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BEYOND THE CLASSROOM: MEDICAL STUDENTS' ENGAGEMENT AND PERCEPTION IN THE FAMILY ADOPTION PROGRAMME IN WESTERN INDIA

Medical Education

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ABSTRACT

Introduction : The Family Adoption Programme (FAP), introduced under the Competency-Based Medical Education (CBME) curriculum by the National Medical Commission (NMC), aims to enhance community engagement and sensitize medical students to social determinants of health. Despite its significance, limited evidence exists on students' perceptions and engagement in FAP. **Objectives:** To assess medical student's perceptions and engagement in the Family Adoption Programme and to identify the challenges they face along with key Facilitating Factors for improving its implementation.**Methodology:** A cross-sectional descriptive study was conducted among 1st,2nd & 3rd year MBBS students at GMERS Medical College, Gotri, Vadodara, who had completed at least one visit to all families allotted to them under the FAP. Data was collected using a pretested, semi-structured, self-administered questionnaire through convenience sampling. Information on socio-demographics, FAP exposure, perception, engagement, challenges, barriers and facilitators were analysed using IBM SPSS version 25. **Results:** A total of 470 MBBS students (mean age 20.04 ± 1.17 years) participated equally by gender. About 80% adopted five families, and 81% were accompanied by faculty. Most were comfortable communicating in local language.The mean engagement score was 3.41, indicating moderate engagement, while the mean perception score was 4.29, reflecting a positive attitude toward the programme. Nearly 90% reported improved understanding of social factors, communication skills, and empathy. Overall, 90% found the FAP a valuable learning experience. **Conclusion:** The Family Adoption Programme positively impacted student's learning and community orientation. Strengthening engagement and follow-up can enhance its sustainability.

KEYWORDS

CBME, Engagement, FAP, Perception, Students.

INTRODUCTION

Community engagement is an essential component of undergraduate medical education, particularly in India, where the health needs of rural and underserved populations remain a public health priority. The Family Adoption Programme (FAP) is an innovative initiative introduced by the National Medical Commission (NMC) under the Competency-Based Medical Education (CBME) curriculum. It aims to sensitize medical students to the social determinants of health and faster their commitment to community-based care from the early years of training [(1)].

Under this programme, medical students are expected to adopt families in nearby villages or urban slums, understand their health needs, identify determinants affecting their well-being, and provide health education or referrals as needed. This initiative helps bridge the gap between theoretical learning and practical understanding of healthcare delivery at the grassroots level [(2)].

Several studies have highlighted the importance of early community exposure in shaping students' attitudes toward rural service, empathy, and holistic patient care [(3,4)]. However, the actual perception, engagement level, and challenges faced by students during the implementation of the Family Adoption Programme (FAP) remain underexplored, especially in newer government medical colleges like GMERS Medical College, Gotri, Vadodara.

Understanding students' perspectives is crucial to improving the effectiveness of the Family Adoption Programme (FAP) and ensuring that its educational and public health goals are achieved([5]). This study aims to assess the perceptions, engagement, challenges & barrier of medical students involved in the Family Adoption Programme at GMERS, Gotri, and identify key facilitating factors influencing their participation and learning outcomes.

Methodology

A cross-sectional observational study was conducted among undergraduate medical students at GMERS Medical College, Gotri, Vadodara, Gujarat, India, where the Family Adoption Programme (FAP) is implemented as part of the competency-based undergraduate medical curriculum to provide community-based experiential learning.

The study population included MBBS students from the first, second, and third academic years who were participating in the Family Adoption Programme. Under this programme, students are assigned families in nearby communities and conduct periodic visits to assess health needs, provide health education, and facilitate linkage with available health services. The study was carried out over four months from July 2025 to October 2025.

Students who had completed at least one family visit under FAP and were willing to participate with informed consent were included in the study. Students who had not participated in any family visit or declined consent were excluded.

The minimum required sample size was 384, calculated for a cross-sectional study; however, using a convenience sampling technique, all eligible students were invited to participate, resulting in 470 respondents.

Data was collected using a pre-validated, semi-structured questionnaire administered through Google Forms. The questionnaire assessed student perceptions of FAP, engagement in programme

activities, barriers encountered, and facilitating factors. Data were entered and analysed using Microsoft Excel. Descriptive statistics were expressed as frequencies and percentages, and the Chi-square test was used to examine associations, with $p < 0.05$ considered statistically significant. Ethical approval was obtained from the Institutional Ethics Committee, and confidentiality was maintained.

RESULTS

Figure 1 shows the academic year-wise distribution of participants (N = 470). First-year students constituted the largest proportion (39%, n = 185), followed by second-year (36%, n = 168) and third-year students (25%, n = 117).

Figure 1 - Academic year-wise distribution of Medical students (N = 470)

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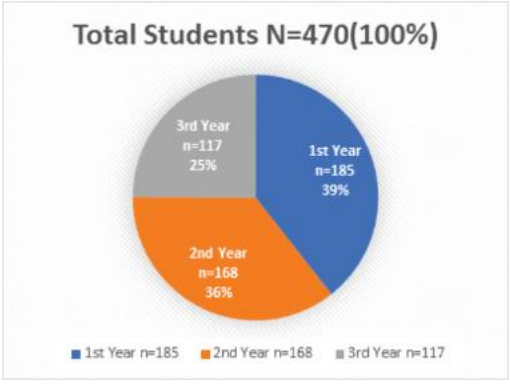

The findings in Table 1 show that most undergraduate medical students have a positive view of the Family Adoption Programme (FAP) across all three academic years. A majority of students either agreed or strongly agreed that FAP helps them understand social determinants of health (74.9%), improves communication skills (76.9%), enhances empathy and professionalism (70.5%), and complements classroom learning in Community Medicine (71.8%). Similarly, most respondents perceived that learning outcomes were clear and achievable (70.5%), that FAP contributes to clinical reasoning and early patient exposure (72.3%), and that the programme is a valuable component of MBBS training (70.5%).

Although minor variations were observed across first-, second-, and third-year students in the proportion of "strongly agree" responses, these differences were not statistically significant. Chi-square analysis revealed no significant association between year of study and perception variables (p-values ranging from 0.32 to 0.83). This indicates that perceptions toward FAP were consistently positive across all academic years.

TABLE 1 : Perception of the FAP* Among Medical Students (N=470).

Perception	Variable	1st year (n=185)	2nd year (n=168)	3rd year (n=117)	Total (n=470)	Chi-square (p-value)
FAP helps me understand social determinants of health.	Strongly Agree	71(38.3%)	66(39.2%)	42(35.8%)	179(38%)	1.44 (0.99)
	Agree	92(49.72%)	81(48.2%)	60(51.2%)	233(49.5%)	
	Neutral	20(10.8%)	18(10.7%)	12(10.2%)	50(10.6%)	
	Disagree	1(0.5%)	1(0.5%)	1(0.8%)	2(0.4%)	
	Strongly Disagree	1(0.5%)	2(1.1%)	2(1.7%)	6(1.2%)	
FAP improves my communication skills.	Strongly Agree	95(51.3%)	95(56.5%)	61(52.1%)	251(53.4%)	4.80 (0.77)
	Agree	79(42.7%)	60(35.7%)	49(41.8%)	188(40%)	
	Neutral	9(4.86%)	7(4.1%)	5(4.2%)	21(4.4%)	
	Disagree	1(0.5%)	2(1.1%)	1(0.8%)	3(0.6%)	
	Strongly Disagree	1(0.5%)	4(2.3%)	1(0.8%)	7(1.4%)	
FAP enhances empathy and professionalism.	Strongly Agree	79(42.7%)	89(52.9%)	50(42.7%)	218(46.3%)	8.38 (0.39)
	Agree	92(49.72%)	61(36.3%)	54(46.1%)	207(44%)	
	Neutral	11(5.9%)	13(7.7%)	11(9.4%)	36(7.6%)	
	Disagree	1(0.5%)	2(1.1%)	1(0.8%)	3(0.6%)	
	Strongly Disagree	2(1%)	3(1.7%)	1(0.8%)	6(1.2%)	
FAP complements classroom learning in Community Medicine.	Strongly Agree	71(38.3%)	75(44.6%)	50(42.7%)	196(41.7%)	8.17 (0.41)
	Agree	91(49.1%)	65(38.6%)	51(43.5%)	207(44%)	
	Neutral	18(9.7%)	24(14.2%)	12(10.2%)	54(11.4%)	
	Disagree	4(2.1%)	1(0.5%)	3(2.5%)	7(1.4%)	
	Strongly Disagree	1(0.5%)	3(1.7%)	1(0.8%)	6(1.2%)	
Learning outcomes are clear and achievable.	Strongly Agree	66(35.6%)	78(46.4%)	40(34.1%)	184(39.1%)	9.24 (0.32)
	Agree	97(52.4%)	68(40.4%)	58(49.5%)	223(47.4%)	
	Neutral	19(10.2%)	18(10.7%)	17(14.5%)	55(11.7%)	
	Disagree	2(1%)	1(0.5%)	1(0.8%)	3(0.6%)	
	Strongly Disagree	1(0.5%)	3(1.7%)	1(0.8%)	5(1%)	
FAP contributes to my clinical reasoning and early patient exposure.	Strongly Agree	72(38.9%)	80(47.6%)	44(37.6%)	196(41.7%)	7.61 (0.47)
	Agree	93(50.2%)	71(42.2%)	56(47.8%)	220(46.8%)	
	Neutral	17(9.1%)	11(6.5%)	14(11.9%)	42(8.9%)	
	Disagree	2(1%)	3(1.7%)	1(0.8%)	6(1.2%)	
	Strongly Disagree	1(0.5%)	3(1.7%)	2(1.7%)	6(1.2%)	
I strongly recommend to the junior batches that participation in the FAP is highly important and beneficial.	Strongly Agree	107(57.8%)	88(52.3%)	56(47.8%)	251(53.4%)	8.62 (0.37)
	Agree	61(32.9%)	58(34.5%)	49(41.8%)	168(35.7%)	
	Neutral	14(7.5%)	18(10.7%)	7(5.9%)	39(8.2%)	
	Disagree	2(1%)	1(0.5%)	3(2.5%)	5(1%)	
	Strongly Disagree	1(0.5%)	3(1.7%)	2(1.7%)	7(1.4%)	
Overall, FAP is a valuable component of my MBBS training.	Strongly Agree	104(56.2%)	96(57.1%)	58(49.5%)	258(54.8%)	4.2 (0.83)
	Agree	65(35.1%)	53(31.5%)	43(36.7%)	161(34.2%)	
	Neutral	14(7.5%)	16(9.5%)	13(11.1%)	43(9.1%)	
	Disagree	1(0.5%)	1(0.5%)	2(1.7%)	2(0.4%)	
	Strongly Disagree	1(0.5%)	2(1.1%)	1(0.8%)	6(1.2%)	

*FAP: Family Adoption Programme

Table 2 shows variable involvement in the Family Adoption Programme among the students. More than half of the students (53.1%) reported actively planning their visits.(75.9%)reported keeping proper records of their activities. These patterns were similar across all academic years and were not statistically significant ($p > 0.05$). However, there was clear differences between years when it came to staying in regular contact with families ($p = < 0.01$) and working with MSW/ASHA/ANM staff ($p = < 0.01$). Second-year students showed better involvement in these areas, while third-year students had a higher proportion of lower engagement.

TABLE 2 : Engagement of Medical Students in the FAP* (N=470).

Engagement	Variable	1st year (n=185)	2nd year (n=168)	3rd year (n=117)	Total (n=470)	Chi-square (p-value)

I proactively planned and scheduled my visits.	High	97(52.4%)	100(59.5%)	53(45.2%)	250(53.1%)	6.92 (0.14)
	Moderate	71(38.3%)	50(29.7%)	48(41%)	169(35.9%)	
	Low	17(9.1%)	18(10.7%)	16(13.6%)	51(10.8%)	
I maintained regular contact with families between visits.	High	60(32.4%)	66(39.2%)	31(26.4%)	157(33.4%)	15.10 (< 0.01)
	Moderate	66(35.6%)	72(42.8%)	43(36.7%)	181(38.5%)	
	Low	59(31.8%)	30(17.8%)	43(36.7%)	132(28%)	
I documented my activities systematically.	High	135(72.9%)	135(80.3%)	87(74.3%)	357(75.9%)	3.13 (0.53)
	Moderate	37(20%)	26(15.4%)	22(18.8%)	85(18%)	
	Low	13(7%)	7(4.1%)	8(6.8%)	28(5.9%)	
I coordinated with MSW/ASHA/ ANM for continuity of care.	High	63(34%)	66(39.2%)	27(23%)	156(33.1%)	17.36 (< 0.01)
	Moderate	54(29.1%)	53(31.5%)	28(23.9%)	135(28.7%)	
	Low	68(36.7%)	49(29.1%)	62(52.9%)	179(38%)	
***FAP: Family Adoption Programme**						

Table 3 shows language and communication barrier (27.2%), transport or travel problems (25.7%), safety concerns (25.7%), and limited time due to academic workload (23.8%) as the major challenges faced by the students.

Other challenges included families being unavailable or not cooperating (20.4%), difficulty in reaching remote areas (18.5%), and inadequate orientation before the programme (17.6%). Few students reported lack of equipment or supplies (16.3%), insufficient supervision (14.8%), and cultural sensitivity issues (13.4%).

Table 3 :- Barriers and Challenges Experienced by Medical Students During the FAP* (N=470).

Barriers and Challenges	Frequency n(%)
Transport/logistics	121(25.7%)
Language/communication	128(27.2%)
Family Non-availability/Non-cooperation	96(20.4%)
Safety concerns	121(25.7%)
Lack of equipment/supplies	77(16.3%)
Academic workload/time constrains	112(23.8%)
Inadequate orientation	83(17.6%)
Inadequate Supervision	70(14.8%)
Difficulty accessing remote areas	87(18.5%)
Cultural sensitivity issues	63(13.4%)
***FAP: Family Adoption Programme (multiple answers recorded)**	

Table 4 highlights the key facilitating factors supporting implementation of the Family Adoption Programme. The most frequently reported facilitators was college transport (94.3%), good mentorship (92.8%), and peer support (82.3%). Clear checklists/logbooks (73.6%) and family support (71.9%) was also commonly acknowledged as important enablers.

Moderate proportions of students reported community leader support (61.3%), availability of kits (56.8%), and flexible scheduling (54.9%) as facilitating factors.

Table 4 :- Facilitating Factors in the Implementation of the FAP* (N=470).

Key facilitators	Frequency n(%)
Good mentorship	436(92.8%)
Peer support	387(82.3%)
Clear checklists/logbook	346(73.6%)
College transport	443(94.3%)
Availability of kits	267(56.8%)
Flexible scheduling	258(54.9%)
Community leader support	288(61.3%)
Family support	338(71.9%)
***FAP: Family Adoption Programme (multiple answers recorded)**	

DISCUSSION

The present study assessed the perception, engagement, barriers, and facilitating factors related to the Family Adoption Programme (FAP) among undergraduate medical students. The findings demonstrate that a majority of students had a positive perception of the programme, particularly regarding its role in improving understanding of social determinants of health, communication skills, empathy, and early clinical exposure. Community-based medical education (CBME) aims to expose students to real-life health situations and strengthen their understanding of population health and primary care. Previous studies have shown that early community exposure enhances student's patient-centered attitudes and awareness of social and environmental determinants of health (6,7).

In the present study, engagement was satisfactory in areas such as planning family visits and documentation of activities. However, maintaining regular contact with families and coordination with frontline health workers showed variation across academic years, with relatively lower engagement among third-year students. This may be explained by increased academic workload and clinical responsibilities in senior years of training. Similar findings have been reported in studies evaluating community-based education programmes where competing academic commitments influence sustained participation in field activities (8).

Despite the overall positive perception, several barriers were identified, including language and communication difficulties, transport or logistical issues, safety concerns, and academic workload. Similar challenges have been reported in studies evaluating the implementation of community-based medical education programmes in India and other settings (9). Logistical constraints and communication barriers are common operational issues that may affect effective implementation of field-based learning programmes (10).

The present study also identified important facilitating factors, particularly institutional support such as provision of college transport, mentorship from faculty members, and peer support. Clear guidelines through checklists and logbooks was also perceived as beneficial. Previous studies have emphasized that strong faculty mentorship and institutional support significantly improve student participation and learning outcomes in community-based education programmes (11).

Indian studies evaluating the Family Adoption Programme have reported similar findings. A qualitative study among stakeholders highlighted that FAP provides valuable community exposure but students often face challenges related to travel, time constraints, and communication barriers (12). Another study among Indian medical students reported that the programme improves communication skills, empathy, and professional development while helping students understand the socio-cultural context of health and disease (13).

Limitation

This study has a few limitations that should be considered while interpreting the findings. The study was conducted in a single medical college, which may limit the generalizability of the results to other medical institutions where the Family Adoption Programme may be implemented differently. The data were collected through self-administered questionnaires, and therefore responses depended on student's self-reporting, which may introduce reporting or social desirability bias.

In addition, the cross-sectional design reflects student's perceptions and experiences at a single point in time and does not capture how their engagement or perceptions might change as they progress through medical training. The study also included only first-, second-, and third-year MBBS students, and therefore the views of interns or students in later stages of training were not explored.

CONCLUSION

The present study demonstrates that the Family Adoption Programme (FAP) is well-accepted by undergraduate medical students and is perceived as a valuable component of MBBS training. Students reported positive perceptions regarding its role in enhancing

understanding of social determinants of health, communication skills, empathy, professionalism, and clinical reasoning, with no significant variation across academic years.

Engagement levels were satisfactory in terms of proactive planning and documentation; however, sustained family contact and coordination with frontline health workers declined in senior years, indicating the need for structured reinforcement throughout training. While logistical, communication, safety, and academic constraints was identified as key barriers, strong institutional facilitators particularly transport support, mentorship, and peer support substantially contributed to effective implementation.

Overall, strengthening supervisory support, ensuring logistical facilitation, and addressing identified barriers may enhance sustained engagement and optimize the educational impact of the Family Adoption Programme.

Recommendations

Structured orientation and training should be provided to students to improve communication skills and understanding of community health issues. Adequate logistical support, including transport facilities, and strong faculty mentorship are essential to enhance student's participation. Improved coordination with frontline health workers (ASHA/ANM) and better integration of programme activities with the academic schedule may help sustain engagement across academic years. Further multi-center and longitudinal studies are recommended to evaluate the long-term educational impact of the Family Adoption Programme.

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