

# Continued Mentorship Program for MBBS Students during COVID-19 Pandemic in Virtual Mode: A Questionnaire-based Observational Study

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## ABSTRACT

**Introduction:** The Coronavirus Disease 2019 (COVID-19) pandemic situation propelled the regular student mentorship program into a virtual mode. Various surveys and studies have uncovered the ramifications on mental health and academic upheaval caused by the changing academic regulations and protocols.

**Aim:** To evaluate the perception of mentors and mentees regarding the utility of virtual mentorship and to deduce barriers in continuing virtual mode mentorship program for 1<sup>st</sup>-year medical students.

**Materials and Methods:** The present observational study was conducted at Sri Siddhartha Institute of Medical Sciences and Research Centre, from April-June 2020. A feedback form was administered to all participants after two months of the online mentorship program, via a semistructured questionnaire. The questionnaire had four open and eight close-ended responses for mentees. The contents were related to the frequency of meetings, mode of communication, perceived barriers, and futility of course, along with one open and five close-ended responses for mentors on barriers to effective conduct and perceived level of the mentoring relationship forged with students. A total of 12 mentors and 125 students responded.

**Results:** It was observed that 96% of mentees felt that the program helped to fight alienation and stay connected, 89.6% felt inspired to study and 83% felt oriented to the online teaching programs. Both 91.7% of mentors and 82.4% of mentees asked for better applications, connectivity, and network support. In fact, the major barrier to effective communication was quoted as being poor network connectivity and applications support (47%). A comparable trend was noted among both mentees and mentors with respect to the program being rated good and above (91.7% mentors and 85.6% mentees). Hence, in the observational study, via thematic analysis and content analysis of qualitative data, two points were observed-1. The virtual mentorship program helped mentees to get emotionally and academically connected, cleared their doubts, and helped to reduce stress. 2. Poor technical and connectivity support were deduced as major barriers to the successful conduct of virtual mentorship.

**Conclusion:** A well-structured virtual mentorship program guides the mentors to effectively chaperone mentees through a stressful uninterrupted academic course period, enhance academic performances and help alleviate the feeling of alienation.

**Keywords:** Coronavirus disease 2019, Medical education, Medical students, Mentee, Mentor

## INTRODUCTION

The Coronavirus Disease 2019 (COVID-19) pandemic has played havoc with traditional teaching methods of medical education with each wave creating an acute shortage of the already stressed-out healthcare staff. The psychological and academic impact of COVID-19 on medical students worldwide is well documented by various studies [1-9]. Also, the National Medical Commission (NMC) of India has significantly revamped the course duration and modalities of teaching with revised guidelines [10]. Teachers are now acclimatised to revised NMC teaching guidelines and also serving as front-line workers. Back in March 2020, a joint statement issued by the Association of American Medical Colleges (AAMC) and Liaison Committee on Medical Education (LCME) recommended the suspension of medical student participation in direct COVID-19 care and patient contact [11].

With this new normal, the shift of traditional methods to e-learning mode came into existence with groundbreaking innovations and strategies in medical education [4] including medical mentorship programs that need continued evaluation through different stages of the MBBS course [12-15]. Although the concept of mentorship existed since the dawn of the trade, it was only in the early 1990s that esteemed academies, noted pedagogues and academic policymakers began shaping this culture of mentorship into

the concept of a pivotal program that now exists in most of the medical academies [16]. Extensive research and studies have gone into understanding this process and conceptualising the most constructive blueprints for the conduct of the same in the medical field [17-21].

An institution's most valued resource is its staff and they can be used as leverage to build up the academy's repute and excellence. The mentoring program is an institution's secret ingredient adding flavour to the final brew made from the choicest of ingredients like robust research culture and scientific excellence, faculty retention and human resource management, and building of a safe gender and culturally sensitive atmosphere [2]. Faculty development programs should include collaborative mentoring [3,22].

Literature provides proof of the benefits galore achieved by this routine, not just for the institution and the mentee, but also for the profession and the society at large. An effective mentorship helps in stimulating and nurturing attributes for professional excellence, and personal growth in the protégé [23]. However, there is a lack of robust implementation of dedicated student mentorship programs in most medical colleges in the subcontinent. Also, conducting and sustaining an effective mentorship program, given the growing pandemic situation and uncertainties mirrored

by the first nationwide lockdown, requires strategic rethinking, planning, and continued evaluation. Hence, the present study was conducted with an aim to evaluate the perception of mentors and mentees regarding the utility of virtual mentorship and to deduce the barriers to continuing virtual mode mentorship programs for 1<sup>st</sup>-year medical students.

## MATERIALS AND METHODS

This questionnaire-based observational study was conducted at Sri Siddhartha Medical College and Research Centre, between April-June 2020. The Institutional Ethics Committee (IEC) approved the study [SSIMSRC/EC/0189/03-20].

During this period 150 first-year medical students received continued online mentorship with assigned mentors chairing mentoring sessions. On average, 10 group mentoring sessions were conducted by an individual mentor, in addition to the individual and group communications on WhatsApp, and social media via group audio or video calls, phone calls, and via email, during the fixed hours (Saturday noon between 2 to 4 pm) and sometimes individually, both on and off the hours as per their convenience and need of mentees.

Aspects of discussion related to academics included attendance, performance reports, barriers to comprehension and successful conduct of mentoring, and possible approaches for the resolution of the same. Aspects of discussion related to personal life were mostly about hostel life, mess food, and stress management while sensitive personal issues required limited careful counselling without being overbearing, disruptive, or threatening.

**Inclusion criteria:** All the 150 students of 1<sup>st</sup>-year MBBS, were eligible participants of the continued online mentorship program.

**Exclusion criteria:** Those who did not give consent to participate.

Participation in the study was purely on a voluntary basis and strictly anonymous. A semistructured questionnaire was prepared after convening a Consensus Committee meeting. Individual questions were validated by five faculty members, and approval was obtained after presenting in front of the mentorship committee, which included a male and female student representative. The feedback questionnaire had four open and eight close-ended responses for mentees, and one open-ended and five close-ended questions for mentors. The questionnaires were sent through a Google Forms link via WhatsApp group for 1<sup>st</sup>-year batch students and to the 12 mentors. A total of 125 (out of 150 students) responses were received within a two-weeks period.

## STATISTICAL ANALYSIS

Google Forms response reports were collected and Microsoft Excel software was used to calculate the percentage distribution of quantitative data including the Likert scale data. Coding, thematic analysis, and content analysis of qualitative data from open-ended questions were done and conclusions were drawn.

## RESULTS

The response rate was 83.3% (125/150). Most students reported having met with their mentors at least once every week (56.8%) followed by once in 15 days (25.6%) [Table/Fig-1].

The biggest negative attribute of the program, according to the 83.3% of anonymous responses, was problems with the network connectivity and clarity in communication through group calls. However, 6.4% of the students did not point out any perceived negative attribute and 9.6% of them answered on a positive note stating no negative attributes were noted [Table/Fig-2].

For the mentors, the major setback in orchestrating a successful mentoring session was the quality of network connectivity and video call options followed by inhibitions in students and a hectic work schedule. 95% of mentors rated the program as good and above.

Close-ended questions	Options	Mentee responses; N (%)
Have you met with your mentor?	Yes	125 (100)
	No	0
Frequency of meetings	Daily	8 (6.4)
	Weekly	71 (56.8)
	15 days	32 (25.6)
	Monthly	14 (11.2)
What forms of communication were used?*	Online video calls (group and individual)	104 (83.2)
	Phone calls	54 (43.2)
	Email	10 (8)
	Social media including WhatsApp.	55 (44)
My mentor has provided honest feedback for my queries	Strongly agree	48 (38.4)
	Somewhat agree	37 (29.6)
	Neither agree nor disagree	25 (20)
	Disagree	9 (7.2)
	Strongly disagree	6 (4.8)
Did you experience any difficulties or challenges in order of communication with your mentor?	Yes	35 (28)
	No	90 (72)
What was the major barrier faced in effective communication?*	Time constraints	45 (36)
	Language barrier	15 (12)
	Trust issue with allotted mentor	6 (4.8)
	Personal or health issues	30 (24)
	Lack of personal commitment	3 (2.4)
	Connectivity and network issues	57 (45.6)
How would you rate the program overall?	Excellent	55 (44)
	Very good	40 (32)
	Good	12 (9.6)
	Fair	14 (11.2)
	Poor	4 (3.2)
Did your mentoring relationship meet your objectives, needs and expectations?	Yes	111 (88.8)
	No	14 (11.2)

**[Table/Fig-1]:** Close-ended questionnaire for mentee responses. All questions carrying an \*sign are multiple response questions.

Open-ended questions	Response code categories	Mentee responses; N (%)
What did you like about the mentor program?*	Connected feeling	120 (96)
	Can orient myself to continued teaching program.	83 (66.4)
	Helped us clarify doubts	78 (62.4)
	Inspired to study well	112 (89.6)
	Ease of communication and free of thoughts	72 (57.6)
What did you not like about the mentor program?	Connectivity and communication issue	95 (76)
	Group call timing issues	10 (8)
	None/no issues with the program	12 (9.6)
	Nil response recorded.	8 (6.4)
What do you think we should change or do differently for upcoming days?*	Better internet connectivity, software support required	103 (82.4)
	Individual attention i.e. one-to-one connection is crucial	8 (6.4)
	Provide option of choosing a mentor	28 (22.4)
	Better redressal of feedback of problems with mess food etc.	15 (12)
	Need for organisation of classes for basics on how to use online resources for study.	59 (47.2)

What qualities would you like your mentors to improve upon?*	Be friendlier	91 (72.8)
	Not be judgemental	62 (49.6)
	Spend more individual face-to-face time than group interaction	10 (8)

**[Table/Fig-2]:** Open-ended questionnaire responses by mentees.  
All questions carrying an \*sign are multiple response questions

Mentees also proposed additions or changes to the existing online mentorship program, of which better internet connectivity and software support was requested, followed by the need to provide basic foundations for using online resource materials [Table/Fig-3].

Questionnaire	Responses	Mentor responses; N (%)
Did the mentorship program run as you planned? If no, why?	Yes	11 (91.7)
	No	1 (8.3) No : because of connectivity issues
Do you think virtual mentorship program was helpful?	Yes	12 (100)
	No	0
How would you describe your relationship with your mentee?	Very good	9 (75)
	Good	2 (16.7)
	Fair	1 (8.3)
	Poor	(0)
Did your student meet your expectations?	Yes	10 (83.3)
	No	2 (16.7)
How would you rate the program overall?	Excellent	5 (41.7)
	Very good	3 (25)
	Good	3 (25)
	Fair	1 (8.3)
	Poor	0
What areas of your program need improvement? (open-ended question)*	(Coded response) Internet/software issues	11 (91.7)
	Awareness of students to be free of mind	6 (50)
	Reduce workload	5 (41.7)

**[Table/Fig-3]:** Questionnaire (open and close-ended) responses by mentors.  
All questions carrying an \*sign are multiple response questions

## DISCUSSION

When the pandemic hit, students were slowly getting ushered into the new competency-based medical education curriculum, through a formal mentorship program. The pandemic brought with it unprecedented challenges and glaring uncertainties to medical students with respect to the conduct of formal classes, clinical learning sessions, and clinical and related essential skill assessment examination [1,2,3]. Although the learning shifted to a virtual platform, lockdowns and cancellation of offline academic tenor had a tremendous impact on their mental health with a few losing interest in studies and co-curricular activities [4, 5]. Studies have documented positive attributes of mentoring on mental health during the pandemic [24]. This necessitated the continuation of the mentoring program in a virtual mode. Online sessions help circumvent geographical, logistical, and scheduling restrictions [21]. However, it is important to foster interpersonal aspects of the mentoring relationship, inclusive of multimentoring strategies, ensuring clarity of expectations and communications and competence with technologies along with institutional aided mentor support online [25].

The mentorship committee comprised mentors and a program leader, who met once a month. The training by the coordinators to the faculty was arranged to continue it through online mode. The program thus structured, needed prompt evaluation for the accomplishment of intended goals which forms the basis of the present study. The present study was relevant and not just limited to the context of a pandemic situation, as more research now

continues to elaborate on nuances of conduct of virtual mode mentoring sessions in a medical academic institute [21,26-33].

The response rate in the present study, 83.3%, was comparable to similar studies [34,35]. The virtual program was well-received by mentees and mentors alike with comparable responses as 85.6% of the students and 91.7% of mentors rating the program good and beyond. Unlike the findings from studies of the pre-pandemic era [9,11,28], a significant proportion of students in this study reported having benefited personally at a mental level than on the academic level. This was mirrored in findings of similar studies from the pandemic era [25,32,33]. Also, as pointed out by Fagenson-Eland EA et al., psychosocial benefits are easily revealed in short-term mentoring relationships and a longer mentorship relationship duration is desirable to deduce career benefits [36]. In the present study, many students felt that the mentoring sessions prevented them from feeling lost and from staying connected and oriented [Table/Fig-1].

A significant proportion of students preferred more individual sessions in addition to group sessions as noted in a similar study [37]. In the present study, the most common modes of communication were through online video conferencing followed by text messages and voice calls. Data from another study showed varied patterns of mode of communication used [37]. We believe that in addition to mentee preferences, these patterns are strongly affected by the institutional mentorship program committee guidelines, the readiness of individual mentors attending to their wards, as well as financial and technical communication challenges at both ends. Also, few students suggested the option of choosing their own mentor as found in some studies [34,35,38]. However, some studies also noted that given the option, it still was difficult to choose a mentor without the institution having a formal mechanism for effective facilitation of the same [38].

There exists exhaustive literature from all fields on characteristics of effective mentoring relationships and cultivable desired traits in a mentor. As in other similar studies, mentees in the present study, sought friendlier mentors who were non-judgemental, maintained confidentiality, and were sensitive and open-minded [30,34,35,38]. Jaffer U et al., suggest that a mentor has to fit into the archetypes of being a coach, sponsor, and connector [39]. With respect to e-mentoring core competencies desirable for mentors, Markus S, enumerates seven online domains [30]. Mentoring bias, confidentiality breach, and perception of being an agent of the establishment are some of the potential downsides of faculty-led mentoring [40]. Benefits of inclusion of strategies like near-peer mentoring, multi-mentoring, and informal mentoring in addition to formal faculty mentoring need to be studied [27,41,42]. These strategies could be more effectively included using telementoring by including senior students, postgraduates, resident doctors, specialists etc. to form a corroborative mentoring web. As more and more millennial students rely on online study and research materials, the need for mentors to be on the same frequency is imperative [26,29,30]. This is reflected in the present study, where a staggering 47.2% of students wanted the institution to organise sessions guiding the use of online study material. Near peer mentoring can aid in partially addressing this lacuna [28,33]. Patel PD et al., noted that given additional guidance and recognition, residents were more enthusiastic about mentoring novices in medical school and reflected similar attitudes and techniques in the use of online social networks and mentoring techniques [26]. Hodgson JC and Hagan P observed that teaching staff adaptation response to the online mode of mentoring was tepid in comparison to that of students and that a general inhibition to using technology, social media, as well as privacy concerns with personal mobile phone contact were observed reasons [32].

The most common barrier to effective virtual communication as noted by both the students and the mentors in this study were effective network connectivity and clarity of chosen video call application as would be naturally required for a virtual course. It can be inferred that quality e-learning applications and compatible hardware are strategic investments providing high returns and can make or break the successful conduct of any aspect of professional courses [21]. Other than the actual barrier of need for technical and human resources support, among the perceived major barriers to online mentoring, mentors called for better involvement of mentees in the mentoring process, followed by workload management. These findings were also in keeping with the findings of similar studies [27,28]. Walsh K pointed out that online sessions to being more asynchronous with respect to reading each other's facial expression and body language and that the relationship becomes less secure [43]. Price MA and Chen HH showed variation in participation motivation, involvement, and personal characteristics to likely affect the maintenance of continuous interactions and render reflective influences difficult to achieve, online mode requiring coordination and management (both technical and human), facilitation and planning, and implementation and evaluation [28]. Other studies state lack of appropriate financial incentives and recognition for the work done as well as mentoring being perceived as a hobby as being major barriers to effective mentoring [38]. Similar to the findings from related studies [34,35], a significant number of students in the present study stated personal or health-related issues and time constraints as being a barrier to communication.

According to two studies, longer mentoring relationship periods lead protégés to better utilise the mentorship program, and its psychosocial rather than career impacts are easier to measure in short-term samples [24,38]. The challenges of any virtual mode sessions vary from that of offline mode sessions [27]. The COVID-19 pandemic should be seen as a major precipitator pushing the concepts of e-moderation and telementoring into major phase of adaptive programming and evolution [20]. The authors propose that similar studies be conducted in other academic centres as more data from the conduct of online sessions will benefit the development of a multicomponent strategy.

Based on the findings of the study presented at the institution's Mentorship Committee Annual Meet, involving stakeholders from the administration and student committee, an online tool kit was formulated and decisions for procurement of additional technical aids for networking and communication was undertaken. Revision of topics for training sessions for mentors was done to include insights on a combined novice, peer-, near-peer, and e-mentoring (CNEP) strategies and inter-professional team-based mentoring (IPT) programs.

### Limitation(s)

As the study was limited to studying the perception of mentors and mentees and deducing the utility of the continued virtual mode mentorship program, more data from continued follow-up of present students in comparison with newer batches, with a focus on correlation with academic performance is desirable. Correlation with academic performance was not performed in the present study as the concurrent assessment examinations conducted were also on the online mode for the very first time and numerous confounding factors could affect the deduction of correlation between perceived levels of benefits from mentoring program and academic performance. Also, inherent bias among mentors and mentees could still affect their perceived notions making it difficult to generalise the findings of the study.

### CONCLUSION(S)

A continued online mentorship program helps to provide

psychological and academic support to medical students during times they are off-limits of the campus. Corroborative mentor training along with attention to technical support like reliable network connectivity and choosing a well-reviewed user-friendly application, regular feedback procurement and self-assessment are crucial for smooth conduct of the virtual mentoring sessions.

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