

Family Adoption Programme: A Qualitative Study of Medical Students and Faculty Perspectives

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Abstract

Background: The Family Adoption Programme (FAP) was introduced under Competency-Based Medical Education (CBME) by the National Medical Commission (NMC) to strengthen community-oriented learning among undergraduate medical students. This study explored the perceptions and experiences of undergraduate medical students and faculty members regarding the implementation of the FAP.

Methods: A descriptive qualitative study was conducted between April and September 2025 in the Department of Community Medicine at Atal Bihari Vajpayee Government Medical College, Vidisha, India. Purposive sampling was used to recruit 41 participants, including 35 undergraduate medical students and six faculty members. Data collection was continued until the principal investigator (PI) considered that subsequent interviews were no longer generating substantially new codes or thematic insights. This assessment was conducted prospectively during data collection, and recruitment was discontinued once the dataset was considered sufficiently rich to address the study objectives.

Results: The analysis generated five themes grouped into two domains. Participants perceived the programme as a valuable experiential learning strategy that provided opportunities for communication development, integration of theoretical knowledge with community practice, early clinical exposure, empathy and professional responsibility, and cultural competence. They also highlighted opportunities for community-oriented learning and professional identity development. Major implementation challenges included transportation constraints, limited human resources, scheduling difficulties, language and cultural barriers, and environmental and safety concerns during field visits.

Conclusion: The FAP was perceived by undergraduate medical students and faculty members as providing opportunities for community-based experiential learning and professional development. Participants also identified logistical, institutional, communication, and safety challenges that may affect programme implementation. These findings should be interpreted in the context of the single-institution qualitative design.

Categories: Medical Education, Public Health, Preventive Medicine

Keywords: community-based medical education, competency-based medical education, family adoption programme, qualitative research, undergraduate medical education

Introduction

As part of the Competency-Based Medical Education (CBME) curriculum, the National Medical Commission (NMC) introduced the Family Adoption Programme (FAP) to promote community-oriented learning among undergraduate medical students. The programme provides early exposure to community settings while promoting communication skills, understanding of family and community health needs, and learning in primary healthcare environments through longitudinal engagement with adopted families [1,2].

Community-based medical education complements classroom-based learning by providing students with authentic experiences in real-world healthcare settings. Programmes that share these features have been shown to have a positive impact on medical student learning in communication, clinical thinking, and knowledge of community needs and promote experiential learning [3,4].

Since the introduction of the FAP, published research has documented educational outcomes, such as early exposure to the community, increased appreciation of patients' living environments, and communication and clinical skills. Previous studies have also identified implementation challenges, such as logistical, transportation, faculty workload, language, and curriculum-related challenges [2,5,6]. The FAP has also been described as an NMC-mandated component of undergraduate medical education intended to strengthen community-oriented learning and engagement within the competency-based curriculum [7].

However, there is limited evidence on stakeholders' perceptions of the implementation of the FAP across different institutional contexts, particularly from qualitative studies exploring the perspectives of both undergraduate medical students and faculty members. Understanding the experiences of undergraduate

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medical students and faculty members is essential to uncover the strengths of the programme and challenges to implementation, and to identify areas for enhancement. Therefore, this qualitative study aimed to gain insights into the perceptions and experiences associated with the implementation of the FAP among both undergraduate medical students and faculty members.

Materials And Methods

Study design

This descriptive qualitative study aimed to explore the perceptions and experiences of undergraduate medical students and faculty members regarding the implementation of the FAP. The study was conducted in the Department of Community Medicine, Atal Bihari Vajpayee Government Medical College, Vidisha, Madhya Pradesh, India, from April to September 2025. A descriptive qualitative approach was considered appropriate because it allowed an in-depth exploration of participants' experiences, perceptions, and views of the programme. The study was informed by an interpretivist-constructivist paradigm, recognising that participants may experience and understand the programme differently depending on their social and contextual backgrounds, while the researchers' interpretations also contributed to understanding the meanings within the data.

Participants and sampling

The study comprised undergraduate students from the Bachelor of Medicine, Bachelor of Surgery (MBBS) 2023 batch who had participated in the FAP and faculty members from the Department of Community Medicine who had been directly involved in the planning, supervision, or implementation of the programme. The MBBS 2023 batch was selected because these students had participated in the FAP and therefore had firsthand experience relevant to the study objectives. Faculty members were selected based on their direct involvement in the planning, supervision, or implementation of the programme.

Criterion-based purposive sampling was used to select participants with firsthand experience of the FAP relevant to the study objectives. All eligible students and faculty members who met the predefined criteria were invited to participate, and 35 undergraduate medical students and six faculty members participated in the interviews. Participants were selected based on their direct experience and involvement with the FAP rather than on academic performance or other demographic characteristics. Variation in these characteristics was not used as a criterion for participant selection.

Data collection and interview procedure

Face-to-face semi-structured, one-to-one interviews were conducted in a private interview room of the Department of Community Medicine, which offered a quiet and private space for confidential discussions.

Separate semi-structured interview guides were developed by the principal investigator (PI), PM, for undergraduate students and faculty members to explore their perceptions of the FAP, its educational and community benefits, implementation experiences, and challenges faced during programme execution. The interview guides were pilot-tested before the main data collection to assess the clarity, relevance, comprehensibility, and sequencing of the questions and were reviewed by faculty members from the Department of Community Medicine who were not involved as participants in the study. The pilot testing and independent faculty review were used to ensure that the questions were appropriate for addressing the study objectives. The interview guides are provided in the Appendix.

The PI (PM) conducted the interviews with written informed consent. With participants' permission, all interviews were audio-recorded, and field notes were maintained to capture contextual observations and non-verbal expressions. A total of 41 interviews were conducted in a single round, including 35 interviews with undergraduate medical students and six with faculty members. Each interview lasted approximately 15–20 minutes. The semi-structured interview format consisted primarily of open-ended questions, with probing questions used where appropriate to encourage participants to elaborate on their perceptions, experiences, and challenges related to the FAP. The same finalized interview guides were used throughout the data collection process and were not substantively modified between interviews. Data saturation was assessed prospectively by the PI during data collection and was considered achieved when no new codes or themes emerged from subsequent interviews.

Researcher characteristics and reflexivity

A semi-structured interview guide was used for conducting all interviews, which were conducted by the PI, who had completed an MBBS degree and three years of postgraduate training in Community Medicine. The research team comprised four researchers. One researcher, RN, had prior experience in conducting qualitative research. Interviews were conducted in English; however, Hindi was used whenever participants were more comfortable expressing their views in that language. There were no other researchers present at the interviews. Interviews conducted in Hindi were transcribed and translated into English by members of the research team who were proficient in Hindi and English. The translated transcripts were reviewed against the original audio recordings to ensure that the meaning and context of participants' responses were

preserved. The PI and other members of the research team had pre-existing professional and personal relationships with some participants as teachers, friends, or acquaintances within the academic setting. Given the potential for interviewer influence, particularly in interactions involving students and faculty members within the same academic setting, the possibility of response and interviewer bias was acknowledged. To minimize this influence, interviews were conducted in a private setting, participants were encouraged to express their views openly, and neutral, non-directive probing was used throughout the interviews. Reflexive field notes documenting contextual observations, non-verbal cues, and methodological reflections were maintained throughout data collection and considered during interpretation and theme development to support critical reflection on the potential influence of the researchers' perspectives and relationships with participants and to enhance the trustworthiness of the findings.

Data analysis

The audio-recorded interviews were transcribed verbatim, and the accuracy of the transcripts was checked by comparing the transcripts with the audio recordings. Data were analyzed using reflexive thematic analysis following the six-phase approach of Braun and Clarke [8]. All four researchers participated in the analysis. First, the transcripts were read repeatedly to familiarize the researchers with the data. Second, meaningful units of text were identified, and initial codes were generated using both inductive and deductive approaches. Coding was performed manually. Throughout the analysis, the researchers maintained reflexive awareness of their perspectives and potential influence on data interpretation, with reflexive field notes considered during interpretation and theme development. Third, related codes were grouped into categories based on similarities in meaning and content. Fourth, the categories were examined and organized into broader themes representing patterns across participants' accounts. Fifth, the themes were reviewed by the research team and refined to ensure that they accurately represented the participants' narratives and addressed the study objectives. Finally, the themes were defined and presented as the overarching findings of the study. The four researchers discussed the developing codes, categories, and themes throughout the analytic process, using differences in interpretation as opportunities for reflexive discussion and refinement. No substantive divergent interpretations required resolution during the analysis. Codes represented specific concepts identified from the data, categories represented groups of related codes, and themes represented broader patterns that integrated related categories.

Trustworthiness and rigor

To increase the trustworthiness of the study, several strategies were used. A criterion-based purposive sampling strategy was used to ensure that participants had firsthand experience of the FAP. Data collection was continued until the PI considered that subsequent interviews were no longer generating substantially new codes or thematic insights relevant to the study objectives. This assessment was made prospectively during data collection, and recruitment was discontinued once the dataset was considered sufficiently rich to address the study objectives. Audio recordings and verbatim transcripts were maintained to support the accuracy and transparency of the data. Member checking was performed by providing participants with their interview transcripts for review and verification, allowing them to clarify or confirm their responses. Formal peer debriefing was not undertaken, and methodological triangulation was not performed because data were collected primarily through semi-structured individual interviews. Instead, credibility was supported through reflexive field notes, involvement of all four researchers in the analysis, repeated review of codes, categories, and themes, and discussion of differing interpretations throughout the analytic process.

Ethical considerations

The study was conducted ethically in accordance with the Declaration of Helsinki. This study received approval from the Institutional Ethics Committee of Atal Bihari Vajpayee Government Medical College, Vidisha (Approval No. 04/A/25/R/IEC/ABVGMC/Vidisha/2025) on 28 February 2025. All participants gave written informed consent before their participation. Participants were informed of the purpose of the study, the voluntary nature of participation, and that they could withdraw from the study at any time without consequences. The anonymity and confidentiality of the participants in the study were assured by omitting all identifying information from the interview transcripts and from study records.

Results

A total of 41 participants, comprising 35 (85.4%) undergraduate medical students and six (14.6%) faculty members, participated in the study. All five overarching themes were identified across both participant groups, with perspectives from both undergraduate medical students and faculty members contributing to each theme. Face-to-face, semi-structured interviews were analyzed using reflexive thematic analysis following Braun and Clarke's six-phase framework. Analysis of the interview data yielded five overarching themes and 19 categories. The findings were organised into two broad domains: perceptions towards the FAP and challenges in its implementation. The perceptions domain comprised two themes: Advantages of the FAP and Opportunities Created by the FAP. The challenges domain comprised three themes: Logistics and Human Resource Barriers, Communication and Cultural Barriers, and Environmental and Safety Challenges.

Perceptions towards the FAP

Theme 1: Advantages of the FAP

Participants described the FAP as an important component of CBME that extends learning beyond the classroom and promotes meaningful engagement with communities. They described several educational benefits, including improved communication skills, integration of theoretical knowledge with practical experience, early clinical exposure, development of empathy and professional responsibility, and enhanced cultural competence. Six categories were developed under this theme, namely, communication competency, integration of practical knowledge, early clinical exposure, empathy development, professional responsibility, and cultural competence (Table 1).

Theme	Category	Quoted responses	Supporting codes / illustrative quotes
Advantages of Family Adoption Programme	Communication Competency Enhancement	"Regular interaction with families boosted my confidence in initiating and maintaining meaningful conversations." (S8) "I learned to talk to people in their comfortable language and build a strong connection with them." (S4) "To know their needs and problems, listening efficiently increased." (S14)	Confidence Building, Active Listening, Local Communication.
	Practical Knowledge Integration	"So that we know the reality of rural areas." (S2) "The family plays a crucial role in health-related decision-making, treatment adherence, and emotional support." (S15) "I came to know their background, lifestyle and living standards." (S13)	Ground Reality Exposure, Disease Pattern Recognition, Family Dynamics in Health, Lifestyle and Socioeconomic Understanding
	Early Clinical Exposure	"...FAP makes them have early clinical exposure." (F5) "From the first professional year, students are able to communicate with the community and didn't hesitate to speak confidently with patients in clinical settings." (S15) "Students are learning to take family history, examining the index cases, and learning how the family household and community is effecting the disease." (F3)	Pre-clinical Patient Interaction, Case-Based Learning, Family History Taking, Index-Case Assessment, Understanding Disease Determinants
	Empathy Development	"It made me realize the hardships people face due to lack of awareness and access to healthcare. I became more compassionate and motivated to help people." (S15) "I gained a deeper understanding of the daily challenges they face—whether related to health, finances, or social issues." (S8) "It helped me empathize towards patients and understand their problems which they are facing." (S19)	Patient Perspective and Compassion, Social Sensitivity.
	Professional Responsibility	"I feel more responsible as a future healthcare provider." (S15) "...its incorporation gives students a sense of public service as well as responsibility to students." (F5)	Professional identity; public-service orientation; community responsibility; health-promotion responsibility
	Cultural Competence	"Understanding Community Health... Cultural Sensitivity and Awareness." (S8) "I learned to talk to people in their comfortable language and build a strong connection with them." (S4) "By talking with them in local language." (S16)	Cultural sensitivity; local-context understanding; adaptive communication; community awareness

TABLE 1: Categories and supporting codes identified under the advantages of the FAP

FAP: Family Adoption Programme, S: student participant; F: faculty participant. Participant numbers following S or F identify individual participants.

Together, these categories illustrate how participants described the FAP as a multidimensional educational experience in which sustained engagement with families connected communication and practical learning with early clinical exposure, empathy, professional responsibility, and cultural competence.

Communication Competency Enhancement: Participants identified improved communication competency as an important benefit of the FAP. Repeated interactions with families were perceived to improve participants' ability to initiate conversations, listen actively, and communicate about health-related issues

in locally appropriate ways. Improved communication skills were also noted by the faculty.

Practical Knowledge Integration: Participants stated that the FAP was useful for bridging theory and practice by providing firsthand experience with rural families. The programme provided participants with better insight into health issues faced by rural populations, the realities of rural healthcare delivery, and the effects of family and social influences on health.

Early Clinical Exposure: Students viewed the FAP as a platform that was effective in ensuring early clinical and community exposure. The Faculty felt that early exposure to patients and their families made it easy for the acquisition of clinical skills in a progressive manner, while the students appreciated the chance to take family histories, index cases, and communication skills.

Empathy Development: Participants described the FAP as contributing to empathy and social awareness through exposure to the challenges associated with limited access to healthcare facilities and financial resources, among other social determinants of health.

Professional Responsibility: The FAP contributed to professional responsibility among students because of increased consciousness about their future role in the delivery of care and their responsibility to the community.

Cultural Competence: Participants noted that interacting with different communities made them more conscious of the culture of the community, beliefs, health requirements, and better communication with community health workers.

Faculty member 6 (F6) similarly highlighted the importance of involving local health workers, such as Accredited Social Health Activists (ASHAs), to facilitate effective communication within the community.

Overall, participants described the FAP as a valuable experiential learning strategy that was perceived to support communication, practical learning, early clinical exposure, empathy, professional responsibility, and cultural competence through sustained engagement with families in community settings. Taken together, these experiences suggest that the educational value of the FAP extended beyond individual skill development, as interactions with families enabled participants to connect theoretical knowledge with practical community experiences while developing greater awareness of patients' social and cultural contexts. Collectively, these experiences contributed to a broader understanding of community-oriented healthcare and the professional role of future physicians.

Although participants commonly described these educational and professional benefits, their experiences were not uniformly positive. Participants also reported difficulties during implementation, particularly related to language differences, initial challenges in establishing rapport with families, logistical constraints, and field-level conditions, which are described in the subsequent themes.

Theme 2: Opportunities Created by the Family Adoption Programme

The FAP was viewed by participants as providing educational experiences and opportunities that extended beyond traditional classroom-based learning. The programme provided early exposure to community and clinical settings, facilitated family- and community-oriented learning, and supported the development of professional skills and identity. Three categories emerged under this theme: early field and clinical exposure, community- and family-oriented learning, and skill and identity development (Table 2).

Theme	Category	Quoted responses	Supporting codes / illustrative quotes
Opportunities of Family Adoption Programme	Early Field and Clinical Exposure	"Students get to know about the ground reality early on, and their communication skills improve." (S4) "Students are learning to take family history, examining the index cases, and learning how the family household and community is effecting the disease thus learning a lot about the determinants of a disease in a family." (F3)	Early Field Exposure, Early Clinical Exposure, Family History Taking, Index-Case Assessment, Understanding Disease Determinants
	Community and Family-Oriented Learning	"...they will be interacting with the family members about their social demographic and clinical profile." (F1) "They know about family, its composition and value and functions." (F6) "I came to know their background, lifestyle and living standards." (S13)	Community-Oriented Learning, Family-Centred Healthcare, Family Structure, Social and Lifestyle Context, Holistic Family Assessment
	Skill and Identity Development	"It improved our skills and communication." (S24) "...reminded me of the human side of medicine and the importance of community-based care." (S8) "Its incorporation gives students a sense of public service as well as responsibility to students." (F5)	Communication Skill Development, Professional Identity Formation, Empathy and Compassion, Public Service Orientation, Community-Based Professional Values

TABLE 2: Categories and supporting codes for the opportunities created by the FAP

FAP: Family Adoption Programme, S: student participant; F: faculty participant. Participant numbers following S or F identify individual participants.

Taken together, these categories suggest that the FAP created a continuum of experiential opportunities, beginning with early exposure to families and clinical settings, extending to family- and community-oriented learning, and contributing to the development of communication skills and professional identity.

Early Field and Clinical Exposure: Participants described the programme as providing early exposure to healthcare settings, allowing them to engage with families and communities before their formal clinical placements.

Community- and Family-Oriented Learning: Participants described the programme as an opportunity to understand healthcare in relation to families and communities. Interaction with families helped them recognize the influence of family composition, social circumstances, and community context on health and healthcare.

Skill and Professional Identity Development: Participants noted that continued engagement with families contributed to professional identity development by encouraging compassionate, community-oriented, and socially accountable approaches to medical practice.

Overall, participants described the FAP as an opportunity for experiential learning, although the extent to which these opportunities could be realized was influenced by practical, communication, and field-level challenges described in the subsequent themes.

Although the two themes were related, they were distinguished analytically based on their central focus. Theme 1 focused on the perceived educational and professional benefits of participating in the FAP, whereas Theme 2 focused on the opportunities created by the programme for community engagement, experiential learning, and application of knowledge. Thus, Theme 1 captured what participants perceived they gained from the programme, while Theme 2 captured the learning and engagement opportunities provided by the programme.

Challenges in the implementation of the Family Adoption Programme

Theme 3: Logistics and Human Resource Barriers

Participants identified logistical and human resource constraints as major barriers to the effective implementation of the FAP. Students and faculty members described challenges related to transportation, limited human resources, scheduling conflicts, and inadequate field resources, which affected the implementation and conduct of community visits. Four categories emerged under this theme (Table 3). Although the barriers were broadly similar between students and faculty members, their emphasis differed: students primarily highlighted practical and field-level difficulties encountered during community visits,

whereas faculty members emphasized programme-level and administrative issues, including transportation availability, human-resource constraints, coordination and scheduling, workload, student preparedness, supervision, and institutional support.

Theme	Category	Quoted responses	Key Challenges Identified
Logistics and Human Resource Barriers	Transport	"Bus availability, larger batch size, first prof student with no knowledge of health programme and diseases." (F4) "Transport, staff shortage." (F1)	Vehicle/bus shortage; inadequate transport availability; large batch size; staff-related logistical constraints
	Human Resources	"3 buses, staff like MSW and tutors in extra." (F1) Another participant recommended the involvement of "MSW worker, ASHA worker and Anganwadi worker." (F4) "Transportation and support staff." (F2)	Insufficient staff/faculty support; need for MSW, ASHA and Anganwadi worker support; additional field-support personnel
	Scheduling	"I cannot balance my academics with FAP visits." (S9) "Curriculum, meetings, classes, practicals and visits are difficult to manage." (F1)	Difficulty balancing academic activities and FAP visits; faculty workload conflicts; competing curricular, practical and departmental responsibilities
	Resources	"Lack of basic tools like BP instruments, thermometers, or first aid kits..." (S8) Another participant highlighted the need for "Water bottle and sanitation." (S7) "Some eating lunch or some incentives to family and faculty." (F6)	Lack of basic medical equipment; inadequate water and sanitation facilities; limited practical/supportive resources during field visits
Communication and Cultural Barriers	Language	"We try to find the person who can act as translator." (F3) "Take help from anganwadi worker and neighbors." (F2)	Difficulty communicating due to language differences; dependence on translators; reliance on community intermediaries for communication
	Rapport Building	"They don't trust us easily." (S4) "...families were first very indecisive of telling any personal information..." (S19) "Initial hesitation from families, trust issues, and misconceptions about our intentions often made it hard to build rapport." (S15)	Initial distrust from families; reluctance to disclose personal information; hesitation and misconceptions affecting relationship-building
	Cultural Differences	"Differences in beliefs, especially around health practices, sometimes made communication tricky." (S8) "I learned to talk to people in their comfortable language and build a strong connection with them." (S4)	Differences in beliefs and health practices affecting communication; need for culturally responsive and adaptive communication
Environmental and Safety Challenges	Climate	"We were required to perform the FAP visit during scorching sun and intense heat." (S19) "Extreme heat and humidity caused discomfort during travel and fieldwork. Sudden rains disrupted scheduled visits." (S15)	Exposure to extreme heat; difficulties during rain/monsoon; weather-related discomfort and disruption of field visits
	Field Conditions	"Sometimes visits are difficult due to bad weather and roads." (F3) "One of the family that was allotted to me had shifted into the main town and was not available." (S19)	Poor road conditions; difficulty accessing or locating allotted families; disruption of planned field visits.
	Safety	"Visiting unfamiliar areas or households alone sometimes raised safety issues." (S8) A faculty member added, "There is also a security concern for female students." (F4)	Safety concerns while visiting unfamiliar households; gender-specific security concerns

TABLE 3: Summary of challenges of the FAP

MSW: Medical Social Worker, FAP: Family Adoption Programme, S: student participant; F: faculty participant. Participant numbers following S or F identify individual participants.

Transport: Transport emerged as an important logistical challenge. Participants reported difficulties in arranging transportation because of limited vehicle availability and large student batches. Faculty members also described additional logistical challenges associated with organizing field visits for first-year students. Several students identified inadequate transport facilities, particularly the need for better bus arrangements (S4, S6, S9).

Human Resources: Participants identified shortages of faculty and community health staff as challenges to

programme implementation and emphasized the need for additional tutors, medical social workers, ASHA workers, and Anganwadi workers.

Scheduling: Another problem mentioned by students was managing time between participation in the FAP activities and regular academic work. In addition, lecturers reported having to find time for the FAP activities by making time available at the expense of other duties.

Resources: Participants also reported inadequate field resources. These included limited access to basic medical equipment required for simple health assessments, as well as inadequate drinking water and sanitation facilities during field visits.

Overall, participants identified transportation, human resource availability, scheduling, and field resources as important practical factors influencing the implementation of the FAP. These findings suggest that adequate institutional and logistical support may be necessary to facilitate regular and effective community visits.

Theme 4: Communication and Cultural Barriers

Communication and cultural issues were identified by participants as important barriers to the implementation of the FAP. Participants described language differences, difficulties in establishing rapport with families, and variations in cultural beliefs and health practices as barriers to effective community engagement. Three categories emerged under this theme: language, rapport building, and cultural differences (Table 3). Together, these categories illustrate how language, trust, and cultural differences influenced communication and engagement with families.

Language: Participants described difficulties communicating with families who spoke unfamiliar local dialects. Faculty members reported using translators or seeking assistance from local community members when necessary.

Rapport Building: Participants reported that establishing trust with families required repeated interactions. During initial encounters, some families were reluctant to disclose personal or health-related information.

Cultural Differences: Cultural beliefs and health practices of the community members also posed certain obstacles to communication.

Overall, participants emphasized that addressing language barriers, building trust with families, and developing cultural sensitivity were essential for fostering effective community engagement and supporting the implementation of the FAP.

Theme 5: Environmental and Safety Challenges

Participants identified environmental conditions and safety concerns as additional barriers affecting the implementation of the FAP. Adverse weather, inadequate field infrastructure, and concerns regarding personal safety were perceived as challenges that complicated community visits and influenced students' field experiences. Three categories emerged within this theme: climate, field conditions, and safety (Table 3). Taken together, these categories illustrate how environmental conditions, field infrastructure, and safety concerns affected the practical feasibility of conducting community visits.

Climate: Participants frequently reported that extreme weather conditions affected the conduct of field visits. Excessive heat and seasonal rainfall made community visits physically demanding and occasionally disrupted planned activities.

Field Conditions: Participants also described poor field infrastructure as a challenge during community visits. Inadequate road conditions made travel to some households difficult, while changes in family availability sometimes disrupted planned visits.

Safety: Safety during field visits was another important concern raised by both students and faculty. Participants expressed apprehension about visiting unfamiliar communities and households, particularly when visiting alone. Faculty members additionally highlighted the need to address gender-specific safety concerns to ensure the well-being of female students during field activities.

Overall, participants emphasized that environmental conditions, field infrastructure, and safety concerns could affect the feasibility of community visits. Addressing these challenges through improved field infrastructure and appropriate safety measures may help facilitate safer and more effective implementation of the FAP.

Discussion

This qualitative study aimed to gain insights into the perceptions and problems associated with the implementation of the FAP among both undergraduate medical students and faculty members in a government medical college in Madhya Pradesh, India. Interviews with 41 participants generated two overarching domains and five themes that reflected both the perceived educational value of the FAP and the challenges encountered during its implementation. Positive perceptions were reflected in the themes of Advantages of the FAP and Opportunities Created by the FAP, while implementation barriers were reflected in Logistics and Human Resource Barriers, Communication and Cultural Barriers, and Environmental and Safety Challenges. Participants described the FAP as a valuable experiential learning strategy and reported perceived benefits in communication, early clinical exposure, empathy, professional responsibility, and cultural competence. Logistical, staffing, scheduling, language, building community trust, and safety issues, however, limited effective implementation. The findings highlight the perceived educational value of the FAP while emphasizing the institutional support required for its effective implementation.

A recent mixed-methods study by Sulgodu Ramachandra et al. involving first-year MBBS students across three medical colleges in Uttar Pradesh similarly reported perceived benefits of the FAP, including communication, teamwork, leadership, understanding of social determinants of health, and application of medical knowledge, while identifying language barriers, family cooperation, and transportation as important implementation challenges [9]. The present findings are broadly consistent with these observations but extend the existing evidence by incorporating the perspectives of both undergraduate medical students and faculty members and by providing a qualitative account of educational experiences alongside institutional, communication, environmental, and safety-related implementation challenges.

Communication competence and educational value

The present findings reinforce the educational value of the FAP and are consistent with previous evidence on community-based medical education. Participants described greater communication confidence following repeated interactions with families, including greater ease in talking to families and adapting health messages to local language and literacy levels. Yalamanchili et al. also reported that communication development is found to be one of the most important advantages of the FAP among students, faculty, postgraduates, as well as field workers [2]. These findings are supported by quantitative evidence. Chepuru et al. reported that 92.1% of the MBBS students felt that FAP had resulted in better communication skills and understanding of socio-cultural aspects of their patients' lives, and Ganganahalli et al. noted that 88.8% of medical undergraduates felt that FAP helped them communicate with their patients and families and that the faculty members were a key facilitator [10,11]. Similarly, Fathima et al. found that a community orientation programme in a rural setting was highly effective in enhancing communication skills and understanding of the rural health contexts among first-year medical students [4]. Claramita et al. also presented a theoretical model, the community-based education (CBE) tree, which considers communication as one of the key competencies acquired by the CBE [3]. Beyond communication confidence, the present findings highlight culturally responsive communication, including adaptation to local dialects and community health beliefs. However, these quantitative findings were derived from different institutional and regional contexts, and differences in programme organization, student cohorts, faculty support, and local community settings may influence the transferability and comparability of these findings to the present study.

Empathy and professional identity formation

Two prominent perceived benefits described by participants were empathy development and professional identity formation. Participants described exposure to families experiencing financial hardship, limited health literacy, and restricted access to healthcare as experiences that contributed to their perceived development of empathy and motivation to serve underserved communities. The results are consistent with Ganganahalli et al., who found that 90.1% of the medical students said that their community engagement through multiple household visits led to an increase in their level of empathy, while classroom education did not [11]. Likewise, previous studies involving community members have reported that the FAP increases awareness of community health needs and promotes service towards underserved populations [12]. Reshmi et al. also highlighted the need for greater professional responsibility and community accountability as a very positive aspect of the programme [5].

These findings are corroborated by a PROSPERO-registered mixed-methods systematic review by Plessas et al., which found that community-engaged healthcare education is consistently associated with empathy, cultural sensitivity and social accountability in undergraduate health professions education [13]. Forming an identity as a professional also corresponds with the model that was proposed by Cruess et al., which describes identity formation as an internalisation of professional values and behaviours [14]. In the FAP, participants perceived that continuous exposure to families contributed to the development of their professional identity by connecting their learning with the lived experiences of community health. This resonates with the findings of Nabiilah et al., who found that early community exposure enabled the development of professional identity by experiential learning, emotional involvement, and social accountability [15].

Practical knowledge and early clinical exposure

Participants' accounts highlighted the perceived value of authentic community-based learning alongside classroom-based teaching. Participants reported gaining hands-on experience of the disease patterns and family dynamics that influence health behaviours and social determinants of health, which may be difficult to achieve through classroom-based teaching alone. This is consistent with Kolb's experiential learning theory, which focuses on learning via concrete experience, reflection, conceptualisation, and application [16]. Likewise, Ge et al. showed that community-based experiences enhanced medical students' social determinants knowledge and fostered transformative learning through exposure to real-world health disparities, which go beyond theoretical instruction [17].

This is also borne out by evidence from India. Fathima et al. found that the residential rural training helped to improve students' knowledge about rural health, social organisation, empathy, and comprehensive care [4]. Similarly, Sahu et al. found that faculty, students, medical social workers, and community members found the FAP to be a useful tool to learn about rural living and its impact on health, and to enhance undergraduate medical education [6]. Claramita et al.'s CBE-tree model further supports these findings by emphasizing the integration of clinical knowledge, primary healthcare, and person-centered care within authentic community settings [3]. Overall, these findings support participants' perceptions of the educational value of the FAP and are consistent with the rationale for its inclusion in the competency-based medical curriculum by the NMC. The findings suggest that early longitudinal family engagement may support the integrative learning objectives of CBME, while the single-institution context should be considered when interpreting their broader applicability [1].

Implementation challenges: logistics and human resources

Although education was identified as a valuable aspect, several implementation challenges were identified. Limited vehicle availability and large batches of students were the most commonly reported logistical challenges, which limited regular field visits. Yalamanchili et al. found that inadequate transportation facilities in government medical colleges were among the major operational challenges reported, with the addition of the involvement of first-year students who have little contact with the community as a significant challenge [2]. Similarly, Chepuru et al. reported that transport arrangements were identified as a major implementation challenge by 57.9% of the faculty, with the logistics aspect contributing to their workload [10]. Baruah and Choudhari also found transportation and infrastructure issues to be major challenges for effective implementation of FAPs [12].

There was also a lack of human resources, which further limited programme delivery. Faculty highlighted the importance of providing supervision by involving more tutors, medical social workers, ASHA, and Anganwadi workers. In line with this finding, Sahu et al. identified the lack of human resources as the primary challenge in the implementation and suggested enhancing infrastructure and human resources to maintain the FAP [6]. Aikat et al. similarly identified human-resource and logistical constraints as important implementation challenges and highlighted practical modifications to support sustainable FAP delivery [18]. Ganganahalli et al. also highlighted time constraints (56%) and institutional barriers (10%) as frequent barriers and faculty support (45%) and structured orientation (40%) as the key facilitators [11]. Scheduling problems between FAP activities and academic work arose as an important issue, as stated by Reshmi et al., that despite being a major concern, it could be overcome by restructuring the curriculum [5]. Taken together, these findings suggest that transport, staffing, and scheduling challenges may reflect broader institutional and implementation issues that could benefit from appropriate institutional support and policy-level planning.

Communication and cultural barriers

Barriers to implementation included communication and cultural differences. Early interactions were frequently hampered by language differences, especially because of unfamiliar local dialects requiring assistance from local translators or community health workers. In line with these findings, Ganganahalli et al. found that language barriers were the most frequent problem (60%) and that families also struggled to understand the purpose of the visits (33%) and didn't like to share information (34%), adding that support should be provided by field workers to communicate with families [11]. At the community level, Chepuru et al. noted that 68.4% of faculty saw language as a challenge, and that 97.9% of faculty reported family non-availability during visits [10]. Baruah and Choudhury noted that it took several visits to establish rapport and get the families to exchange health-related information [12]. These experiences are not only barriers but opportunities for building cultural competence, trust-building, and context-specific communication skills. This is consistent with the vision of the FAP by the NMC, which states that the graduates should be community-oriented and culturally competent [1].

Although previous Indian studies have examined stakeholders' perceptions, educational benefits, and implementation challenges of the FAP, the present study adds a complementary contextual perspective by examining how perceived educational opportunities and implementation constraints are experienced together within a single government medical college. Importantly, the findings demonstrate differences in emphasis between undergraduate students and faculty members: students primarily described practical and field-level difficulties, whereas faculty members highlighted programme-level concerns related to

transportation, staffing, scheduling, supervision, and institutional support. The study therefore extends previous work by illustrating how the conditions of implementation may shape the extent to which participants perceive experiential and community-oriented learning opportunities as realizable in practice. Rather than establishing the effectiveness of the FAP, the findings provide context-specific insight into the relationship between perceived educational value and the institutional and field conditions under which the programme is delivered.

Environmental and safety challenges

Environmental conditions and safety concerns also posed important challenges to FAP implementation. The field visits were hindered by extreme heat, monsoon rains, and inadequate infrastructure, which are consistent with the findings of Sahu et al., who identified infrastructure as a constraint towards effective implementation of FAP [6]. Additional concerns were raised by faculty around gender-specific issues of safety, including the need for protection for female students on community visits. While the literature on FAP is sparse, several studies on medical education in rural areas in India have also reported safety issues as obstacles to active community involvement, including general safety issues and gender-related concerns [19].

Implications for policy and practice

These findings have implications for CBME, community-based learning, and institutional policy. The findings suggest that institutional safety measures, such as supervised group visits, community liaison support, and established emergency procedures, may be considered as part of institutional field-visit protocols when implementing the FAP. These suggestions are based on participants' experiences within a single institution and may require further evaluation before broader implementation across different educational settings. However, this will require institutional investment in transportation, supervisory staffing, and culturally appropriate student preparation and safety protocols. Previous implementation experience has also emphasized advance orientation, student sensitization, faculty mentoring, and meticulous planning as important components of FAP delivery [20].

Faculty development is especially important because effective supervision and guided reflection are core elements for meaningful community-based learning [1,3]. Similarly, Plessas et al. identified deliberate educational planning and structured mentoring as important factors for promoting empathy and social responsibility in community-based learning [13]. However, if the programme is implemented without adequate institutional support and structured reflection, much of its experiential learning value may be diminished [16].

Strengths and limitations

This study provides an in-depth qualitative exploration of medical students' and faculty members' experiences with the implementation of the FAP. The findings were further enhanced by conducting semi-structured interviews, collecting data until saturation of themes was achieved, verbatim transcription, reflexive field notes, and iterative team-based thematic analysis, which supported the credibility and trustworthiness of the findings. The study was conducted in a government medical college, providing context-specific insights that may be relevant to other resource-constrained medical colleges with similar programme and institutional conditions.

However, the study has limitations due to its single-institution design and criterion-based purposive sampling, which may have introduced selection bias. Participants were recruited from a single government medical college and were selected based on their direct involvement or experience with the FAP; therefore, individuals with different levels of engagement or experiences who were not eligible or did not participate may not have been represented. To maximize the breadth of perspectives within the study setting, all eligible students and faculty members who met the predefined inclusion criteria were invited to participate, and selection was based on direct FAP experience rather than academic performance or other demographic characteristics. Nevertheless, the sample was not intended to be statistically representative of medical students or faculty members nationally, and the findings may not be directly transferable to other institutions, particularly private medical colleges or institutions with different organizational and community contexts. The relatively small sample also limited the breadth of perspectives captured. In addition, the study included the perspectives of undergraduate medical students and faculty members but did not include adopted family members or community health workers, such as Anganwadi and ASHA workers. Their perspectives may provide additional insights into the practical challenges, acceptability, and community-level experiences of the FAP and should be explored in future multi-stakeholder studies.

Future research directions

Future studies should use a longitudinal and a multi-institutional design to investigate changes in experiences of FAP over time and across various educational settings. They would provide a more holistic picture of the programme impact in the community if the adopted family members and community health workers are included. Standardized faculty development programmes, culture-specific student preparation, structured safety procedures, and context-specific implementation strategies could be assessed in future

research. Validated quantitative measures of communication skills, empathy, and community engagement, along with qualitative analysis, may provide a stronger evidence base for the impact of the FAP on these skills. Last but not least, evaluating the optimal timing for introducing the FAP within the MBBS curriculum, as previously emphasized by Yalamanchili et al., can inform the consistent implementation of FAP in the country [2].

Conclusions

The FAP was perceived by undergraduate medical students and faculty members as a valuable component of CBME, providing opportunities for experiential learning and early clinical exposure alongside perceived benefits in communication, empathy, professional responsibility, and cultural competence. Participants also identified transportation constraints, limited human resources, scheduling difficulties, communication barriers, and environmental and safety concerns as important challenges to effective implementation. Strengthening institutional support through adequate logistical planning, faculty supervision, and appropriate student safety measures may help facilitate effective implementation and preserve the educational value of the programme. As these findings are based on participants' experiences within a single institution, their applicability to other educational settings should be considered in the context of local institutional and implementation conditions.

Appendices

Semi-structured interview guide

A. To Assess the Perceptions of the Faculty

1. What is your take on the policy decision to introduce the FAP in the 1st year?
2. What are the possible benefits of the Family Adoption Programme (FAP) to the M.B.B.S. students?
3. How is the Family Adoption Programme (FAP) beneficial to the community?
4. How does the Family Adoption Programme (FAP) help in providing early exposure to the undergraduate students?
5. How do you perceive the role of collaboration between faculty, students, and the community during the Family Adoption Programme (FAP) visits?
6. Why do you think it is important for the faculty to be involved in Family Adoption Programme (FAP) visits?

B. To Identify the Challenges of the Faculty

1. What were the difficulties faced in implementing the Family Adoption Programme (FAP) for Undergraduate MBBS students?
2. What resources or support do you wish you had during the Family Adoption Programme (FAP) visits?
3. How do you manage limited resources during the Family Adoption Programme (FAP) visits?
4. Was there smooth coordination amongst faculty, staff, and students during the visit? YES/NO
If no, then what were the difficulties faced?
5. How do you handle communications with families who speak different languages?
6. How do you balance your academic or professional duties with the demands of the Family Adoption Programme (FAP) visits?
7. Were there any other challenges faced during the FAP visits?

C. To Assess the Perceptions of the Students

1. Do you think exposure to the community through the Family Adoption Programme is required in the First Professional year? YES/NO
If YES, then why?

If NO, then why?

2. What knowledge did you gain through your participation in the FAP programme?
3. How did the FAP impact your communication skills with patients and their families?
4. How did the FAP impact your empathy towards patients and their families?
5. Has the FAP improved your understanding of the role of family in health? YES/NO

If YES, then how?

If NO, then why?

6. How can you bring any healthy lifestyle-related changes in the family?
7. How do you feel after completing a FAP visit?
8. Why do you think the FAP visits are important for a future healthcare professional?

D. To identify the Challenges of the Students

1. What are the main difficulties faced during the FAP visit?
2. What resources do you feel are lacking during the FAP visits?
3. What climate-related challenges have you encountered during the FAP visits?
4. How did you balance your academics with these FAP visits?
5. How do you handle communication barriers with the families during your FAP visit?
6. What were the difficulties faced in building rapport with the families?
7. Were there any challenges regarding the follow-up visit? YES/NO

If YES, then what were the difficulties faced?

8. Were there any other challenges faced during FAP visits?

Additional Information

Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

Concept and design: Priyadarshini Matcha, Richa Nigam

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Disclosures

Human subjects: Informed consent for treatment and open access publication was obtained or waived by all participants in this study. Institutional Ethics Committee of Atal Bihari Vajpayee Government Medical College, Vidisha issued approval 04/A/25/R/IEC/ABVGM/College/Vidisha/2025. All participants gave written informed consent before their participation. Participants were informed of the purpose of the study, the voluntary nature of participation, and that they could withdraw from the study at any time without

consequences. The anonymity and confidentiality of the participants in the study were assured by omitting all identifying information from the interview transcripts and from study records. **Animal subjects:** All authors have confirmed that this study did not involve animal subjects or tissue. **Conflicts of interest:** In compliance with the ICMJE uniform disclosure form, all authors declare the following: **Payment/services info:** All authors have declared that no financial support was received from any organization for the submitted work. **Financial relationships:** All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work. **Other relationships:** All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

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