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Fostering Adaptive Learners: Exploring Academic Mentoring Strategies from Students' and Mentors' Perspectives During Learning Disruption

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ABSTRACT

Medical institutions have implemented academic mentoring programs to support students in navigating learning disruptions caused by the COVID-19 pandemic. However, the strategies academic mentors employ to assist students in this context remain unexplored. This study utilised a qualitative approach and conducted in-depth interviews with 17 preclinical students and eight mentors who participated in mentoring sessions during the pandemic. The participants were selected using purposive stratified sampling. The data were analysed using a modified grounded theory approach. A total of 24 concepts, eight categories, and two core categories were generated from the data analysis. The primary goal of mentoring is to empower students to adapt to learning disruptions independently. Mentors play academic parenting roles and serve as mediators. Strategic steps in mentoring sessions involve monitoring students' adaptability, identifying their potential, and encouraging them to determine new learning strategies tailored to changing learning environments. Several enabling factors contributed to the program's success, including responsive mentors, acknowledging individual challenges, and offering tailored mentorship; students with effective communication skills and proactivity; and a robust mentoring system equipped with a well-structured curriculum, technology-enhanced mentorship, and regular faculty development. To better prepare students for potential disruptions, this study recommends integrating the development of adaptability skills into the mentoring program curriculum.

Keywords: *mentoring, master adaptive learner, learning disruption, COVID-19*

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INTRODUCTION

The undergraduate medical curriculum is marked by numerous transitions, such as a shift from being high school students to becoming medical students and preclinical students to clerkships, and frequent changes in clinical placements (1). A disruption is defined as an abrupt break or interruption (2). Disruption in education means departing from the traditionally established educational models of knowledge transmission and unexpectedly replacing them with novel models (2).

The COVID-19 pandemic has brought unprecedented changes to medical education, referred to as learning disruptions. It increased anxiety due to disruptions in usual routines and social contacts and a perceived threat to the situation (1,3). In addition to physical health concerns, the stressful nature of medical disciplines places significant psychological and social stress on students during the pandemic (3). Moreover, previous studies have reported that medical students are more susceptible to mental health issues than the general population (4). Thus, the challenges posed by COVID-19 in offline medical training have resulted in poor mental health among medical students worldwide (5).

Students need to possess coping skills such as adaptability, flexibility, and resilience to cope with challenging situations caused by disruption. Adaptability involves the realisation that previous learning strategies may no longer be effective after a disruption and seeking innovative strategies (6). Flexibility refers to being open to acquiring new knowledge and seamlessly integrating it into the current situation (7). Simultaneously, resilience is a dynamic and self-regulatory response that enables individuals to return quickly to a normal state after difficult situations (8).

These problems and the necessary skills emphasise the importance of providing academic and personal support to medical students to facilitate their success during training after disruption (9,10). The primary goal of student support systems is to develop all aspects of a student's character, including academic competency and professional identity (1).

Academic mentoring program is one of the student support systems developed by the institution to help students adapt to new situations (1,3). The institution assigns faculty members to longitudinaly

mentor students from their first semester until graduation as doctors (11). They attended meetings every semester to discuss their academic and personal development. Mentoring refers to the support provided to individuals to assist in finding solutions to problems. In mentoring, a student or mentee who cannot solve their problems independently meets a mentor to better understand oneself and one's environment to find solutions by accepting or changing the situation (12).

One of the objectives of the mentoring program is to help students develop self-regulated learning (SLR) skills (1,13,14). Students with good SRL skills continuously adjust their motivation and strategies to achieve learning tasks effectively (15). Prior to learning, students must set goals and plans (15). While learning, students must monitor their progress to be on track with their goals (15). After learning, students must reflect on their learning approach and consider modifying it for future learning tasks (15). Mentors give "guidance on the side" by helping students generate their own learning goals, plans, strategies and reflection while providing support to raise student confidence (1).

In addition to self-regulated learning skills, medical students must continuously improve and adapt to deal with disruptions and become lifelong learners (7,16,17). Disruption due to the COVID-19 pandemic reminds us of the urgent need to equip medical students with adaptive skills to keep up with a rapidly changing learning environment, requiring them to continually identify learning gaps and adapt to novel situations (18,19). Several studies have highlighted the significant role of longitudinal academic mentoring programs in supporting students during the COVID-19 pandemic (20,21), and many of these programs were found to be feasible when conducted virtually (20–22). However, the strategies implemented in the longitudinal mentoring program to support preclinical medical students facing learning disruptions remain unexplored, particularly in countries with a high-power-distance culture, such as Indonesia. Therefore, this study aimed to explore the perspectives of students and mentors regarding strategies implemented in the longitudinal mentoring program to support preclinical medical students in facing learning disruptions due to the COVID-19 pandemic.

METHODS

Study Design

We used a qualitative method employing a modified grounded theory approach (M-GTA) (23) to identify the strategies of academic mentoring programs to support students facing learning disruptions based on their experiences. We then developed a substantive theory that can be used practically, especially during mentoring sessions. M-GTA has an objective similar to that of the grounded theory approach (GTA) (24): to generate theories grounded in the data. However, unlike GTA's strict coding procedures, that data should be broken into small parts, labeling, and coding; M-GTA employs an analysis worksheet that enables the direct formation of concepts through coding (25).

Setting

The academic mentoring program at the Medical Faculty Diponegoro University was designed to monitor students' academic progress and professional development. Each mentor supervises 12 to 14 medical students from the same cohort throughout their five years of medical school. Students meet with their mentors at least once per semester, either in small groups or individually, to discuss the difficulties encountered in the previous semester and set goals for the next. During the pandemic, mentoring methods varied, with most sessions conducted virtually, a few in person, and the rest communicating only through messenger platforms.

Participants

Preclinical students who experienced disruptions in medical education due to the COVID-19 pandemic and engaged with their academic mentors were eligible to participate. Students who sought consultation from a psychiatrist were excluded. Mentors were selected from a pool of students who agreed to participate. A purposive stratified sampling strategy was employed to ensure diversity (26), considering factors such as academic year, gender, GPA, student admission pathway, gender, years as a mentor, and career position. A previous study reported that admission criteria such as the type of

high school degree and admission pathways could predict student performance in medical schools (27). The participants were purposefully selected from these strata.

Recruitment involved contacting students individually, with subsequent students contacted if the initial choice was declined or if they did not respond within a week. Mentors whose students had already agreed to be interviewed were approached. The participants received compensation in the form of e-wallet credit. We stopped inviting eligible participants when we obtained a minimum representation of each stratum. If we did not reach saturation after the first round of interviews, we intended to contact more individuals (28).

Data collection

The participants completed semi-structured in-depth interviews between November 2022 and April 2023. Guiding questions were employed to elicit the participants' descriptions of their mentoring experiences during the pandemic, the roles of students and mentors, and the factors influencing their effectiveness. Interviews were conducted face-to-face or online, depending on participant availability. Privacy was ensured during the face-to-face interviews in a private room. The interviews lasted 30-60 minutes and were digitally recorded, followed by verbatim transcription. Field notes were also taken to capture participants' facial expressions and behaviours. All interviews were conducted and recorded by a single investigator (L.P.F).

Data analysis

We applied the modified grounded theory approach (M-GTA) to analyse the transcripts (25). Two coders independently conducted the initial coding using an analysis worksheet to generate concepts from each transcript. The worksheet contained concept names, definitions, quotations, and theoretical notes. Subsequently, selective coding was conducted to synthesise the categories grouped into core categories. Regular discussions were held among the coders to reach a consensus. Data collection and analysis were concurrently performed until theoretical saturation was achieved. A diagram illustrating the reciprocal links among concepts, categories, and core categories was developed. Other

investigators (M.C and R.N.H), who were experienced in mentorship and qualitative research, reviewed the results to ensure the proper application of concepts and identify any new concepts or categories. Atlas.ti 23 software was used for data coding and organisation.

The involvement of multiple coders in each transcript and frequent debriefing with experts maintained data credibility (29). Reflexivity was maintained through regular discussions within the research team to address potential bias. Every step of the data collection and analysis was documented to ensure the dependability of the findings.

Ethical consideration

This study was approved by the Ethics Committee of the Faculty of Medicine, Gadjah Mada University (Ref. No. : KE/FK/1397/EC/2022). Before the interviews, all participants signed an informed consent form. During the consent process, the participants were informed that their responses would be published anonymously to protect their privacy. Their participation would not affect the students' grades or mentors' evaluations.

RESULTS

We conducted 25 interviews (17 medical students and eight academic mentors). After the 18th interview, we achieved saturation. Nevertheless, we evaluated the last seven interviews to ensure a variety of representations and that no significant concepts were overlooked. The participants' characteristics are shown in Tables 1 and 2.

Table 1. Medical students' characteristics (N=17)

Characteristics	n(%) or mean ± SD
Age (years)	20 ± 1.2
Academic year	
2019	5 (29%)
2020	7 (41%)
2021	5 (29%)
Gender	
Female	11 (65%)
Male	6 (35%)
GPA	

< 3.00	7 (41%)
3.00-3.50	6 (35%)
> 3.51	4 (34%)
Admission pathway	
High School merit-based admission	5 (29%)
National test-based admission	6 (35%)
Local University test-based admission	6 (35%)
Non-academic activity*	
Student organization	9 (53%)
Academic competition	2 (12%)
Art and sport	1 (6 %)
None	7 (41%)
Time of graduate as bachelor of medicine (for cohort 2019, N= 5)	
On time	3 (60%)
Delayed	2 (40%

*Participants may have participated in more than one activity

Table 2. Academic mentors' characteristics (N=8)

Characteristics	n(%) or mean ± SD
Age (years)	45 ± 9.23
Gender	
Female	5 (62%)
Male	3 (38%)
Years of experience as an Academic Mentor	
< 5 years	2 (25%)
5 – 15 years	4 (50%)
> 15 years	2 (25%)
Career position	
Clinician	4 (50%)
Academician	4 (50%)

One core category, eight categories, and 18 concepts were identified as mentors' roles, strategies, and enabling factors in facilitating preclinical students' navigation of learning disruptions due to the COVID-19 pandemic (figure 1). The results below explain each category, the associated categories, and concepts. Quotations are presented with the participant code numbers in parentheses (M is student, D is mentor, 19/20/21 is a batch of students, and the last two numbers are their sequences in the transcript).

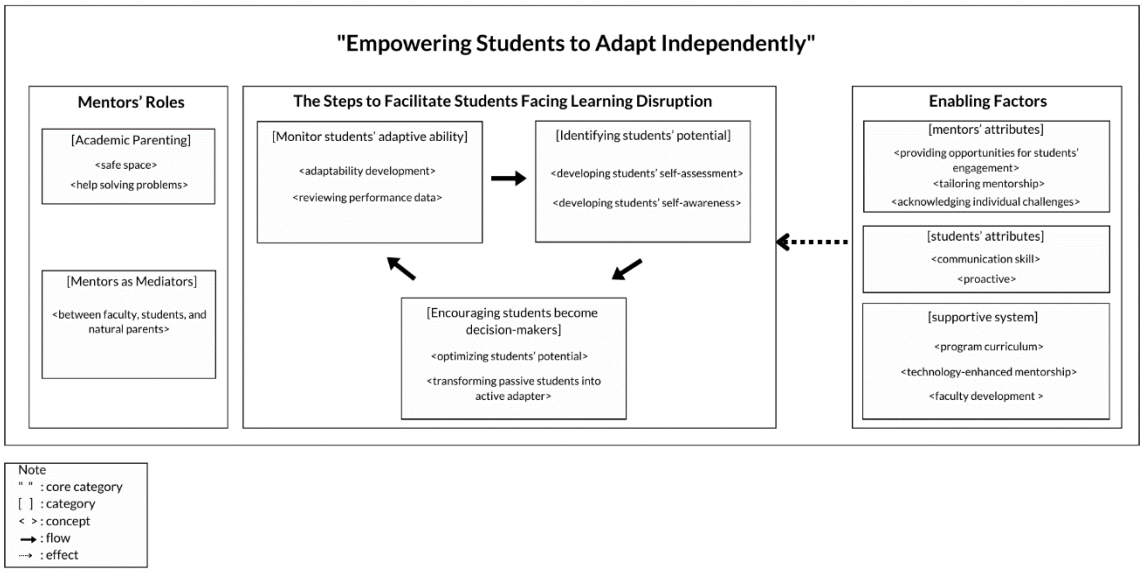

Figure 1. the Diagram of Strategy of Academic Mentoring Program to Facilitate Preclinical Students Facing Learning Disruption

Core category 1: Empowering students to adapt independently

The primary goal of an academic mentoring program that supports students in dealing with learning disruptions is to help them become self-reliantly adaptive. Initially, the students attempt to adapt by themselves. When they have difficulty adapting, they seek assistance from their mentors. This strategy fosters longitudinal and long-term interactions between the mentors and students.

> Students need to find a way to motivate themselves to be adaptive learners. In my opinion, adaptation starts from ourselves (students), how we manage our time to adapt to the transition from offline to online learning. (M2004)

> In my opinion, mentors must help students experiencing academic difficulties. The mentor allows students to share their problems and provide guidance to obtain better solutions. (M2105)

Mentor's Roles

Mentors play an essential role in assisting students to navigate learning disruptions, taking responsibility for academic parenting, and serving as mediators.

Category 1: Academic Parenting

Safe Space

Both students and mentors agree that the primary role of mentors is the substitute of parents, guiding students in academic and non-academic matters. Mentors also provide a safe space for students to voice their concerns and can be contacted at any time regarding academic or non-academic difficulties.

> Some of my friends admitted that I was brave because I encouraged myself to ask for help from my mentors. This is because I consider my academic mentor as my parent on campus. My mentor also introduced herself as my parent on campus and welcomed me to ask anything of her. Therefore, there are no boundaries between mentors and students. Like a son to his mother, whenever I have problems, I will tell her I am not okay. (M1901)

Help Solving Problems

When students face problems, mentors try to assist them in finding solutions by identifying the cause of the problem.

> There used to be something like e... problem (unprofessional behavior). We were told to meet him (mentor). He said not to do it again. Then he dug into the problem by asking the reason we did that (unprofessional behavior). (M2001)

Category 2: Mentors as Mediators

Between faculty-students-natural parents

Students find it more comfortable to share their concerns with mentors than with faculty because the mentor is more accessible. Mentors can relay these concerns to the faculty for further consideration.

They also maintain communication with the students' parents to inform them of their academic difficulties, fostering collaboration between mentors and parents to resolve the students' issues.

> Even though the students have a student body organisation that could deliver their aspirations to the faculty, they (the faculty) did not listen. If a mentor delivers them, they may listen more. (M1903)

> I keep in touch with the student's mother. I asked her how her son was doing, and reminded her of her child's responsibility. Sometimes I talked to her on the phone for almost an hour. (D2004)

Steps to Facilitate Students Facing Learning Disruption

Category 3: Monitoring the student's adaptive ability

Adaptability development

Mentors and students engaged in periodic meetings at least once a semester to discuss their learning progress and current difficulties. This monitoring continues even after the disruption period, assessing students' academic progress and their ability to adapt to the new learning environment. This monitoring persisted until the students adapted independently.

> An academic mentoring program was created to monitor the students' learning progress. If they face challenges, they should be assisted by recommendations. (D1901)

Review performance data

The mentors and students reviewed the student performance reports to track their learning progress. These data demonstrate that students can determine whether they have achieved the required competencies. These reports reflect students' adaptability processes. A decline in students' grades indicated that their adaptability was not optimal.

> During an online mentoring session, he (the mentor) checked our (students) grades. He called us one by one. Students with low grades were asked about the difficulties they faced. Students with good grades were asked to share learning tips with others. (M2104)

Category 4: Identifying students' potential

Developing students' self-assessment

In the next step, students assessed the outcomes of their adaptive processes, reflecting on their satisfaction and areas needing improvement (gap). Mentors and students collaboratively identify the causes of the gaps, which inform their selection of opportunities and resources for new learning strategies.

> I received poor grades during my online learning. Then, I talked to my mentor. I had to retake the course. She (my mentor) directed me to retake the course because she was considering my academic load. (M2101)

Developing students' self-awareness

Students need to identify their strengths, weaknesses, and potential – a skill known as self-awareness.

> Medical students must attempt to identify their potentials and weaknesses. I am certain that every student will possess these characteristics. They must also adapt to the standards of the medical schools. (D2102)

Mentors are responsible for assisting students to identify their potential. They can also recognise it based on students' track records.

> I was grateful when I received a report that my students were in trouble because I could understand their track records. Track records are beneficial for identifying which students often get in trouble, and which are active and passive. I can monitor the students' progress from it. (D1902)

Category 5: Encouraging students to become decision-makers

Optimizing students' potential

Students utilise their strengths and resources to develop new learning strategies. Mentors guide students who are still struggling in this step by offering them several options for consideration. Students lead and make decisions during these sessions, whereas mentors only facilitate this process.

> My mentor gave me several options. She asked me what I wanted and what my priority was. Then, she gave me insight and motivation. (M1901)

> I (the mentor) could not decide what module the student had to take. Thus, the final decision is up to them. I always reminded them of the risks though. (D1902)

> My mentor asked students who were going to take remedial to write a letter stating that they were the ones who decided to take remedial, even though the mentor had already suggested not to take it. (M2006)

Transforming passive students into active adapters

As students develop their adaptability skills, they identify areas in which they need improvement and seek assistance to overcome these gaps, indicating that they are actively adapting. Mentors must acknowledge this progress and provide support tailored to students' current level of adaptability.

> I did not know him (the student) when he was in trouble during the first semester. I called him and convinced him that he could share anything with me. Then, he told me his problem. Every time he was in trouble, he talked to me immediately. (D2004)

<u>Enabling factors of academic mentoring to support students facing learning disruption</u>

Mentors and students, as actors in academic mentoring programs, should have qualities that enhance the program's effectiveness in assisting students dealing with learning disruptions. The design of an academic mentoring system should be based on the specific requirements and preferences of mentors and students.

Category 6: Mentors' Attributes

Providing opportunities for student engagement

Mentors open to students' complaints and create an environment in which they feel comfortable sharing their concerns. Students prefer mentors who are easily accessible and responsive.

> If mentors set boundaries with students, they will not be brave enough to talk to the mentor because they feel inferior. (D2004)
>
> My mentor is open to her mentees and says that we can tell her about our problems. (M2001)

Tailoring mentorship

Mentors should be aware of each student's abilities and provide guidance tailored to individual student levels.

> As mentors, we should be aware of the students' abilities. Mentors' advice should be provided on a case-by-case basis. Therefore, I must consider whether they should take remedial immediately or be postponed. (D1902)

Acknowledging individual challenges

Typically, a mentor has only one session to guide dozens of students. However, this method is considered less effective, particularly for struggling students. They are uncomfortable discussing their problems in front of a large group. Thus, mentors should allocate private time for individual consultations, and the sessions should be more frequent than those for ordinary students.

> Perhaps not all students achieved excellent grades. It is possible that some of them are embarrassed. Therefore, they must see their mentors personally. (D1901)
>
> The mentoring sessions were conducted according to the students' needs. If students need more attention, I can meet them more frequently. I even contacted their parents. (D2004)

Category 7: Students' Attributes

Communication skill

Students' interpersonal skills influenced their communication with their mentors. Mentors have expressed concerns about students' communication skills, particularly during the pandemic, when virtual meetings exacerbated communication challenges.

> Since the first meeting, I remembered that I was like doing a monologue. I seemed to be talking to myself. I was trying to ask questions and joking around, but the students were unresponsive. I felt quite shocked. (D2101)

Proactive students

Students should take the initiative to consult with mentors when experiencing difficulties, as not all mentors may recognise their students' need for assistance.

> Perhaps the students felt that they needed it (assistance). For example, if approval is required, the mentor must be informed. If there are problems, we can also tell the mentor. (M2104)

Category 8: Supportive System

The interaction between mentors and students in academic mentoring programs to help students face learning disruptions will not work well if a robust system does not support it. This supportive system must have a well-structured curriculum, bolstered by appropriate technology and faculty development to train the actors.

Program Curriculum

The faculty should establish a mentoring session schedule at the beginning of the semester to ensure that students and mentors can plan their time accordingly.

> Mentoring may be more effective if a precise schedule is employed. It should not clash with other schedules. (M2102)

The number of students assigned to a mentor should be aligned with the mentor's ability to provide adequate support.

> Therefore, it is better to reduce the number of students assigned to one mentor. The fewer the students, the more engaged the interaction between the mentor and students. (M1905)

While mentoring media depend on students' needs, mentors and students can choose the most comfortable media.

> This can be considered a hybrid. We can make it more effective. For example, we did not have the time to interact face-to-face. We can meet each other through Zoom, which is good. There was a blessing in disguise of the pandemic. Now we can consult without being in the same place. (D2001)

Program evaluations should be conducted regularly by the head and secretary of the study program.

> I usually evaluate with other mentors or sometimes meet the head and secretary of the study program. We also discuss students' problems. (D2102)

Technology-enhanced mentorship

Technology should be developed to facilitate the monitoring of students' learning progress and make performance reports easily accessible.

> Sometimes, faculty members did not provide transparent and detailed performance reports. Thus, we (students and mentors) did not know how to evaluate the students' learning progress. (M2103)

The logbook keeps track of topics discussed during mentoring sessions and follow-up plans. Faculties can also use this logbook to track the progress of each student's mentoring process. Digital logbooks can replace conventional logbooks and offer greater flexibility.

> For me, a conventional logbook is impractical and is easily lost. I think it can be digitised. (M2105)

Faculty development

Faculty development programs should be conducted whenever changes occur in the learning environment. These programs should inform mentors about the new curricula and rules while enhancing their facilitation skills.

> Training, yes, but it should be periodically divided. Each session might only last half a day. There will be refreshment theory and further discussions. (D2102)

Procedure manuals should be provided to mentors for reference, clarifying the process flow and reporting structure, to help them develop the best strategy for their students.

> Sometimes, we are still confused about what the flow should be, whom I should report to, and what the follow-up will be. These should be mentioned in the procedure manual. (D1901)

DISCUSSION

Academic mentoring programs are valuable support systems offered by educational institutions to help students face learning disruptions. General mentoring strategies typically focus on broader skills, such as academic competence and professional identity (1). However, during disruptions, the mentoring approach should be tailored to develop student adaptability, enabling students to effectively respond to the novel challenges of a changing learning environment and innovate with new learning strategies. This skill is necessary for students who may encounter future disruptions or transitions in their learning (16). This skill is indispensable for physicians working in constantly changing health environment (30).

Numerous studies have highlighted the effectiveness of academic mentoring programs in helping students, at both the preclinical and clinical levels, become adaptive learners, with reference to the master adaptive learner (MAL) framework (13,21,31–35). Nonetheless, studies that explicitly describe the concrete strategies mentors employ to assist students in becoming adaptive are still limited, especially in the preclinical setting, post-COVID-19 disruption, and within a high-power-distance culture.

Adaptive students must possess self-awareness, self-evaluation, receptiveness to feedback, and the ability to create self-improvement plans (19,30,36). To achieve adaptability, they ultimately undergo the four critical phases of metacognitive processes: planning, learning, assessing, and adjusting (28). Consequently, the primary goal of a mentoring program during a disruptive period is to empower students to progress through these stages and independently become self-reliant, adaptive learners.

Mentors play a pivotal role in creating a nurturing environment, similar to parents, where students feel comfortable discussing the challenges they face following a learning disruption. Mentors act as intermediaries, relaying students' concerns to the faculty members. This intermediary role is especially beneficial in high power distance cultures, such as Indonesia, where students may hesitate to approach faculty members directly (36).

Throughout the mentoring session, the participants described three stages to facilitate student adaptability: (1) monitoring students' adaptive ability, (2) identifying students' potential, and (3) encouraging students to become decision-makers. During learning disruptions, mentors monitor the students' learning progress and assess their adaptability to the new learning environment. Adaptability can be assessed based on individual characteristics, observable behaviours, and outcomes (36). Typically, mentors begin by reviewing students' performance reports to gauge their adaptability to disruptions. If students struggle to adapt, mentors assist in operationalising the four critical phases of becoming adaptive, depending on which phase students face difficulties in (21,30).

Students usually meet mentors to review their performance and goals (13). Students are trained to reflect on their performance results through informed self-assessment, assisted by external mentor feedback (31,37). Satisfactory performance indicates the successful implementation of strategies to address learning disruptions, leading to the incorporation of these strategies into their routine learning methods. However, students must find new strategies if they identify areas that require improvement (36). Students develop self-awareness by identifying strengths, weaknesses, and potential areas for innovative solutions. A previous study also mentioned that discussions with mentors could help develop undergraduate students' self-awareness in interpreting their progress (13).

The primary role of a mentor mentioned in the literature is to guide students to find solutions and make decisions (1). They can perform this role by optimising their students' potential. Mentors provide an overview of students' characteristics and learning situations and provide recommendations for students struggling to adapt (38). However, the final decision regarding the solutions is entirely the responsibility of the student. To cultivate self-reliant adaptive learners, mentors must encourage active student involvement in their adaptation process, in alignment with learner-driven education (39). Mentors do not offer specific advice but only facilitate students depending on their adaptability level (39).

This study highlights factors contributing to the effectiveness of academic mentoring programs in supporting students facing learning disruptions, emphasising the pivotal roles of mentors and students and the supportive system.

Similar to general mentoring programmes, mentor accessibility and openness to communication are crucial for fostering student engagement and trust (11). Another characteristic of mentors that was not reported in this study is their non-evaluative role (11). Thus, faculty members should ensure that mentors lack summative authority over their mentees/students (11). The non-evaluative role is especially vital within a high-power distance culture, where mentors should receive training to facilitate safe and non-judgmental dialogue with students to encourage open communication (40).

Students come from various characteristics and backgrounds, necessitating mentor assistance tailored to their individual abilities. While the steps of mentoring strategies employed share similarities, the intensity of mentor involvement depends on the student's level of adaptability (38). Students with solid adaptive skills required less assistance, whereas those struggling with adaptation required more attention from their mentors.

Mentors pay special attention to students' communication skills in pandemic class students, as these skills may pose challenges. Many students are perceived as less responsive and inexperienced in communicating with more senior individuals, possibly because of a generational gap between mentors (baby boomers/generation X) and students (generation Z) (41). Generation Z students, who are often digitally oriented, may lack experience in face-to-face interactions (42). The COVID-19 pandemic has further exacerbated this by fostering reliance on screens and multitasking, making it challenging for students to focus on a single task at a given moment, particularly during mentoring sessions (42).

An effective support system should encompass a well-structured curriculum, appropriate technology integration, and faculty development to equip mentors with the necessary skills. This system evolves iteratively based on evaluations of previous mentoring programs, and students and mentor need assessments.

The lack of student performance data reported by the participants in this study can be addressed by implementing technology-enhanced performance data in the form of portfolios (43). A portfolio typically includes data performance, student reflections, and mentor feedback (44). It allows mentors and students to track learning and performance longitudinally, facilitating the identification of adaptive behaviours over time (16).

Although this study primarily focused on faculty development for mentors, providing early year training to medical students is imperative. Mentoring sessions promoted self-assessment, self-awareness, and decision-making skills to foster adaptability. Therefore, institutions should introduce these skills in the first semester to provide direct training and indirect instruction through learning activities (45,46).

Limitations

It is essential to acknowledge that this study was conducted at a single institution, which limits its generalisability owing to contextual factors. Additionally, this study primarily focused on mentoring strategies to help students facing learning disruptions, rather than assessing students' adaptive levels assisted by mentoring programs. Further studies should assess the impact of these mentoring strategies on students' adaptive levels. In addition, these strategies were implemented during the disruption caused by the COVID-19 pandemic and should disruptions occur in the future due to different causes, adjustments and customisation of strategies may be necessary to align with prevailing circumstances.

CONCLUSION

In summary, the main findings of this study highlight the role of mentors in establishing longitudinal interactions with students to assist them in navigating learning disruptions with the specific objective of fostering adaptive learners. The strategies employed by mentors include continuously monitoring

students' adaptive abilities, guiding them to identify their potencies, and encouraging them to decide on new learning strategies to confront disruptions. Moreover, this study underscores the significance of establishing a robust support system and shaping the characteristics of mentors and students as pivotal elements in guaranteeing the effectiveness of this program. Institutions should consider these identified strategies and enabling factors when enhancing academic mentoring programs. Empowering students to adapt should be integrated into the mentoring program curriculum to prepare them for potential disruptions in their educational journey.

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