.

Another important objective of the DRP is to familiarize postgraduate residents with district-level healthcare delivery, including national health programmes and preventive and curative services. In the present study, exposure to these components was suboptimal among a

substantial proportion of participants. A similar observation was made by Kopal et al., who reported that nearly half of residents felt that the programme did not adequately orient them to national health programmes and other district-level curative services. This represents an important area of concern because exposure to the functioning of public health programmes and district health systems constitutes one of the principal objectives envisaged for the DRP.

Despite these limitations, an important positive finding was the substantial clinical exposure experienced during district residency. Approximately three-fourths of residents in the present study reported adequate clinical exposure. Varun et al. similarly documented favourable clinical exposure among District Residents [11]. Such exposure may be particularly valuable for residents from diagnostic, allied, and non-clinical specialties by providing greater interaction with patients and a broader understanding of clinical decision-making and healthcare delivery. At the health-system level, deployment of postgraduate residents may additionally strengthen the medical workforce available at peripheral and district-level hospitals.

Availability of Specialty-specific Guidance and Supervision

Effective postgraduate training requires appropriate supervision and mentorship. The availability of a specialty-specific guide or suitably qualified supervisor at the district hospital is therefore important for translating service exposure into structured competency acquisition.

However, studies by Kopal et al., Raj et al., and Mohan et al. [12] have highlighted inadequate specialty-specific supervision during DRP postings. A proportion of residents (23%) expressed dissatisfaction with the limited opportunities for knowledge and skill acquisition from faculty or supervisors at their posting institutions compared with their parent teaching hospitals. Similar concerns were observed in the present study.

The absence of specialty-specific mentors may result in District Residents predominantly performing general service duties without adequate opportunities for supervised specialty-oriented learning. Establishing defined mentorship arrangements between the district hospital and parent medical college, therefore, may help ensure that the service component of the programme remains appropriately integrated with postgraduate educational objectives.

Continuity of Academic and Research Activities

Maintenance of academic continuity during district residency is another important concern. Journal clubs, seminars, case discussions, and other structured academic activities contribute to critical appraisal skills and promote

the practice of evidence-based medicine [13]. However, Kopal et al. and Khilnani et al. reported that many residents were unable to participate adequately in journal clubs and other academic activities during their DRP postings. Potential contributing factors include excessive clinical workload, inadequate academic supervision, limited protected academic time, and difficulties in maintaining online connectivity with the parent institution.

The DRP may also have implications for postgraduate dissertation work. Thesis preparation and data collection constitute important components of postgraduate medical education, and data collection may extend over several months. A continuous three-month posting away from the parent institution could potentially interfere with recruitment of study participants, follow-up, laboratory work, data collection, or interaction with the postgraduate guide. Khilnani AK et al. similarly highlighted the potential impact of district postings on thesis-related activities.

The present study also identified limitations in participation in teaching-learning activities conducted by the parent institution. Comparable findings have been reported by Khilnani et al., where nearly 43% of residents did not participate in teaching activities conducted by their teaching institution through online platforms [10,14]. This may be related to high workload at peripheral facilities, incompatible duty schedules, inadequate internet connectivity, or insufficient coordination between district hospitals and parent institutions.

Raj et al. similarly reported limited online connectivity with the parent teaching institution, with significant differences across disciplines ($p=0.001$). The consistency of these observations suggests that academic disconnection during district residency is not merely an isolated institutional issue. Structured online academic schedules, protected academic time, reliable internet access, and regular communication between the parent institution and district hospital may therefore be required to maintain continuity of postgraduate training.

Challenges Related to Basic Amenities

Availability of adequate accommodation, safe drinking water, hygienic food, sanitation, electricity, and internet connectivity is essential for ensuring a safe and functional working environment for District Residents. In the present study, deficiencies in basic amenities constituted an important challenge.

Similar findings have been documented by Raj et al., Jain S et al., and Khilnani et al., with more than half of residents reporting inadequate basic amenities at their places of posting. Raj et al. additionally demonstrated a statistically significant difference across different categories of postgraduate specialties ($p=0.015$). In some instances,

residents reportedly had to meet accommodation or other essential expenses from their own resources. Such deficiencies may contribute to dissatisfaction, psychological stress, reduced productivity, and impaired academic engagement. These findings highlight the need for district authorities to ensure that minimum standards of accommodation and essential facilities are verified before residents are posted to a particular centre [15].

Safety, Grievance Redressal, and Institutional Support

Safety at the workplace is particularly important for residents deployed to unfamiliar healthcare environments. Concerns regarding violence against healthcare professionals have increased in recent years, and deployment away from the parent institution may further increase residents' perception of vulnerability when appropriate institutional support mechanisms are lacking.

Consistent with the findings of the present study, Dharmakhstu et al. and Shaktivel et al. reported safety-related concerns among District Residents [16,17]. In these studies, only approximately one-third of residents reported an absence of safety-related problems. Raj et al. highlighted safety concerns among approximately 35% of residents, particularly in relation to interactions with patients and attendants. Furthermore, 57% of residents were strongly dissatisfied with the absence or inadequacy of grievance-redressal mechanisms. Significant differences in these experiences were reported across specialty categories ($p=0.02$), which is comparable to the pattern observed in the present study.

Khilnani et al. and other investigators also reported that approximately 47% of residents experienced a sense of isolation or disconnection from their parent institution during district residency. Collectively, these findings suggest a need for stronger administrative linkage between district hospitals and parent medical colleges. A clearly designated nodal officer, accessible grievance-redressal mechanism, emergency contact system, periodic review of resident welfare, and regular communication with postgraduate guides could potentially address several of these concerns.

Perception Regarding Duration of the DRP

Opinions regarding the optimal duration of district residency varied among participants. In the present study, approximately one-third of residents—the largest individual response category—felt that the existing duration of the DRP should remain unchanged. Vaishnavi et al. similarly reported that approximately 50% of residents favoured continuation of the existing duration.

However, other studies have reported less favourable perceptions, with more than half of residents expressing a preference for reducing the duration to less than three months. Such dissatisfaction was primarily attributed to perceived inadequacy of specialty-specific learning, disruption of academic and research activities, and difficulties related to accommodation, infrastructure, supervision, and administrative support. Thus, dissatisfaction with the duration may partly reflect the quality and organization of the posting rather than the duration alone. Improving the educational content, supervision, infrastructure, and integration with parent institutions could potentially improve residents' acceptance of the existing three-month duration.

Overall Satisfaction with the District Residency Programme

Overall satisfaction provides an integrated assessment of residents' experiences with the DRP. Khilnani et al. and Vaishnavi et al. reported predominantly neutral levels of overall satisfaction. In contrast, Kopal et al. and Raj et al. documented greater dissatisfaction with the programme. Raj et al. further demonstrated statistically significant differences in overall satisfaction across different postgraduate branches ($p=0.04$), a pattern comparable to that observed in the present study.

The coexistence of favourable clinical exposure with dissatisfaction regarding specialty-specific training, academic continuity, infrastructure, safety, and grievance redressal indicates that the DRP has considerable potential but requires further optimization. The programme appears to provide meaningful exposure to district-level clinical services and may simultaneously strengthen medical manpower at peripheral healthcare institutions. However, service delivery should not occur at the expense of the educational objectives of postgraduate residency.

Overall, the findings of the present study, together with those of previous investigations, suggest that strengthening the DRP requires a coordinated approach involving the parent medical college, district hospital administration, postgraduate departments, and programme coordinators. Ensuring specialty-relevant learning opportunities, designated supervision, protected academic time, uninterrupted communication with the parent institution, adequate accommodation and basic amenities, workplace safety, and a responsive grievance-redressal mechanism may substantially enhance the educational value and acceptability of the programme. Regular structured feedback from each outgoing batch of District Residents could further provide a mechanism for continuous quality improvement of the programme.

Strengths of the Study

The present study has several important strengths. It provides institution-specific evidence regarding the implementation of the District Residency Programme (DRP) in Southern Odisha, an area where published evidence on residents' experiences with the programme remains limited. The inclusion of postgraduate residents from three consecutive batches (2021–2023), representing different disciplines and various DRP posting facilities, enabled assessment of experiences across diverse academic and healthcare settings.

The study adopted a comprehensive approach by evaluating multiple dimensions of the DRP rather than restricting the assessment to overall satisfaction. The questionnaire examined perceived cognitive and psychomotor competency acquisition, academic and research activities, specialty-specific learning, challenges encountered, grievance redressal, safety, basic amenities, and residents' feedback regarding future implementation of the programme. The questionnaire was subjected to expert content validation and pilot testing before its final administration, strengthening the relevance and comprehensibility of the study instrument.

Another strength was the comparative assessment of residents' experiences according to postgraduate discipline and characteristics of the DRP posting. This allowed the study to identify specific areas in which experiences differed significantly rather than presenting only aggregate responses. Consequently, the findings provide actionable information that may assist medical colleges, district health authorities, and programme coordinators in strengthening academic supervision, infrastructure, resident safety, grievance redressal, and coordination between district hospitals and parent teaching institutions.

Generalizability

The findings should be interpreted primarily within the context of postgraduate residents from MKCG Medical College and Hospital who underwent DRP postings at different healthcare facilities across Odisha. Inclusion of residents from three consecutive postgraduate batches, multiple disciplines, and different categories of posting facilities provides heterogeneity of DRP experiences and may enhance the relevance of the findings to similar government medical colleges implementing the programme. However, this was a single-centre study with voluntary participation, and only 100 residents constituted the final analytical sample. Differences in infrastructure, patient load, specialty availability, administrative support, supervision, accommodation, and DRP implementation across institutions and states may limit direct extrapolation of the findings to all postgraduate residents in India. Multicentric studies involving diverse geographical regions and

healthcare settings are therefore required to determine whether the observed patterns are consistent across DRP programmes nationally.

Limitations of the Study

The present study has certain limitations that should be considered while interpreting its findings. First, this was a **single-centre, cross-sectional study** involving postgraduate residents from one tertiary teaching institution; therefore, the findings may not fully represent the experiences of District Residents from other medical colleges or regions of Odisha and India. Second, although 270 postgraduate residents constituted the eligible population, the final study included 100 participants. Consequently, **non-response bias** cannot be excluded, as residents who participated may have had experiences or perceptions different from those who did not respond. Third, the study was based on a **self-administered questionnaire and residents' retrospective perceptions** of their DRP experience. Hence, the responses may be influenced by recall bias, response bias, and individual expectations. The reported acquisition of cognitive and psychomotor competencies was based on residents' self-assessment rather than objective competency evaluation through workplace-based assessments, procedural logbooks, or direct observation. Fourth, the cross-sectional nature of the study limits assessment of changes in residents' knowledge, skills, and attitudes attributable specifically to the DRP. As no pre-DRP assessment or longitudinal follow-up was performed, a causal relationship between participation in the programme and subsequent competency development cannot be established. Finally, considerable heterogeneity existed in postgraduate disciplines and places of DRP posting, including CHCs, District Headquarters Hospitals, medical colleges, and Sub-Divisional Hospitals. Differences in patient load, infrastructure, supervision, specialty-specific facilities, and administrative support across these centres may have influenced residents' experiences. Larger multicentric and prospective studies incorporating objective competency assessments and pre- and post-DRP evaluations would therefore be valuable for a more comprehensive assessment of the educational and service impact of the District Residency Programme.

Conclusion

The District Residency Programme provides postgraduate residents with valuable clinical exposure and an opportunity to experience healthcare delivery beyond the tertiary teaching environment. However, the present study identified important gaps in specialty-specific skill acquisition, academic continuity, interaction with postgraduate guides, basic amenities, safety, and grievance redressal. These findings indicate that the effectiveness of DRP depends not

merely on completion of the mandatory posting, but on the quality of its academic, infrastructural, and administrative support. Strengthening specialty-oriented supervision, maintaining continuous linkage with parent institutions, ensuring adequate basic facilities and resident safety, and establishing responsive grievance-redressal mechanisms are essential to transform the DRP from a predominantly service-based posting into a meaningful competency-based learning experience. Such measures could enable the programme to fulfil its dual objective of strengthening district healthcare services while developing competent, adaptable, and socially responsive postgraduate medical professionals.

Recommendations

Based on the findings of the present study, DRP implementation should be strengthened through structured specialty-specific learning objectives and appropriate supervision at posting institutions. Regular academic interaction between District Residents and their parent departments should be maintained through scheduled online teaching, mentoring, and research/thesis support. Posting centres should ensure adequate accommodation, food, water, electricity, internet connectivity, and appropriate resident-safety measures. Functional and time-bound grievance-redressal mechanisms should be available at each posting institution. Greater flexibility in allocation of posting centres, where administratively feasible, and appropriate financial or TA/DA support may reduce logistical and financial difficulties experienced by residents. Periodic structured feedback from each DRP batch should be incorporated into programme monitoring and quality improvement.

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Ethical approval

The study protocol was reviewed and approved by the Institutional Ethics Committee (IEC) of MKCG Medical College and Hospital, Berhampur, Odisha. The study was

conducted after obtaining the required institutional ethical approval. (IEC Approval Number: 277/Date of Approval: 09 April 2025)

Informed consent

Participation in the study was voluntary. All eligible participants were provided with information regarding the purpose and procedures of the study, confidentiality and anonymity of their responses, voluntary nature of participation, and their right to decline or withdraw from participation without any adverse consequences. Electronic informed consent was obtained from each participant before completion of the online questionnaire.

Confidentiality and privacy

The confidentiality and anonymity of the study participants were maintained throughout the study. No unnecessary personally identifiable information was collected, and the data were used exclusively for research purposes. Results were analysed and reported in aggregate form to prevent identification of individual participants.

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Conflict of interest

The authors declare that they have no conflicts of interest relevant to this study.

Data availability

The data supporting the findings of this study are available from the corresponding author on reasonable request, subject to institutional and ethical requirements and protection of participant confidentiality.

Author contributions

Srikanta Panigrahy (First Author): Conceptualization; Methodology; Investigation; Data curation; Writing – original draft.

Adyasha Anindita Panda (Second Author): Investigation; Data curation; Methodology; Writing – review and editing.

Suvendu Kumar Panda (Third Author and Corresponding Author): Conceptualization; Methodology; Formal analysis; Supervision; Writing – review and editing.

Jayanti Prava Behera (Fourth Author): Supervision; Methodology; Validation; Writing – review and editing.

Abbreviations

CBME: Competency-Based Medical Education

CHC: Community Health Centre

DHH: District Headquarters Hospital

DRP: District Residency Programme

IEC: Institutional Ethics Committee

MKCG MCH: MKCG Medical College and Hospital

NMC: National Medical Commission

PG: Postgraduate

SDH: Sub-Divisional Hospital

TA/DA: Travelling Allowance/Dearness Allowance

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