

## Difficulties and Coping Strategies of Final Year Medical Students at College of Medicine and Health Sciences, NU, Oman during COVID 19: A Qualitative Study



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### ABSTRACT:

**Introduction:** The emergence of the COVID-19 pandemic resulted in a sudden change in medical education scene in colleges and universities. These circumstances presented many challenges for higher education faculty and students around the world but especially for medical education programs which were traditionally conducted in a face-to-face learning environment.

**Methods:** The final year MD students at College of Medicine and Health Sciences, NU were recruited for the study. This final year students had passed out their prefinal during the pandemic period and had faced trials and tribulations related to the same. After informed consent a total of 65 students participated in the focused group discussions.

**Results:** Sixty-five students participated in the study after giving consent. Six themes emerged from the thematic analysis of transcripts on difficulties the students faced, and five themes emerged on the coping strategies of students. The themes of the difficulties students faced were lack of clinical experience, technical difficulties, problems in the home environment, the phase problem, the assessments and the anxiety and depressive symptoms. Family support, good food, entertainment, books, and moments of relaxation helped the students cope with the problems they faced during the pandemic.

**Conclusion:** The sudden transition to remote learning resulted in several challenges for the medical graduates. Despite these challenges, students demonstrated a remarkable sense of resilience and perseverance which was evident in the way they had coped and moved ahead.

### INTRODUCTION

The COVID 19 pandemic had caused a lot of upheavals in the socioeconomic aspects of many countries. Educational institutions and students were also significantly affected by the pandemic. The pandemic had a significant impact on all aspects of medical education. Students faced lot of difficulties in different areas of teaching learning (1). Starting from the method of delivery of teaching learning to the different types of assessment. The difficulties of the clinical students were much higher than the preclinical students. The clinical students were stopped from attending the clinics. The alternatives were being explored with none coming close to the scenario of seeing the patient in the clinic (2). College of Medicine Health Sciences, NU, Oman was no exception to the situation. Because of the pandemic the government closed all the institutions in the country. This was a big blow to the students since their studies were significantly affected. The pandemic has brought a range of psychological consequences in students, such as fear, anxiety, and depression, as well as behavioral changes like difficulty in sleeping, stress, and eating (3). Comprehensive measures need to be taken to control the current pandemic (4). This situation was unique to year 5 and year 6 students since they had their clinical postings which were very important. Committees were formed to explore the best deal for both the clinical and preclinical students. Virtual simulation software and virtual grand rounds too were explored. However, online patient interactions with simulated patients were used to hone the clinical skills of the students. While contingency planning is an important strategy for abrupt changes in curricula, the infrequency of pandemics and other natural disasters invariably leads to inadequate preparedness (5). In addition to delivering the pre-established medical curriculum, students should also receive education and training relevant to the

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underlying circumstances precipitating the disruption to the typical methods of instruction (6). Virtual learning, defined as the delivery of learning materials and instruction using the internet, has previously been used as a solution in resource-constrained countries and in response to disasters such as the Ebola epidemic (7). Blended learning combines virtual education with traditional classroom-based education and is preferred for curricular elements that cannot be substituted with virtual components (8). Given social distancing restrictions during the COVID-19 pandemic, instruction using virtual and blended models became the educational methods of choice for pre-clinical students (3). The students were apprehensive about the nature of the course delivery and the methods of assessments. The institution had come up with solutions within a short span of time. There were doubts in the mind of everyone whether the interventions from the college were effective and had done good to the students. However, by this time the students had gone through these difficult periods and had reached their final year. This seemed to be the right time to explore what was right and what educational methods and assessment methods have been better during the pandemic. This study explored the difficulties of the students and how they had coped with the problems of learning medicine during the pandemic.

### **DATA COLLECTION**

#### **Setting and participants:**

The College of medicine and health sciences (COMHS) is the second largest medical college next to Sultan Qaboos University college. After ethics committee approval the research was carried out based on the methodological phenomenological pattern of qualitative research (9). Approximately around 120 students are recruited each year based on their grades and interview process. The sample was the MD6 students who were currently in the final year of their MD course at COMHS, NU. These students had begun their clinical postings a year ago in MD5 where they go through their major postings and minor postings for the first time. Because of COVID 19 they had to resort to online during this period. The sample was the MD6 students who were currently in the final year of their MD course at COMHS, NU. MD6 students are divided into a batch of approximately 20 each and go through psychiatry and other subjects. Three batches of students N=65 consented to participate in the study. After verbal consent, focused group discussion was held with the students asking about the difficulty they had faced and how they coped up. The recordings were transcribed, and thematic analysis was done on the transcript. The results were analyzed using QDA Miner lite.

#### **Questions used in the focused group discussions.**

Most of the questions were open-ended and the group interaction was facilitated.

Can identify yourself: Then start your answers to the questions asked.

*Questions related to difficulties faced.*

What are the difficulties faced? In terms of teaching learning process?

Did you face any problems in learning medicine? What are they?

(It can be anything which you had faced during the pandemic and lockdown.)

How was the online environment for teaching learning activities?

Were there any difficulties in going through your assessment? Can you describe them?

How was home environment for learning? Were there any problems or difficulties?

What were the social and interpersonal issues which you can think about during the pandemic?

*Questions related to Coping:*

How did you cope up with the situation?

What were the support system?

How did the family support you?

How did you spend your leisure time?

How did the college support you? Was it adequate?

### **RESULTS**

#### **Difficulties faced by the students:**

##### **Theme 1: Lack of clinical experience**

*...we were fed up because we already knew the theory but we need to know how to elicit the findings Student 1*

*.....that, like even if they show us cases, it could be a scenario, just a scenario. So yeah, it is not as good as seeing the patient and do a bed side clerking. Transcript 2.19-2.22 Student 2*

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One of the important themes which emerged during these focused group discussions is the lack of clinical experience. After the students were asked to stay at home the morning sessions were without any clinics. It took time for the institutions to come up with some alternatives. The morning sessions were filled with PBL sessions, case-based discussions and many departments resorted to use of simulated patients. Whatever substitutions were offered the students could not exactly get the experience of seeing a real patient. Though some departments claimed that simulated patients came closer to reality the students still felt incomplete about the lack of real patient interaction. Especially subjects like psychiatry had felt the advantage of having simulated patients gave them the advantage of showing cases which were discussed in the afternoon lectures. Though physical examination is stressed upon in evaluation of psychiatric cases history and mental status examination could lead on to possible diagnostic conclusions.

### **Theme 2: Technical issues**

*...i do have nine brothers and sisters four of us had to use the internet. all of us are working in the morning and have to use the internet in the morning Student 1*

The next important issue is on the technical aspect of the student teacher interface. The common issue which resurfaced repeatedly in the discussions was the internet. Some students reported that they had to buy new laptops or use the phones, which were also difficult during COVID times. New laptops were not available, shops remained closed, and all the siblings had to use the same machine at the same time. But the most difficult one was the internet issues. Few students came from remote parts of the country where the internet speeds were not in par with the city. And even if they had internet, the siblings had to attend their classes at the same time as them, their parents had to attend to their office work all at the same time. This created significant problems for the students causing frequent connection problems and disruption of teaching learning activity.

### **Theme 3: The Home Environment**

*..Sometimes my brothers will fight sometimes my sister wanted to do something so, so many things... Student 5 Transcript 1 (15.22)*

The place of study was another theme which had come up in the focused group discussions. The college environment has many spaces which motivates and helps the students study. But the home environment seems not an ideal place to study during the COVID period. During this period the students reported everyone was at home, the siblings, parents, and some relatives too. The environment was crowded, and the ambience and mood were not the ones which motivated the students to study. At one point the brothers and sisters would be playing at other moments there would be small get togethers which would also prompt the students to participate in them. Many students opined that since they were at home they had to share in the workload of their parents at home. Many of the students' younger siblings had their school closed and considered this period as holidays. This made the home environment the most difficult one to focus and study.

### **Theme 4: The "Phase" problem**

*..Because they started as phase 1 and phase 2 because of the corona situation, the full rotation is six weeks but they make it like three weeks in phase one and three weeks in phase two. Student 2 Transcript 1 (21.37)*

Once the COVID 19 started the institutions in Oman had to faced lot of difficulties. Like the international and national universities, the major problem was the one of uncertainty. The uncertainty was on many areas like what should be the changes which should be implemented in teaching learning and assessments, how long the new changes should continue, when should the students be called back to the college campus etc. The decision making was completely dependent upon the unfolding of the pandemic and government policies. This led to cautious decision making at COMHS, NU, which came up with a solution that the whole year be divided into two phases. In phase 1 the students will be completely online, and the TL activities and assessment will be online. In phase 2 if the students were allowed to go to come to the college, they would resume their regular activities. At the end of these two phases the students had a summative assessment which would be later clubbed together for the final grades. There were different problems the preclinical and clinical students faced. The more difficult ones were faced by the clinical students who go through different clinical postings for a shorter duration. This had caused difficulties for the students in grasping the concepts with minimal clinical exposure. Since there was no clinical input in phase 1, most of the time was spent in learning theory. The students had difficulty in understanding the subject and before they did, they had an assessment waiting. Because of these two phases students had to go through the difficulty of two assessments. Though the positive side is students could take the exams online from the comfort of their home environment.

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## Theme 5: The Assessments

*..I had faced problems during the exams my laptop works and ok all the time but during exam it shut down...Student 7 Transcript 1 (12.33)*

The situation demanded that the exams be conducted online. The students were from different parts of the country and not everyone had the same level of speed of internet connectivity. One of the major issues had been the time control of the exams. With the problems related to internet connectivity many could not complete the exams in the given time. This was misunderstood as purposeful delays and gave rise to many other wrong misinterpretations from the faculty. The anxiety of the students sitting at home and giving the exam made the faculty set difficult questions which were lengthy and complicated. Given the short phase of three weeks with poor understanding of the subject and this exam situation was stressful for most of the students.

## Theme 6: Anxiety and Depressive symptoms

*"you're the only one sitting at home and studying for too many hours. Or was anxious after all, was very hard. You will be compared you will be stressed all the time." speaker 6 22:01*

The general emotion around the pandemic for the students had been a uncertainty. The students were not sure when the college would reopen, what sort of teaching learning activity the university would resort to, what sort of assessments they can expect etc. Even when they called up their friends these questions remained unanswered in their mind. They were many hours after the online sessions where they had remained pondering over the outcome of such a difficult situation. This led on to sleepless nights for some students. This emotional status reflected badly upon the students in the close family circle since it was evident in their speech and behavior. Many of the students coped very well in the hostel situation because of the good companions they had. But though the family was around them the lack of support of the friends pushed them into emotional numbing and depressed feelings as they had expressed in the group discussions.

## Coping strategies of the students.

### Theme 1: Family support

*now I could say that I could not have done that alone without the help of my family... Speaker 6 (04.23)*

The students felt that the presence of family members around had helped them to overcome this difficult situation effectively. The family could literally see how difficult the life of medical student is watching their ward go through the courses. The amount of material the students must learn the number of lectures they have to attend have become an exhibit every day. The parents called them at the right time to give them food, which otherwise would have been another task in the college. In college sometimes after coming from the clinics finding time for the food becomes difficult. Frequent family get togethers provided the students with the necessary break from long online lectures. The parents could watch the difference in the workload of their kids in different colleges and different grades. They started appreciating the difficulties studying more clearly during the times students had spent in their homes due to COVID.

### Theme 2: Entertainment

*I watched a lot of movies, a lot of TV shows I played a lot of games, and I slept a lot I had a lot of relaxation. Speaker 8 (1.23)*

Being at home provided another opportunity which was not there in the college premises. The students could watch the movies they wanted to watch and the series which they had not finished in the past. The preference was given to them because the family also felt the need for them to relax. This was also one of the means of relaxation for the students. The other important avenue was playing games. The home environment was perfect to engage in the games which you wanted to play for a long time. The setup left by the siblings with the gaming consoles and titles was a wonderful way to relax after a stint at the whole day long online lectures. This opportunity was not there in the college though sometimes we do play with our mobiles. We could connect with our friends in the game platform with the proper consoles, equipment and sound system.

### Theme 3: Good food

The college canteen provides the students with healthy and tasty food. Apps like Talabat also give the students a break from the regular food they eat in the college canteen. But all the students wholeheartedly believe that home-made food is a gift. The food made with all the important ingredients of love and affection of their mother is nourishment for both the body and the soul. Sometimes the students are fed by their dear and near ones because they were online studying a difficult subject (medicine). This was a big boon for the students. Weekends provided a variety in the food since their cousins would bring their food or the students went to the relatives' place for a small get-together. This replenished their energy to study continuously and engage online with the tough subjects and long hours of online lectures.

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### Theme 4: Reading books

*"I read a lot of books"* speaker 6 05:34

During the college hours the students reported that they did not have enough time to do their regular work like studying their slides and relevant subject books. But the COVID situation had provided the students with the opportunity to read novels, regional language books and some eBooks. These books were not related to medicine and were kept untouched by the students for months or sometime years. This habit of reading books was dying a slow death in the life of students. The pandemic situation has revamped it completely according to many students.

### Theme 5: Moments of relaxation

*"I did a lot of karaoke singing. These were some moments of relaxation."* Speaker 6 03:08

Though the time in the college did provide the students with a lot of time with friends, it didn't provide them with time for themselves away from all the chatter. It did not provide the students with a time for silence or a time for reflection. But the COVID pandemic provided them a lot of opportunities for the students a time for themselves. Some students reported that they had an opportunity to unleash their hidden talents. Some sang, some danced and some even meditated for some time. These were behaviors which were relaxing for the students among all the heated online discussions. Because these students were doing a higher professional degree the family members also could understand that they needed moments like the ones mentioned above. These they had reported may not have happened in the college or hostel premises for different reasons.

## DISCUSSION

The primary aim of this study was to evaluate the difficulties experienced by final year medical students during the pandemic and to investigate the factors which helped them to cope with the difficulties. In our study, most of the students were final year medical graduates and came up with practical problems like lack of clinical exposure, problems related to internet connectivity and difficulties remaining at home. Only some of the students reported of some lack of hope, anxiety and depressive symptoms like the previous studies (10,11). These psychological effects manifested themselves as stress, anxiety and uncertainty, withdrawal, and loss of hope, exhibiting obsessive behaviors, depression, and sleep problems. Previous studies have also supported that students show a series of psychological impairments during quarantine processes and pandemics. There are many studies revealing negative psychological effects caused by COVID-19, such as fear, sadness, confusion, insomnia, depression, stress, and so forth (12–14). The psychological challenges of the students are especially associated with uncertainty of what will happen in the future. (11,15,16).

The main difficulties faced by final year medical students regarding their education were the problem of adapting to online courses and the lack of clinical exposure. The literature indicates that students have difficulty in adapting to rapidly changing educational conditions and that students in other countries experience similar problems (17–19). Students are prepared for professional life by acquiring many attributes, such as the formation of professional identity in clinical settings, role modeling, and developing doctor-patient relationships. In addition, through campus life, fieldwork, and elective courses they both develop personally and socialize (19,20). The uncertainty about how long this situation will continue and that quarantine and social distance may be required in the future increase the views on the formation of new education conditions in a "new normal" environment (17,21). This can be facilitated by care plans, interactive case studies, web-based learning activities, written work, communication activities, and class discussions (21–23). Gathering small groups online in virtual team environments, continuing student counseling to provide academic support to students, reviewing best practices examples of online training and counseling can be helpful (24,25). Faculty and staff should consider offering students virtual office hours and working together to be in communication and to help address students' academic concerns arising from the disruption. For students whose internships or research projects are affected by the pandemic, advisors should actively help students seek alternative plans, ensuring that they work from home to maximize their internship and research experience (26). The university should provide services that continue to facilitate graduation and career development for the students (19). In the future, the use of online active learning techniques as a regular addition to traditional clinical practices can improve learning outcomes and turn our students into reliable, job-ready graduates (21,26). In this context, it is recommended that higher education institutions, healthcare professionals, and nurse academics develop action courses to better support students (19). Considering the negative psychological effects of strict public health isolation measures, such as temper, anger, fear, sadness, confusion, depression, stress, and so forth (27), it is inevitable that this situation will result in family conflicts and disagreements for students. Many of the students participating in our study complained about family conflicts and tension.

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In our study, some students reported that they managed their time well and found an opportunity for their personal development. Many students reported that they had coped well with their family support, good food and relaxation. For some students the family environment was a double-edged sword but despite this they had overcome the difficult situation. To support students, it is important that university counseling centers create options to continue providing distance counseling services (i.e., telehealth counseling) to university students, within the constraints imposed by the pandemic. For example, tele mental health has been found effective in treating anxiety and depression symptoms (28) and it would facilitate the provision of counseling services to address urgent mental health concerns of students (18,29). University counseling centers can also provide options for students to join online support groups that allow them to share common concerns and receive social support (18,30). Moreover, university counseling centers should come together to develop public health messages and take action to communicate to students, share coping resources, protect students' health, and continue their education (19).

### **CONCLUSIONS**

While there were many negative aspects of the pandemic for medical students in their teaching and learning and assessments, there were also positives. Students felt the absence of face-to-face teaching and a shift towards theoretical underpinnings of the medical subject were burdensome. Some also had experienced significant levels of stress manifesting as anxiety and depressive symptoms. However, the family environment and the support offered by the near and dear ones during the lockdown gave them the strength to overcome the stress. The students also felt the major factor being the uncertainty on the timeline of pandemic which was the main reason for most of the issues. In the future universities should be prepared for adversities like pandemics in terms alternative curriculum and curricular delivery. Should develop a plan beforehand related to teaching learning activities and assessments. The stakeholders like students also should be involved in the decision making related to all the aspects of teaching-learning activities and assessments.

### **LIMITATIONS**

This study has some limitations. Our student population was only from the final year medical graduates. It would give a broader perspective if it had been from all the medical students from year one to year 6 of our COMHS, National University. Differences in education level can affect students' lives. The sample size was only sixty-four and a larger sample could have possibly resulted in various other themes.

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