Facilitators and Barriers to Student Learning and Impact of an Undergraduate Clinical Posting in Psychiatry: A Thematic Analysis

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ABSTRACT

Background: There is an absence of information on empirical evaluation of undergraduate psychiatry training programs in India. We aimed to evaluate a clinical posting in psychiatry for undergraduate medical students.

Methods: We employed levels one and two of Kirkpatrick's four-level program evaluation model. The qualitative study used written feedback that was collected using a semistructured questionnaire. For quantitative metrics, we used end-of-posting assessment scores and frequencies of standard comments provided by examiners on case-based discussions with students to evaluate their clinical skills.

Results: We obtained written feedback from 40 female and 19 male fifth-semester students. We identified facilitators (patient interaction, outpatient department observation and teaching, demonstration of signs, case presentation and discussion, evening posting, observation of clinical work, use of anecdotes while teaching, and lectures by senior faculty) and barriers (organizational issues related to evening posting and disinterest in didactic teaching) to the students learning psychiatry, and the perceived impact of the posting for the students (changed attitudes, knowledge, self-efficacy, and skills acquired). The mean total score on case-based discussion, assigned to 22 groups of students, was 3.86 out of 5.

Conclusion: We described the impact of the posting and identified unique facilitators and barriers to students' learning in psychiatry. These findings will inform the choice of teaching-learning methods in the context of the new Competency-Based undergraduate Medical Education (CBME) curriculum.

Keywords: Program evaluation, Medical education, Psychiatry, Teaching-learning methods

Key Messages: Patient interaction, outpatient department observation and teaching, demonstration of signs, case presentation and discussion, evening posting, observation of clinical work, use of anecdotes while teaching, and lectures by senior faculty facilitated student learning during the clinical posting in psychiatry, whereas organizational issues and disinterest in didactic teaching acted as barriers. The students perceived that the posting had a positive impact on them in terms of changed attitudes, acquired knowledge and skills, and improved self-efficacy.

It is essential to ensure that undergraduate (UG) medical students in India receive adequate psychiatry training. This is necessary to address the unmet need for mental health care, dispel the stigma surrounding mental illness, improve doctors' communication skills and empathy toward patients, and improve doctors' skills in handling "difficult and complex" clinical situations.[1,2] Kishor et al. had raised concerns about the adequacy of UG psychiatry training in meeting these goals.[3] Additionally, psychiatry training has focused primarily on major mental disorders such as psychosis and bipolar disorder, while common mental disorders such as anxiety, depression, and alcohol-use disorders that have a higher prevalence in primary care settings are given a lower priority.[4] In this regard, there have been repeated calls to revise the curriculum and to even

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have psychiatry as a separate examination subject at the UG level.[5–7]

The new competency-based undergraduate medical education (CBME) curriculum has been described as a laudable attempt to modernize medical education in India.[8,9] It provides an opportunity to structure the psychiatry curriculum and use optimal teaching-learning methods to equip the Indian Medical Graduate with the requisite knowledge, attitudes, and skills to help patients with psychiatric disorders who seek help in primary care settings.[10] However, it is necessary to identify facilitators and barriers to UG medical students' learning in psychiatry that will inform the choice of optimal teaching-learning methods. Also, as students are the ultimate beneficiaries, it is imperative that the teaching-learning methods adopted fulfill their needs and are well-suited to enable them to learn effectively.

Models of teaching psychiatry to UG medical students have been described based on the consensus of experienced UG psychiatry teachers.[11–13] Although there has been some evaluation of these models,[11] not all have been evaluated empirically. Other studies in this area have focused either on evaluating specific teaching-learning methods or only on data from student feedback.[14,15] Addressing the absence of an empirical evaluation of a clinical teaching program, we aimed to evaluate a 15-day clinical posting in psychiatry for UG medical students across two aspects: (a) qualitative—facilitators and barriers to learning, and perceived impact of the posting for students; and (b) quantitative—psychiatry clinical skills in students.

Materials and Methods

Setting

We conducted the study in a general hospital psychiatry unit of a private medical college in Bengaluru with more than 50 years of experience running the UG medical training program. The hospital's Department of Psychiatry has been in existence for 40 years and, at the time of writing this article, included 15 psychiatrists (nine faculty and five senior residents), two clinical psychologists, and three psychiatric social work consultants. The medical college accepts 150 UG medical students per year.

The Program: Fifteen-Day Clinical Posting in Psychiatry

The program is based on the model for teaching psychiatry to UG medical students proposed by Manohari et al.[13] The posting is of 15 days, consisting of three hours per day. Thirty students in the fifth semester of their UG medical course are posted at a time and are divided into groups of five to six students.

1. **Inpatient**: One psychiatric inpatient is allotted to each group for daily follow-up for the entire duration of the posting. Students would spend an hour talking to their allotted patient, discussing the progress with the concerned postgraduate (PG) resident and consultant, and reading the case record details and relevant theory aspects.
2. **Outpatient:** One group of students would be posted to the outpatient department (OPD) every day, by turn. Each student would shadow a consultant in the OPD and would observe and discuss the patients that are seen.
3. **Clinical Teaching:** All students would then regroup for one-and-a-half-hours per day for a teaching session on clinically relevant topics. Teaching-learning methods such as didactic teaching, bedside teaching, demonstration of clinical signs, observation of students eliciting clinical signs, and discussion with the students are employed. The topics covered are as follows: (a) history; (b) mental status examination; (c) alcohol use disorders-identification, seeking help, and referral; (d) motivating patients to quit alcohol and tobacco; (e) anxiety-identification and seeking help; (f) depression-identification and seeking help; (g) delirium-identification; (h) managing uncooperative patients; and (i) acute pharmacological management in psychiatry. Teachers are given an orientation of what aspects to cover in every class.
4. **Evening Posting:** Groups of three students are posted daily in the evening to shadow the on-call PG for a couple of hours to get a firsthand experience of psychiatric emergencies.

The end-of-posting assessment is conducted on the penultimate day of the posting. It consists of the following: (**a) Case-based discussion (CBD)**, in groups, on the inpatient allotted at the beginning of the posting (5 marks). We chose this method of assessment, given its greater relevance in assessing learning during the clinical posting.[16] Students are assessed on the following parameters: history, physical examination, mental status examination, diagnosis, and management plan. (**b) Logbook** for detailed notes made on the case during the posting and documentation of the CBD (5 marks). Consultants provided feedback to the students on the final day of the posting regarding their performance and areas for improvement, based on standard comments noted by the examiner during the CBDs.

Procedures

The study was approved by the Institutional Ethics Committee. We employed levels 1 and 2 of Kirkpatrick's four-level evaluation model for the program evaluation.[17] This approach has been widely used to evaluate learner outcomes in training programs. It assesses four hierarchical "levels" of program outcomes: (a) learner satisfaction or reaction to the program; (b) measures of learning attributed to the program, such as, knowledge gained, skills improved, and attitudes changed; (c) changes in learner behavior in the context for which they are being trained; and (d) the program's final results in its larger context. In the present study, level 1 comprised the qualitative study and level 2 comprised the quantitative metrics. For the qualitative study, we used convenience sampling to recruit participants. The first author approached UG medical students reporting on the last day of their clinical posting in psychiatry to participate in the study. Informed consent was obtained. We obtained written feedback from 59 students using a semistructured questionnaire (**Box 1**). For quantitative metrics, we used the scores from the CBDs and standard comments provided by the examiners on the CBDs conducted in groups. Examiners were given a checklist of specific aspects to focus on during the CBDs. These were negative history for substance use and organicity,

BOX 1.

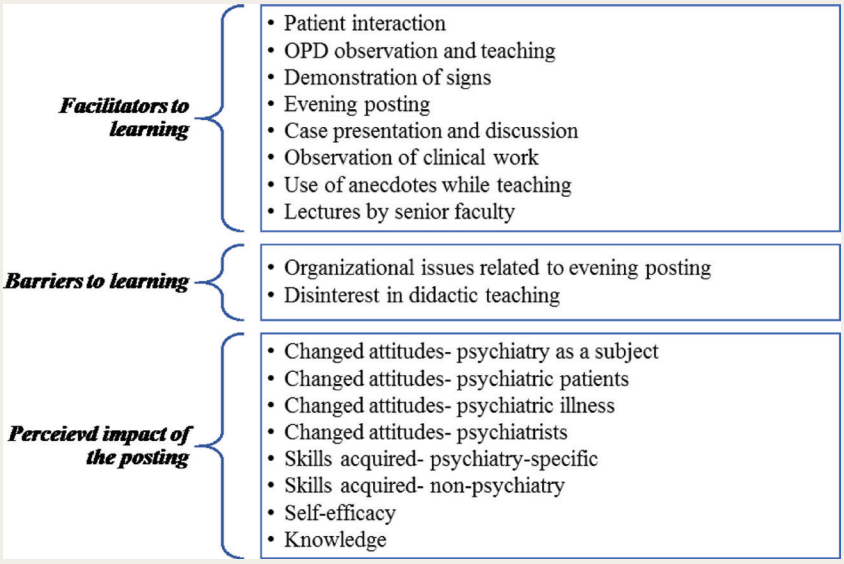
Semistructured Questionnaire for Student Feedback

1. What have you gained from this posting?
2. What aspects of the posting did you feel were most useful? (OPD, seeing cases, demonstration of symptoms and signs, lectures, and interviewing patients)
3. How do you think we can improve our teaching during the clinical posting in psychiatry?
4. After the posting, do you feel confident of being able to identify and manage common mental health problems?
5. Did the posting change your opinion of psychiatry in any way?
6. What was your experience of lectures conducted by senior PG students, senior residents, and senior faculty?
7. What was your experience of the evening posting?

OPD: Outpatient department.

FIGURE 1.

Results of the Qualitative Study (Themes and Subthemes)



history of functional impairment, central nervous system (CNS) examination, and assessment of affect and mood. An examiner's comment, noting adequate or inadequate performance, on any of these aspects was considered a standard comment. The CBDs were attended by 64 students, divided into 22 groups, with each group containing two to four students. Data collection was done from September 2019 to October 2019, before the implementation of CBME in 2020.

Statistical Analysis

The data were anonymized by removing all identifiers and assigning an alphanumeric code to each participant. For the qualitative study, we employed Braun and Clarke's method of thematic analysis.[18] The data corpus, consisting of written responses to the semistructured questionnaire from 59 students, was analyzed manually in its entirety, forming the data set. The analysis aimed at specifically identifying facilitators and barriers to learning and describing the perceived impact of the posting for the students. The analysis identified semantic themes within the framework of a realist epistemology. All the authors had conducted lectures and clinical demonstrations for the students and interacted with them during their clinical posting in psychiatry. The first author coded the data. Then the first and second authors independently searched for themes, reviewed themes, and defined and named the themes. The first, second, and fourth authors jointly produced the report after discussion. All disagreements were resolved by reaching a consensus through discussion. For quantitative metrics, we used descriptive statistics, expressed as mean values of total scores and subscores of the CBDs assigned to the groups of students. A score of 1 mark was assigned for each of the following: history, physical examination, mental status examination, differential diagnosis, and management, leading to a total score of 5 marks. We also calculated the frequencies of standard comments indicating inadequate performance by the students, noted by the examiners during the CBDs.

Results

Qualitative Study

We obtained written feedback from 59 students, that is, 40 (67.8%) females and 19 (32.2%) males. The themes and subthemes are shown in **Figure 1**.

Data extracts of the subthemes are presented in **Tables 1, 2**, and **3**.

Quantitative Metrics

The scores of the CBDs assigned to 22 groups of students were available for analysis. The mean scores were as follows: history: 0.80; physical examination: 0.55; mental status examination: 0.91; differential diagnosis: 0.84; management: 0.82; and total score: 3.86. The frequencies of standard comments made by the examiners, on a total of 22 groups, were as follows: did not do CNS examination: 15; did not assess affect/ mood adequately: 9; did not assess negative history or substance use/ organicity: 7; and did not assess functional impairment: 4.

Discussion

Qualitative Study

Facilitators to Learning

Most of the students perceived that patient interaction in the form of observing and interviewing patients in the ward and OPD stimulated interest, helped make connections to what was taught in theory classes and facilitated professional growth. They also expressed the need to see more cases during the posting. This finding receives support from the results of a prior cross-sectional survey of student feedback of a clinical posting in psychiatry.[15] Students also reported that observing a clinical encounter in the OPD between consultant and patient enhanced their learning. The feedback also implicated a benefit in increasing outpatient case discussions and visit times for

TABLE 1.

Facilitators to Learning in Psychiatry

Subtheme	Data Extracts
Patient interaction	N11: Interviewing and taking case was the most useful as we could gain more out of it. N59: Seeing patients and talking to them helped me to grow as a doctor, to build the relationship with the patient. N17: By making us see more cases. N40: Show us more cases.
OPD observation and teaching	N32: I felt OPD (was useful). From OPD madam gave a small description about the patient before the patient comes in and after the patient leaves. Then she explains about the condition of the patient in detail. N46: OPD was useful- saw how the doctors elicited history from the patients. N59: OPD was useful in (a) way that we were exposed to more people, many experiences of different people.
Demonstration of signs	N12: The direct demonstration of the patient with a particular illness was pretty helpful. N47: Explaining cases bedside, if possible, to elicit signs and symptoms. N50: Bring patients to the class and demonstrate during the lectures taken.
Evening posting	N42: Convenient to talk to patients and interact with them, to get to know them better. N47: We got to learn more things from duty doctors and got to see more cases.
Case presentation and discussion	N57: It will be better if each student will be presenting case per day so at the end we will get a good idea about history taking and examination.
Observation of clinical work	N22: Please take the students on rounds. Learning by observation is extremely useful. N31: Like how Dr X's unit had a round table discussion with (the) patient, we would like that… N59: Taking some of us for rounds and talking to patients in front of us so that we'll know how to manage a patient who is feeling low or in anger.
Use of anecdotes while teaching	N33: The classes could be made more interactive, with stories and cases they (the teachers) have seen related to the disorder. N58: Explain using blackboard and class should be short and with (a) lot of incidences and experiences with psychiatric patients.
Lectures by senior faculty	N45: I would like to mention the lecture on alcohol use by Dr X (senior professor) as it was very good. N56: Class of Dr X (senior professor) was good and helpful.

OPD: Outpatient department.

TABLE 2.

Barriers to Learning in Psychiatry

Subtheme	Data Extracts
Organizational issues related to evening posting	N49: By informing us clearly about cases and evening posting (how the organization of the posting can be improved). N50: There is not much work for UGs to do in evening postings. Maybe it's because the consultants are not here to show us what they do. N59: But if it is a little more coordinated it will be better.
Disinterest in didactic teaching	N11: Lectures was not as such useful because students tend to sleep most of the time.

UG: undergraduate.

TABLE 3.

The Perceived Impact of the Posting for the Students

Subtheme	Data Extracts
Changed attitude-psychiatry as a subject	N19: Yes, though it was different from medicine, but realized just another face of medicine, a different branch. N22: Yes, it is more interesting than I had anticipated. It is also a lot more nuanced and scientific. N8: It (the clinical posting) created an interest in me for psychiatry and to think of it for my postgraduate.
Changed attitude-psychiatric patients	N19: Yes. I felt the psychiatry as a department which I won't be able to manage and understand and was scared of mentally ill people. This view of mine was changed. N29: Yes. I thought psychiatric patients are either very violent or very silent. But my opinion changed after interacting with the patients.
Changed attitude-psychiatric illness	N59: Yes, it did change my perception I had about psychiatry. I now understand that mental illnesses are treated like normal disease(s). N53: Yes. Before I was thought that all psychiatric illness are not curable. But now I understand that we can manage with support and medication.
Changed attitude-psychiatrists	N25: Yes, I thought that the doctors in psychiatry ward was having fun and have a chill life compared to other doctors. But I've come to know it's not that way.
Knowledge	N29: Was able to interact (with patients) and learn more about the various situations leading the person to this illness.

(Table 3 continued)

(Table 3 continued)

Subtheme	Data Extracts
Skills acquired-psychiatry-specific	N43: From this posting I have gained the knowledge of how to elicit behavioral or psychiatric problems from the patient normally present in the OPD. N24: Learnt to develop rapport with an uncooperative patient.
Skills acquired-nonpsychiatry	N79: (How) to empathize with patient. N48: Rapport building with patients.
Self-efficacy	N59: Seeing patients and talking to them helped me to grow as a doctor, to build the relationship with the patient.

OPD: Outpatient department.

students toward enhancing learning in psychiatry. Jakobsen et al. have also recommended using OPD settings as the way forward in enhancing professional training in future young medical professionals.[19] Most students perceived the demonstration of clinical signs by teachers to be an important facilitator of learning. Many called for the inclusion of clinical demonstrations in didactic classes and at the patients' bedside. In a study on nursing students, Moneghi et al. demonstrated the superiority of clinical demonstration over video-based training.[20] On the other hand, George et al. found video teaching to be noninferior to bedside teaching while imparting pediatric clinical skills to UG medical students.[21] Although we did not incorporate video-based training in our program, we suggest that comparing video-based teaching to traditional bedside teaching could be an area for future research in India. Most students also perceived the evening posting as a good opportunity to interact with the on-call psychiatry resident and observe psychiatric emergencies. Such an initiative, along with other suggested teaching-learning methods, could provide clinical exposure in emergency psychiatry to medical students.[22] Students found the observation of consultant ward rounds to facilitate learning. Powell et al. have recommended using simulation-based ward round sessions in UG medical teaching to improve the confidence of junior doctors while leading ward rounds.[23] Other key aspects that students identified as conducive to learning were teaching sessions with senior faculty and the use of anecdotes of patients who were treated. Such use of narratives as a learning tool in medicine has been shown to promote humanistic aspects of medicine, including empathy.[24] Other facilitative aspects to learning were case presentation and discussion.

Barriers to Learning

While most students perceived evening postings as facilitative, a few noted otherwise, expressing that they did not add any extra value in terms of learning. However, further explication revealed this to be because of organizational aspects such as the coordination of the evening posting. This can be overcome by a better organization of the evening posting, for example, making a roster for the students and entrusting the on-call PG with the responsibility to ensure that students are present and to facilitate learning. A minority of students also expressed disinterest in didactic teaching as part of the clinical posting and perceived it as not being useful. Zinski et al. showed that first-year medical students preferred lectures while second-year students preferred clinically oriented teaching methods, leading to the inference that further investigation is needed to identify the optimal mix of teaching-learning methods for medical education, taking into consideration the stage at which they are to be deployed.[25]

Perceived Impact of the Posting

The clinical posting in psychiatry changed the students' attitudes toward psychiatry as a subject, psychiatric illnesses, and psychiatrists. Specifically, their perception of psychiatry changed toward understanding it as a medical subject that is scientific and nuanced. Also, students now considered it to be as important as any other field of medicine, and some were even considering it as an option for postgraduation. A similar finding was reported in a qualitative study by Brown et al.[26] Likewise, positive changes in attitudes toward psychiatry as a subject were also reported by Tharyan et al., who explored the impact of their clinical teaching program in psychiatry on student knowledge, attitudes, and clinical skills in psychiatry.[11] Many students perceived that the posting helped dispel misconceptions of fear and the "horrible" experience of having to "deal" with patients with psychiatric illness. They now understood that psychiatric illnesses were common and were medical problems like any other illness that could be improved by medication, counseling, and support. These findings are in line with those of a previous study that reported positive changes to students' preconceived notions of psychiatric patients as a result of clinical exposure.[26] Students reported an increase in their knowledge of psychiatric illness—etiology, classification, and management—similar to findings in an earlier study.[15] Students also perceived that the posting helped them hone their skills as doctors in training, enhancing their self-confidence and professional growth. These included skills specific to psychiatry, such as establishing rapport with uncooperative patients and eliciting a history of behavioral problems, and more generic skills such as being patient and demonstrating empathy with their patients. These findings are similar to the perceived improvements in communication skills reported by students following a clinical posting in psychiatry.[15]

Quantitative Metrics

The results of the quantitative metrics are encouraging, as the mean total score on the CBD was 3.86 out of 5, reflecting an adequate performance of clinical skills at the end of the posting. Mean scores from 0.80 to 0.91 out of 1 on history, mental status examination, differential diagnosis, and management also reflect adequate performance in these aspects at a UG level. The mean score for physical examination was 0.55. Deficits in the clinical evaluation of patients noted by examiners were missed CNS examination, incomplete assessment

of mood and affect, incomplete negative history in terms of substance use and organicity, and incomplete assessment of functional impairment. These results indicate that although students reported that their perception of psychiatry changed following the posting, to understand that it follows the medical model, changing their behavior in terms of the clinical approach to patients with psychiatric illness to include aspects such as a complete physical and neurological examination may require further emphasis on these aspects during clinical demonstrations and CBDs. This is because a change in knowledge does not always translate to a change in behavior.[27] Deficits in the students' clinical skills can be minimized by adhering to detailed lesson plans and having checklists of learning objectives for each teaching session. Additionally, clinical assessment of mood and affect is a skill that is crucial to empower Indian Medical Graduates to identify and manage common mental disorders in primary care settings, and it must also be a key component of clinical teaching modules. These findings can also guide further inquiry on the development of clinical teaching-learning methods based on deficits in students' skills identified herein.

Strengths and Limitations

Our study utilized qualitative and quantitative research as part of a standard program evaluation model to understand the facilitators and barriers to UG medical students' learning, and the perceived impact and efficacy of a clinical teaching program in psychiatry, which is a strength. The medical students represented in our sample were from across the country, increasing the study findings' generalizability. However, as the students are from a private medical college, these findings might not necessarily apply to those from government colleges. The findings may also not be generalizable to colleges with fewer teachers or with lack of infrastructure such as adequate space in OPD to accommodate students for observation. As the students were known to us, their responses to the qualitative study may have been influenced by social desirability.[28] The quantitative metrics included scores assigned to groups of students as part of the CBDs, which may not accurately reflect individual performance. Additionally, the assessments for students' knowledge and attitudes were not done before the clinical posting, but only at the end of the posting, and therefore do not capture the change in clinical skills from before the posting.

Conclusions

We have described the perceived impact of the posting for students in the qualitative study and have demonstrated its impact using quantitative metrics to evaluate clinical skills. We have also identified unique facilitators and barriers to students' learning in psychiatry in the qualitative study. These learnings will inform the choice of teaching-learning methods in the context of the new CBME curriculum.

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