

Perception and Experience of Medical Undergraduate Students Regarding Family Adoption Programme: a Cross-Sectional Study in Nil Ratan Sircar Medical College, Kolkata

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Abstract

Background and objectives: Family Adoption Programme (FAP) has been included in the undergraduate medical curriculum by National Medical Commission, in which students have to adopt a family, build relationship and do longitudinal follow up. This study aims to describe the perception of undergraduate medical students of NRS Medical College regarding the probable benefits they can gain and the allotted family can gain from FAP and to elicit their views regarding the adversities imposed by FAP and ways to improve the programme.

Methods: It was an observational descriptive study in cross-sectional design. Data collection was done in June, 2024 in NRSMCH, Kolkata, among the Medical Undergraduate students of NRSMCH with a pre-designed, pre-tested questionnaire, administered in Google Form with embedded consent form. Responses were analysed in MS Excel.

Results: More than half of the study participant opined that FAP is advantageous in case of gathering real life experience and sharpening communication skills. 92% students thought that their understanding of the Health Care Delivery system has improved; 85.9% opined that their leadership skills has improved and 94.7% stated that their knowledge regarding health promotion has improved through FAP. More than two thirds felt that the adopted families will be benefitted from FAP. Proportionately more senior-year students perceived FAP problematic than their juniors. Regarding scope for improvement in FAP, majority had no opinion or opined that no improvement was needed.

Conclusion: Study participants found FAP useful and complimentary to classroom teaching in cognitive, affective and psychomotor domains, however senior-year students perceived more adversities.

Key words: Family Adoption Programme, Undergraduate Medical Students, West Bengal, Kolkata

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Introduction

Family Adoption Programme (FAP) was introduced and implemented to address the issue of 'Scarcity in abundance' and to improve community health care along with communication skills among Indian medical graduates. It was launched with the objective of orienting students towards primary healthcare and creating health related awareness among the community. It also aims at students acting as a conduit between the population and healthcare & analysing related data for improving evidence based clinical practices. The targets to be achieved by the Family Adoption Programme is to improve communication skills, understand the dynamics of urban setup under study and education about the various government sponsored health programmes. It also targets to continue active involvement of students to become the first doctor /reference point of the family by continued active interaction. For achieving the above-mentioned objectives, each MBBS student has to adopt families from a field under the Department of Community Medicine. They will visit and interact with the families and exchange their phone number with them. The visits will be done in their first, second and third academic year. Visits and the reports will be done under the mentorship of an assigned faculty of Community Medicine.¹⁻³

A study in Andhra Pradesh, suggests that FAP improves students' community involvement, but the major drawback in implementing FAP were the lack of transport and logistics in government medical colleges and the faculty shortage in private medical colleges.⁴ It is evident from other studies too,^{5,6} that there are felt constraints in implementing the proposed framework of FAP. In between the ambitions of FAP and hesitations of its implementation, there remains the most important stakeholder of the programme, the medical undergraduate students. Moreover, it is the same students who are facing frequent rather dramatic changes in their curriculum and assessment planning, like, implementation of Competency Based Medical Education, introduction of changes in internship, proposal of National Exit Test etc.

It is important to review the appropriateness of the institutional capacity to implement FAP, it is important to find out the strength, weakness opportunity and threat to the family adoption

programme, and it is crucial to find out the perception, views and opinion of them regarding FAP, for whom it is meant for and who are going to become Indian Medical Graduates in upcoming days. Evidence regarding students' perception is a valuable input to the success of the programme at different institutional level, at a cross section of time and also longitudinally; but only a few studies were found in West Bengal exploring the perspective of the Undergraduate Students in regard of FAP. In this background, the study was conducted with the objective to describe the perception of undergraduate medical students of NRS Medical College of different academic years during the study period, regarding the probable benefits they can gain and the allotted family can gain from FAP and to elicit their views regarding the adversities imposed by FAP and ways to improve the programme.

Methodology:

Study type and Design: An observational descriptive study was done to describe the perception of undergraduate medical students regarding FAP and the study design was cross-sectional as no follow up or intervention was planned.

Study Setting: The study was done in NRSMCH, Kolkata, West Bengal

Study Duration: The study was conducted in the month of June, 2024

Study Population: The study was done among the Medical Undergraduate students of NRSMCH

Inclusion Criteria: Students of academic years (Batch- 2020-21, 2021-22, 2022-23, 2023-24) for whom the Family Adoption Programme was implemented and who participated in Family Adoption Programme, at the time of data collection.

Exclusion Criteria: 1. Students who are involved in this research project. 2. Students who could not be contacted even after 3 attempts. 3. Students devoid of any required gadgets.

Sample Size and Sampling: Total enumeration of the study population was done.

Study Tools: 1. Pre-designed, pre-tested questionnaire 2. Google Forms platform 3. Social media (for sending the form) platforms

- Questionnaire:
 - Section-A Socio-demographic and academic information of the study population
 - Section-B Information regarding the course and the family(s) allotted in the Family Adoption Programme
 - Section-C Perception of the students regarding their benefits from Family Adoption Programme
 - Section-D Perception of students regarding the benefits of the families from Family Adoption Programme
 - Section-E Views of the students regarding Family Adoption Programme

Study Technique:- Phone calls, messages and social media platforms were used to inform about the research and follow-up

Data Collection:

- The questionnaire was developed using Google Forms and was pre-tested among the project students.
- The Form was circulated to the study population through their email IDs and WhatsApp whichever information was available.
- The sample frame was made for individual batches using names and phone numbers. A representative from the students in our group were made for each of the four batches who were responsible for the circulation of the google form links. The google form links were sent to the phone numbers of students through WhatsApp for consecutive 3 days.
- Data was collected and compiled on Google Spreadsheet and MS Excel.

Ethical Considerations:- Informed consent was obtained from all the students in electronic format embedded in the google form. Proper anonymity was maintained by avoiding collecting names and roll numbers. Necessary permissions were taken from Institutional Ethics Committee and departmental head. The study has been approved from Institutional Ethics Committee of Nil Ratan Sarkar Medical College, Kolkata (NRSMC/IEC/26/2024).

Data Analysis: The master table was prepared in MS Excel from Google Spreadsheets. The data was expressed in frequency and proportion.

Results

Among the study population who were approached, 356 students responded of whom 263 were consenting and submitted a response. Most of the students were aged between 20-22 years and 65.5% were male. Majority of the students belonged to Hindu religion and 53% of them stayed in hostel. Most prevalent medium of schooling was in English and most prevalent board was West Bengal Council of Higher Secondary Education followed by Central Board of Secondary Education. Table 1.

Table 1. Characteristics of the study participants and their adopted families (n=263)

Characteristics of study participants	Frequency (%)
Age in years	
18-19	101 (38.6)
20-22	149 (66.5)
23-24	13 (4.9)
Gender	
Male	171 (65.5)
Female	90 (34.2)
Preferred not to say	2 (0.3)
Religion	
Hindu	214 (81.3)
Muslim	41 (15.2)
Buddhist	5 (2.2)
Christian	3 (1.3)
Stays at	
Hostel	141 (53.6)
Stays outside hostel	122 (46.4)
Medium of schooling	
English	137 (52.1)
Bengali	123 (46.8)
Others	3 (1.1)
Board of schooling	
WBCHSE*	140 (53.2)
CBSE**	100 (38.1)
ISC***	19 (7.2)
Others	4 (1.5)

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Year of admission in MBBS	
2020-2021	10 (3.9)
2021-2022	14 (5.3)
2022-2023	114 (43.3)
2023-2024	125 (47.5)
Characteristics of the adopted families	
Type of allotted family	
Nuclear	172 (65.3)
Joint	91 (34.7)
Type of members present in the allotted families (at least one member)	
Pregnant or post-natal women	48 (18.3)
Under five children	128 (48.7)
Adolescent members	159 (60.5)
Geriatric members	151 (57.4)

*West Bengal Council of Higher Secondary Education;

**Central Board of Secondary Education;

***Indian School Certificate

Participants who provided an opinion, stated that their knowledge regarding role of environment and socio-economic condition on disease pathogenesis was improved and communication skills were fostered through Family Adoption Programme. More than half of them admitted that teachings in FAP had an edge over normal classroom teaching, especially in case of gathering real life experience and sharpening communication skills. Again, in communication, few of them identified areas in which they could acquire skills, like 'asking relevant questions', 'conversing with persons with diverse personality', 'discussing sensitive topics', 'developing patience'...etc., however a majority of the study population, though admits of the improvement of communication skills, have not identified any specific area of improvement. About two thirds of the students have not opined regarding learning to discuss sensitive topics, among the rest, most identified 'protecting privacy' and 'building trust' as important areas to learn discussing sensitive topics during their FAP visits. Low response rate was noted when the study participants were asked to give opinions regarding areas of improvement in Non-Communicable Diseases knowledge; among those who responded, thought 'practical knowledge', 'patient perception' and 'approach to lifestyle modification' were major

areas of learning. A vast majority, i.e., 92% students think that their understanding of the Health Care Delivery system has improved; 85.9% opined that their leadership skills has improved and 94.7% stated that their knowledge regarding health promotion has improved through FAP. Table 2.

Table 2. Opinion of the study participants regarding their perceived benefit from Family Adoption Programme

Opined areas of knowledge/skill gain [263 responded and multiple response]*	
Role of environment on spread of communicable diseases	229 (86.7)
Improvement of communication skill	207 (78.4)
Socio-economic condition	134 (50.8)
Edge over classroom teaching as per their opinion [263 responded and multiple response]	
Real life experience	133 (50.6)
Improving communication skill	63 (23.9)
Others	26 (9.9)
No opinion	46 (17.5)
How communication skills will be improved as per their opinion (250 out of 263 provided a valid opinion in multiple response)	
Direct communication, asking relevant questions	36 (14.4)
Conversing with persons of different personalities from different socio-economic strata	18 (7.2)
Empathy and politeness	6 (2.4)
Discussing sensitive topics	7 (2.8)
Local language and dialect learning	9 (3.6)
Developing patience	4 (1.6)
No opinion	178 (71.2)
Opinion regarding learning areas to discuss sensitive topics(223 out of 263 responded in multiple response)	
Protecting privacy	40 (17.8)
Building trust	29 (12.9)
Educating about STDs	14 (6.3)
Being non-judgemental	5 (2.2)
Showing empathy	8 (3.6)
No opinion	148 (66.4)

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Opinions regarding areas of improvement in Non-Communicable Diseases knowledge (122 out of 263 responded in multiple response)	
Practical knowledge	35 (28.7)
Patient perception	18 (14.8)
Approach to lifestyle modification	18 (14.8)
Health education	13 (10.7)
Effect of environment	11 (9.0)
Others	15 (12.3)
No opinion	21 (17.2)
Understanding of Health Care Delivery System	
Improved by FAP	242 (92.0)
Not improved	21 (8.0)
Leadership abilities	
Improved by FAP	226 (85.9)
Not improved	37 (14.1)
Knowledge regarding Health Promotion	
Improved by FAP	249 (94.7)
Not improved	14 (5.3)

The perceptions of the students regarding areas in which adopted families can be benefitted were sought. More than two thirds felt that the adopted families will be benefitted from FAP. On a multiple response scale, 51.7% felt that knowledge of the family members regarding communicable and non-communicable disease will improve. About one third of the study participants said that they provided direct health intervention to the families. Table 3.

Table 3. Opinion of the study participants regarding the benefits adopted families can gain/have gained from Family Adoption Programme (n=263)

Opinion of study participants	Frequency (%)
Opinion that adopted family has benefitted from FAP	
Yes	177 (67.4)
No	86 (32.6)
Areas in which adopted families can be benefitted [multiple response]	
Knowledge about communicable and non-communicable disease	136 (51.7)
Hygiene and sanitation	91 (34.6)
Information regarding health care delivery system	60 (22.8)
Information regarding available health schemes	37 (14.1)
Direct health intervention to the family	
Provided	96 (36.4)
Not provided	167 (63.6)

According to the perception of students regarding difficulties faced due to Family adoption Programme, 15.6% faced difficulties in 'Feasibility to continue FAP', 24% faced communication problems and 58.6% faced problems to manage FAP with their hectic study schedule. In all three areas where problems were faced, a significant trend was seen where proportionately more senior year students perceived problems than their juniors. Table 4.

Table 4. Opinion regarding difficulties faced due to Family Adoption Programme across background characteristics of the study participants (n=263)

Background characteristics	Feasibility to continue FAP		Total	p-value
	Feasible	Not feasible		
	No. (%)	No. (%)		
Gender**				
Male	141 (82.5)	30 (17.5)	171 (100.0)	0.264 [#]
Female	79 (87.7)	11 (12.3)	90 (100.0)	
Academic Year				
2023-24	108 (86.4)	17 (13.6)	125 (100.0)	0.037*
2022-23	97 (85.0)	17 (15.0)	114 (100.0)	
2021-22	12 (85.7)	2 (14.3)	14 (100.0)	
2020-21	5 (50.0)	5 (50.0)	10 (100.0)	
Total	222 (84.4)	41 (15.6)	263 (100.0)	

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	Communication problem faced				
	No	Yes			
	No. (%)	No. (%)			
Gender**					
Male	133 (77.8)	38 (22.2)	171 (100.0)	0.318#	
Female	65 (72.2)	25 (27.8)	90 (100.0)		
Academic Year					
2023-24	104 (83.2)	21 (16.8)	125 (100.0)	0.013*	
2022-23	80 (70.2)	34 (29.8)	114 (100.0)		
2021-22	10 (71.4)	4 (28.6)	14 (100.0)		
2020-21	6 (60.0)	4 (40.0)	10 (100.0)		
Total	200 (76.0)	63 (24.0)	263 (100.0)		
Facing problems to manage FAP with hectic study schedule					
		No	Yes		
		No. (%)	No. (%)		
Academic Year					
2023-24	65 (52.0)	60 (48.0)	125 (100.0)	0.003*	
2022-23	36 (31.6)	78 (68.4)	114 (100.0)		
2021-22	6 (42.8)	8 (57.2)	14 (100.0)		
2020-21	2 (20.0)	8 (80.0)	10 (100.0)		
Present residence					
Stays outside	48 (39.4)	74 (60.6)	122 (100.0)	0.520#	
Stays at hostel	61 (43.3)	80 (56.7)	141 (100.0)		
Total	109 (41.4)	154 (58.6)	263 (100.0)		

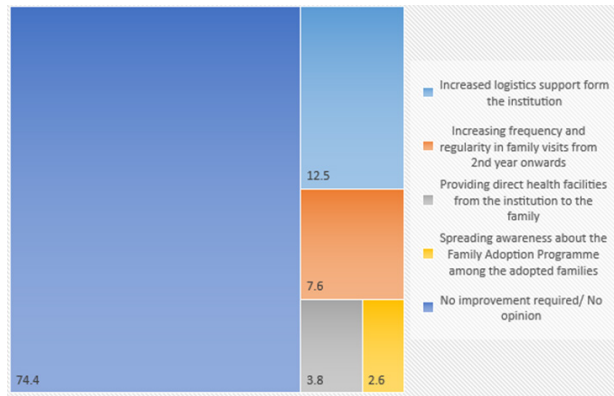
Note: #Chi square test for independence;

*Chi Square test for trend;

**2 students who did not mention Gender were excluded.

On asking for their opinion regarding scope for improvement in FAP, majority had no opinion or opined that no improvement was needed. Among the rest, opinions like ‘increasing logistics support’,

‘increasing number and duration of visits’, ‘providing direct health benefit from the institution’ were important. Figure 1.



Note: Sizes of the boxes are proportionate to the proportion of the study population with the particular opinion.

Figure 1. Opinion of study participants regarding scope for improvement for the FAP.

Discussion

Medical Undergraduate Students of NRS Medical College, West Bengal of different academic years were approached for finding out their perspective regarding FAP. The study was done quantitatively since the phenomenon was previously studied among students and an estimate of the magnitude was aimed for. To reduce social desirability bias and keep students at ease, the Google Form platform was used to conduct online interview. A total of 263 valid responses were received and analyzed.

Background characteristics of the students are comparable to the demographic characteristics of medical students in India as reported in other studies⁷⁻⁹ and unique in some perspective of West Bengal like the board of education. From the study, it is evident that FAP is well accepted by the students and its out of the classroom approach and provision to gather real life experience was acclaimed as an edge by a significant proportion of students. Participants found FAP useful in sharpening communication skills and skills to discuss sensitive topics outside their comfort zone. Similar findings were elicited in another study⁴ which quotes an undergraduate student saying *"Hospital communication is controlled by a doctor... very tense. Only the most important things are spoken. Here, the family can talk about anything with us, even gossip about neighbors' health."* However, a negative finding that significant proportion of the students had not opined should also be noted. It may be a fact that many students have faced some non-cooperation and absence of the family members hindering rapport building, so they have not reached a place to give opinion regarding areas of communication skill improvement. This is evidenced as reality in a study by Rashmi S et. al.¹⁰ Present study finds that 92% students thought that their understanding of the Health Care Delivery system has improved; 85.9% opined that their leadership skills has improved and 94.7% stated that their knowledge regarding health promotion has improved through FAP. These figures may reflect the experienced reliance and prospective confidence of students in FAP. A qualitative study to identify strengths, weakness, opportunities, and challenges of family adoption programs among students also finds a strength of FAP as 'beneficence to students' through focused group discussions

conducted among them.¹¹ More than two thirds of the study participants felt that the adopted families will be benefitted from FAP. Similar views from students have been elicited in other studies.^{4,11}

Feasibility to continue FAP longitudinally, communication problems in families and problems to manage FAP with their hectic study schedule were identified themes of adversities faced by the students. Among them, 58.6% students considered the addition of FAP a bit problematic to manage with their existing study schedule. Moreover, perceived adversities were more for senior year students. This may be explained by the fact that students who are senior year at present were the batch for whom FAP was rolled over initially. Apprehension for a new thing, absence of guidance from their seniors, for whom there were no FAP, made them feel more adversities due to FAP. Similar concerns and findings are expressed in other studies.^{5,10} Among a few opinions received from students regarding scope for improvement in the family adoption programme, a major concern was deficient logistics. Availability of transport, equipment like sphygmomanometer, weighing scale is important as every student cannot buy them for their own use. Lack of logistics or limited resources are a major concern in many medical colleges among others.^{4,12-14}

Conclusion

The study has been based on the previous qualitative research experience on student perception regarding FAP and explored magnitude of benefits perceived, areas in which they perceive and degree of adversity they feel or experience due to FAP. Study results may only have external validity at the level of the institution, but the findings have cohesion with studies conducted at other sites and may provide an important introspection and a roadmap for future multicentric studies. The fact that data was collected avoiding face to face interview may have its own limitations but also have the strength that it provided necessary space and freedom to express themselves at their feasible time. The scope of self-serving bias can also not be eliminated.

Conflict of Interest: Nil

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References

1. Undergraduate Medical Education Board, National Medical Commission Guidelines. Available from: <https://www.nmc.org.in/MCIRest/open/getDocument?path=/Documents/Public//LatestNew s/Implementation.pdf>. [Last accessed on 2024 Jan 22]
2. National Medical Commission [Internet]. 2022 [cited 2022 October30]. Available from:<https://www.nmc.org.in/about-nmc/introduction/>
3. National Medical Commission[Internet]. 2022 [cited 2022 October29]. Available from:<https://www.nmc.org.in/about-nmc/functions-of-nmc/>
4. Yalamanchili VK, Uthakalla VK, Naidana SP, et al. Family adoption programme for medical undergraduates in India - The way ahead: A qualitative exploration of stakeholders' perceptions. *Indian J Community Med* 2023;48:142-6.
5. Chakraborty A, Sarkar N, Lahiri U, et al. Family adoption program in medical education and role of community medicine in its implementation in India: An overview. *J Integr Med Public Health* 2023;2:49-53.
6. Landge J, Kasbe S, Singh R, Satardekar A. Experience of Family Adoption Programme Implementation in Phase I MBBS Curriculum in a Medical College of Western India: Family Adoption Programme Implementation. *GAIMS Journal of Medical Sciences*. 2023 Jul 18;3(2 (Jul-Dec)):74-9.
7. Mandal A, Ghosh A, Sengupta G, Bera T, Das N, Mukherjee S. Factors affecting the performance of undergraduate medical students: a perspective. *Indian Journal of Community Medicine*. 2012 Apr 1;37(2): 126-9.
8. Kumar R, Dhaliwal U. Career choices of undergraduate medical students. *The National medical journal of India*. 2011 May 1;24(3):166-9.
9. Biswas S, Bipeta R, Molangur U, Reshaboyina LR. A study to assess the quality of life of undergraduate medical students. *Open Journal of Psychiatry & Allied Sciences*. 2019;10(1):19-25.
10. Rashmi S, Kumar DS. Community as a classroom: Perception of an Indian medical graduate on family adoption program. *Clinical Epidemiology and Global Health*. 2024 Jul 1;28:101630.
11. Reshmi PS, Lunagariya R, Patel H, Patel N, Chauhan D, Patel R. Qualitative Study to Identify Strengths, Weakness, Opportunities, and Challenges of Family Adoption Programs among Students. *Indian Journal of Community Medicine*. 2024 Jul 1;49(4):610-6.
12. Annadurai K, Sharath U, Nachiyar SG. Family adoption program in medical education curriculum: National medical mission recommendations, challenges, and possible solutions for better implementations. *BLDE University Journal of Health Sciences*. 2023 Jan 1;8(1):203-4.
13. Shikha S, Kumar A, Begum J, Ali SI, Tripathy S. Family adoption program for undergraduate medical students at a new medical school of Jharkhand: An experience and SWOC analysis. *Indian J Community Med* 2024;49:218-22.
14. Mallik S. Family Adoption Program, A Way Forward to Community Based Medical Education.... Challenges Ahead. *Journal of Comprehensive Health*. 2022 Jun 30;10(1):1-3.