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PERSPECTIVES

Medical Education in the Context of the Eastern Mediterranean Region: Professional Development Activity of Health Professionals

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Background: The development and maintenance of a high-quality medical education workforce depend on continuing medical education (CME). Traditionally, CME is delivered face-to-face, but due to COVID-19 and geographical distances, it is challenging to conduct professional development activities for several days. Using a webinar on advancement in medical education in the context of the eastern Mediterranean, we aimed to assess the participants' perspectives towards the professional development activity using a synchronous learning approach.

Methods: We used a cross-sectional survey-based study design. We invited faculty members from King Saud bin Abdulaziz University for Health Sciences (KSAU-HS) and United Arab Emirates University for Health Sciences (UAEU). We assessed their perspectives on the relevance of the content and effectiveness of the activity on their knowledge and skills after the two days' webinar series. A self-designed questionnaire was administered post-webinar immediately. Open-ended responses were analyzed thematically.

Results: One hundred thirty-six registered healthcare professionals attended day 1, and 97 registered participants joined on the second day of the webinar. Most participants appreciated the diversity of the contents, the quality of the presentations, and the expertise of the facilitators. They reported that the content optimized their knowledge and understanding of new concepts such as assessment in simulation teaching, programmatic assessment, insight into the implementation of IPE and EPAs in CBME, and so on. The e-learning platform's user accessibility, online tutor interaction, and the addition of more scenario-based case studies were all recommended for improvement.

Conclusion: Overall the two days webinar series presentations were informative and highlighted the transformation in medical practices. Suggestions to improve the quality of the webinars and content were discussed.

Keywords: medical education, professional development, health professionals, webinar

Introduction

Building and maintaining a high-quality staff for every educational institution depends on Continuing Professional Development. The Association of Medical Education in the Eastern Mediterranean Region (AMEEMR) is an international medical education organization headquartered in Saudi Arabia. Its mission is to advance high scientific and ethical standards in medical education and creative management of medical education, focusing on the Eastern Mediterranean region at all levels.[1] Since 2012, AMEEMR has provided capacity-building workshops and training opportunities to healthcare and associated professionals from Saudi Arabia, the Eastern Mediterranean Region, and overseas. All face-to-face (f2f) programs for building medical education capacity were modified and provided online using the same training nodules and materials due to the COVID-19 epidemic that has posed challenges to AMEEMR's activities, including

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professional and scientific development training. In this paper, we discuss our methodology, the difficulties we faced, the participants' feedback, and the advantages of synchronous online learning.

Depending on the timeliness of interaction, online learning is of two modalities: synchronous and asynchronous. Before COVID-19, AMEEMR had been building skills and competencies of healthcare professionals through in-house training by f2f and blended (f2f + asynchronous online learning) approach. There was a strong impetus to find and implement a suitable "pandemic pedagogy"[2] following the "stay at home" order of the Saudi government and the subsequent "work from home" policy of the Ministry of Education. Self-paced learning at a convenient time is generally seen as a strength of asynchronous training.[3] However, participants' active engagement with facilitators is crucial,[4] can be achieved through synchronous training. Furthermore, developing an online module for asynchronous learning requires considerable time and resources, which could slow down our response during the pandemic. Considering the practicality and nature of the contents, we opted for synchronous online learning. Designing effective educational development programs for practitioners in all Eastern Mediterranean region, institutions should take into account their various professional and educational needs since practitioners are considered as adult learners with individual learning styles. This might result in improved resource utilization and integration. This study intends to evaluate the AMEEMR professional development activity in order to identify strengths and limitations, and build an educational professional development program that improves the knowledge and abilities of medical health professionals. We opted synchronous online learning in view of the applicability and nature of the content.

Materials and Methods
Study Design
Our cross-sectional survey-based study was conducted from May to August 2022. Quantitative data measured self-assessment of the effectiveness of the webinars and facilitators' expertise. The qualitative responses explored participants' perspectives of the strengths, weaknesses, and suggestions for improvement of two days of professional development activity.

Inclusion and Exclusion Criteria
The study included all the health professionals from KSAU-HS and UAEU who registered for the two-day webinars. Potential participants applied through the AMEEMR-designated portal. The activity was free of charge. The webinar was accessed by participants from any location that was convenient for them.

Sample Size
Since this was a feasibility study, no sample size calculation was performed.[5] We utilized a feasibility study to identify potential strengths, challenges, prospects, and risks to evaluate the webinar's value and impact on an AMEEMR's long-term goal of capacity building. Resource availability allowed us to run two days webinar, so we enrolled an average of 136 participants. That was our normal group size and is sufficient sample size for assessing feasibility.[5]

Study Procedure
From May to August 2022, based on the prior evaluation of the AMEEMR conference, we transformed professional development activity online and included the content of the learning activities contained the contents: Challenges of medical education in EMR, program evaluation as a tool of quality education, working towards quality in medical education, the status of quality in medical education in EMR, social accountability, programmatic assessment in medical education, rethinking faculty development, and postgraduate competencies assessment. We used the KSAU-HS training management portal for course advertisement, application, enrolment, evaluation and feedback, and sharing course contents and "teams" of teams Video Communications, Inc. to host synchronous sessions that could be accessed from anywhere.[6] The total duration of each course was 10 hours delivered over two working days.

A pool of international speakers conducted the online sessions. All the speakers were experts in medical education and had profound expertise in facilitating face-to-face training in relevant areas. Based on their knowledge and acknowledged contributions to the training of health professionals and their involvement in developing similar professional development programs,

content experts from national and international institutions were identified (ie, speakers were scholars in the field of health profession education). An individual invitation e-mail was sent to the nominated experts requesting them to participate as one of speakers. Experts delivering each session were supported by a session moderator and an information technology expert, who familiarized them with the technical aspects of providing a synchronous learning activity. The learning approaches used were interactive lectures with small group activities. Most sessions started with a short video, questions, or case studies and ended with a dedicated question-answer session to make the sessions interactive. Participants could ask questions anytime using the "Raise Hand" option or write the question in the chat box. We evaluated this training using both quantitative and qualitative approaches. After each session, participants were asked to evaluate the contents and the facilitators who conducted that sessions using the Likert scale. At the closing session, participants were requested for their written feedback on the overall course of the activity, especially the challenges they faced and the areas of improvement. They participated in the evaluation after filing an automatic consent form. The consent form included the anonymously published responses from all those who participated in the evaluation. The aim was to explore their views and opinions about the practicalities of delivering professional development activities using a synchronous approach.

All responses were scored and presented as percentages using SPSS Software version 2022. We utilized thematic analysis to highlight commonalities and patterns in the participants' comments on their experiences when analyzing the qualitative data. Open coding was used in the first step to recognize critical terms and label them appropriately. To ensure that every piece of data was correctly labeled, data were checked line by line. Later, these identifiers were used to produce categories and themes. The authors reviewed the codes, which led to the emergence of subthemes and themes.

Results

We received a total of 136 online applications to attend the two days online training sessions. Of the allocated participants, 136 (100%) attended Day 1, and 97 (71.3%) attended Day 2. The commonest reason for low attendance on Day 2 was the inability to take time out of prior commitments. Another reason was that the faculty development offices of the individual universities should have made announcements.

Socio-Demographic Characteristics of the Attendees

Sixty-eight percent of the participants were from KSAU-HS. From KSAU-HS and UAEU, 41.2% of men and 58.8% of women participated in the activity. Assistant professors (26.5% of participants) made up the majority, followed by associate professors (18.4%) and consultants (14.7%), (See Table 1).

Table 1 Socio-Demographics of Attendees

Variables	N=136	Percentage
Gender		
Male	56	41.2%
Female	80	58.8%
Institution		
KSAU-HS	84	61.8%
UAEU	40	29.4%
Others (Qatar, Egypt, Oman, Bahrain)	12	8.8%
Designation		
Leaders	10	7.4%
Professor	12	8.8%
Associate professor	25	18.4%
Assistant professor	36	26.5%
Lecturer	13	9.6%
Consultants	20	14.7%
Clinical instructors	20	14.7%

Quantitative Findings

Responses of Participants Regarding the Webinar's Overall Quality

The quantitative results are presented with the caveat that this was a feasibility study that was not powered to show a difference. Most Day 1 participants (83%) and Day 2 participants (96.9%) reported that the webinar content met the stated objectives. On Day 1 and Day 2 (97.8%; 98.9%, respectively), nearly all participants expressed their willingness to suggest the upcoming AMEEMR professional development program to other healthcare providers. 72% of participants assessed Day 1's webinar effectiveness as great, while 75% rated Day 2 as excellent (See Table 2).

Participant Responses on the Overall Performance of Experts

Table 3 indicates attendees' responses on the quality of experts' knowledge, presentation style, and response to queries. Most of the participants have a positive opinion about the facilitators' expertise.

Qualitative Analysis

Four main themes emerged in the analysis of open-ended questions.

Theme I: Overall Effectiveness of AMEEMR Webinar

Category 1: Educational advantage and relevance to regional issues

Table 2 Responses from Participants Regarding the Webinar's Overall Quality

No of days	Were Webinar Objective Achieved			Would you Recommend this Webinar to Others			How Would you Evaluate the Webinar Sessions		
	Yes n(%)	No n(%)	Maybe n(%)	Yes n(%)	No n(%)	Maybe n(%)	Excellent n(%)	Good n(%)	Fair n(%)
Day 1	113 (83.1)	0	05 (3.7)	133 (97.8)	0	03 (2.2)	98 (72.1)	38 (27.9)	0
Day 2	94 (96.9)	0	03 (3.1)	96 (98.9)	0	01 (1.0)	73 (75.3)	24 (24.7)	0

Table 3 Responses from Participants Regarding the Speaker's Overall Impact

Characteristics	Day 1: Topics (N=136)				Day 2: Topics (N=97)			
	Challenges of ME n (%)	Program Evaluation as Tool of QE n (%)	Working Towards Quality in ME n (%)	Status of Quality in ME n (%)	Social Accountability n (%)	Programmatic Assessment n (%)	Rethinking Faculty Development n (%)	Postgraduates Competencies Assessment n (%)
Speaker Knowledge								
Excellent	116 (85.3)	109 (80.1)	77 (56.6)	99 (72.8)	69 (71.1)	70 (72.2)	69 (71.1)	66 (68.0)
Good	20 (14.7)	26 (19.1)	51 (37.5)	31 (22.8)	26 (26.8)	25 (25.8)	27 (27.8)	29 (29.9)
Average	0	01 (0.7)	08 (5.9)	06 (4.4)	02 (2.1)	02 (2.1)	01 (1.0)	02 (2.1)
Presentation Style								
Excellent	93 (68.4)	85 (62.5)	56 (41.2)	81 (59.6)	60 (61.9)	63 (64.9)	61 (62.9)	58 (59.8)
Good	41 (30.1)	47 (34.6)	67 (49.3)	46 (33.8)	35 (36.1)	31 (31.9)	33 (34.0)	36 (37.1)
Average	02 (1.5)	04 (2.9)	13 (9.6)	09 (6.6)	02 (2.1)	03 (3.1)	03 (3.1)	03 (3.1)
Response to questions								
Excellent	98 (72.1)	91 (66.9)	63 (46.3)	84 (61.8)	63 (64.9)	69 (71.1)	63 (64.9)	59 (60.8)
Good	37 (27.2)	39 (28.7)	59 (43.3)	42 (30.9)	32 (32.9)	25 (25.8)	33 (34.0)	34 (35.1)
Average	01 (0.7)	06 (4.4)	14 (10.3)	10 (7.4)	02 (2.1)	03 (3.1)	01 (1.0)	04 (4.1)

Almost all participants acknowledged the diversity of the topics discussed in two days AMEEMR webinar. They appreciated the quality of presentations that were very informative and relevant to the regional issues.

> Regarding knowledge, I'll say that my views and skills have been changed a lot. The experts addressed issues I did not attend before, such as insight about the implementation of IPE and EPAs in CBME

Other participants appreciated the knowledge they received from the webinar, which will help them in their practice.

> –after attending the sessions, I feel confident that now I have an understanding of the current status of ME, what we can do to improve the Quality of Medical education in the EMR, challenges, future directions and reforms for medical education in the future.

> —The speakers shared topics with reference to appropriate literature. It is related to our regional problems of medical education, information about ME in our region, importance of measuring social accountability that has impact of our university.

Category 2: Quality of the topics of discussion

The survey responses on the quality of the topics were interesting. Overall the presentations were informative and highlighted the transformation in medical practices and how clinical integrations are suggested in the basic sciences year.

> Topics of discussion were relevant to the undergraduate and the post-graduate practices in medical schools and the evidence based practices of medical education. There were many viewpoints on the necessity of a quality system for excellency in medical education.

Category 3: Role of Speakers

The role and expertise were considered one of the main strengths of the webinar. Participation of world-renowned figures in the field of Medical Education enhanced participants' interest and motivation to learn more about the current trends in medical education. As one participant stated:

> The selected themes and the distinguished speakers with long-standing involvement in health education enhanced my motivation to attend both days of webinar. Most presenters on day 1 were excellent with regards to their knowledge, expertise in the field and use of evidence to back up their assertions.

Category 4: Effectiveness of webinar and mode of delivery

Participants thought online learning was a better and more convenient professional training mode than traditional or blended training.

> The ideas of the webinar to update our knowledge was excellent. It provided us an opportunity for interaction with leaders in Medical Education in the EMR.

Most participants appreciated the interactive sessions and sharing experiences of educators from worldwide. The speakers ensured to allocate adequate time for interaction and feedback. As one participant mentioned:

> As an undergraduate teacher I found the webinar focusing on medical education for that level which was a good approach for me, as I took a 1 year medical education fellowship but most of the coverage was directed to postgraduate students and learning in that period.

> The 1st day presentations were so informative particularly talking about the transformation in the medical field which was elaborated in the second day, the quality in medical education to achieve the outcomes were discussed in the day 1, sharing of thoughts from various background were appreciated.

Theme II: Challenges/Problems of AMEEMR Webinar
Category 1: Communication and information technology

The main challenges for the attendees were late advertisement from the concerned department and technical support. The webinar platform was not friendly and interrupted very frequently. As one attendee mentioned:

Sending information to all medical college faculty on their official email was not done so many medical teachers were not aware of this conference, I myself came to know one day before through one of my professor who was one of the speakers.

In addition:

Theoretical concepts and expected implications on the impact of such webinar should be disseminated on advance. Also, Teams App on Laptop was not giving Chat Option, Had to logout and join through browser to see the chat.

Category 2: Webinar schedule

Many participants could not attend day 2 of the activity due to other professional commitments and the webinar time. The majority suggested that such activities should be conducted in the afternoon or on weekends.

It was difficult to attend all the sessions as in the morning there is conflict with work schedule. Better for next time, such activities should to be held in the evening after work so that everybody will attend.

Category 3: Language as barrier

The language was challenging to follow up on sometimes for a few participants. They argued that there should also be Arabic translation and more frequent feedback and brainstorming sessions. One of the participants points out that:

I felt that the language and material was not simple for those who do not have enough background. I would recommend that the Presentation skills and language of speakers should be chosen wisely to attract audience.

There was little consideration on feedback from the audience. The organizers forgot to put pre-symposium feedback about what we will be learnt in this webinar?

Category 4: Preference for instructional methods

Some participants thought blended learning was a better and more convenient training mode than traditional or online training. In contrast, one trainee preferred the traditional approach because it enabled him to focus on the topic for the course duration. In contrast, online learning could too easily be postponed.

I wish that this workshop was delivered face to face rather than online to facilitate more interaction, hopefully it will be face to face next time! Or Hybrid delivery, interactive, including group session.

The most commonly cited problem was the nature of lectures that were mostly more traditional than interactive, like asking appropriate questions to the attendance. Such as:

Sessions should be more interactive instead of talking and sharing bookish knowledge. Nobody did invite people to share their own experience related to the topic.

Several participants believed that although the webinar was good, using more case-based scenarios could help them understand many new concepts that emerged in medical education.

By including more experience sharing sessions, such as sharing some of current curriculums that are practicing these transformations in the medical education and the various methods of practices in different medical schools would help more. Speakers should brought more real examples and actual curriculums that is implemented in their sessions.

In contrast, one of the participants liked the format of the session and quoted:

It was amazing and please don't change anything. The topics are chosen well, the speakers were excellent, and the delivery platform was very user friendly.

Theme III: Topics to Be Included in Future AMEEMR Webinar

When asked about the topics AMEEMR professional development program should consider in the future, the participants suggested many topics, such as all aspects of quality measurement involving students, postgraduates, developing curriculum, and community services. Furthermore, the participants suggested topics about students' portfolios, how to create a comprehensive plan for period program evaluation of the medical school, technology-enhanced learning (AR, VR, and MR), Student evaluation

and simulation, Comparison between the different educational systems, and Competency framework. As many participants stated:

> I would like to attend session on how improve and collaborate in research in ME, how to implement simulation in curricula, how to attract graduates to settle and serve their communities.

In addition:

> New teaching modalities and their impact on quality of medical education is very important to discuss in upcoming course.

Theme IV: Suggestions for Improvement

Category 1: Sharing of local experiences

According to many participants, the sessions should be held in the future, focusing on scientific data specific to the region. As said:

> More speakers who are expert in the field of medical education from the region should be invited. Making a committee from other university will help.

Category 2: Improve communication system

The main concern reported was related to the dissemination of information and the use of information technology. Participants suggested:

> Should adopt a mailing list for all health sciences colleges in the region and send them the announcement a head of time of the date of the event. To boost the number of attendees, I would advise more publicity for the event.

> Though the link for registration and joining the webinar were circulated in PDF, a separate link and maybe a reminder would help for those who forget after registering.

Category 3: Frequency of professional development activities

Participants requested more webinars and faculty development activities of this kind with proper feedback from the speakers.

> We are all looking forward for more faculty development symposiums, workshops, and conferences from stalwarts like you who can change the health professions education scenario and bring excellence in the HPE in the EMRO region.

Discussion

This study aimed to assess the AMEEMR professional development activity to identify strengths and limitations. One of the objectives of AMEEMR is to build an educational professional development program. This webinar is a novel intervention in the eastern Mediterranean region that offers recommendations for enhancing the skills and knowledge of medical and healthcare professionals. The result of the study reported that of the 136 participants, the majority did appreciate the AMEEMR webinar. The literature points to this type of delivery by several universities and education centers which report utilizing face-to-face interactive sessions and workshops,[7] online,[8] or hybrid/blended approaches.9 Although most respondents took online webinars, and some desired to attend a blended face-to-face and online program. This result is consistent with the previously generated reports from an online continuing education program indicative of overall underutilization.[9]

Delivering face-to-face is advantageous since it offers learners an environment that facilitates direct communication and experience sharing between healthcare professionals.[10] In addition, it spares them from facing technical issues that often arise with online approaches, as was found in a case study that assessed the pedagogical and instructional effectiveness of healthcare practitioners' online continuing professional education programs.[11] Regarding health professionals' needs, relatively high pedagogical and information systems requirements indicate that they tend to concentrate on improving their teaching methods and increasing their information technology literacy.[12] The duration allocated for this program seems reasonable for the content provided and is similar to other programs with the same mode of delivery.[7,13] However, findings indicated that scheduling difficulties impede

professional development. These are consistent with TALIS 2018, where participants identified "professional development conflicts with their job schedule" as the most important barrier to professional development.[14]

The inability to take time out of busy schedule was the most typical reason for not attending the second day of the webinar. The participants acknowledged that they gained knowledge and skills about the recent advancement in medical education and the practicality of these for improving teaching and practice. All participants appreciated the learning approach as it was more convenient within their busy work schedules. The study results are consistent with a study conducted in Bangladesh which reported high satisfaction of trainees with the online training strategy and found the sessions interactive and, in some cases, even better than the f2f approach.[15] They liked the freedom to ask questions at any point. Some participants appreciated the private chatting option, where their queries were addressed anonymously. Small group work was regarded as the most fruitful session. Few participants indicated that the intense group activities and interactions distracted them from their fear of the pandemic. Some suggestions for improvement included extending the course, increasing session days, disseminating in advance the theoretical concepts and expected implications on the impact of such webinar, and putting pre-symposium feedback about what will be learned. There were several issues with internet connectivity, such as sessions that were occasionally interrupted for a brief period due to bandwidth variability, cellular data, and participants who found it "uncomfortable" to read documents on-screen. The majority of participants suggested increasing interactivity.

Inevitably, this study has some potential limitations. Due to time limitations, the use of a convenience sampling technique to register health professionals from KSAU-HS and UAEU. Therefore, the findings shall be interpreted carefully due to variations in participants' qualifications and experience in medical education.

The results are indeed novel because they offer practical suggestions to institutions on how to implement effective online teaching, including increasing student interaction with tutors online, enhancing the functionality of the e-learning platform, and adding more case-based scenarios to advance the field of study and significantly improve the skills of health professionals.

Practical Consideration

For continuous training, backup computers and mobile devices should be available along with internet connectivity. Because health professionals might engage in other tasks during synchronous online meetings, interactive sessions are essential; therefore, the activities selection and the approaches to teaching are of paramount significance. For group work, it is important to allow enough time, depending on how complex the breakout activities are, and to have a committed facilitator. At the start of professional development activities, suitable instructions should be given because some participants may need to become more familiar with the online platform. Also, to ensure a high attendance rate and to enable participants to accommodate their teaching and clinical work schedules, which many participants indicated, it is most vital that the activity be advertised in advance.

Conclusion

The application of the AMEEMR webinar serves as an example of how professional development may continue during the epidemic. Synchronous online learning is a practical solution with a few caveats to engage and disseminate professional development activities. Future studies should evaluate how well "The Medical Education in the Context of Eastern Mediterranean Region" has served to improve the knowledge and satisfaction of healthcare professionals to improve both the program's efficacy and the professionals' sense of efficiency. According to several meta-analyses on the effect of webinars on physician performance, future research should concentrate more on why CPD is successful.[16] A deeper understanding of the conceptual mechanisms underpinning the influence of online courses on clinical practice is necessary.[17]

Ethics Statement

This research obtained ethics approval as per the guideline involving humans. The approval of the Institutional Review Board from the Ethical Committee at King Saud bin Abdulaziz University for Health Sciences Riyadh, Saudi Arabia is available (IRB/2352/22), (RYD-22-419812-155753).

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Disclosure

The authors report no conflicts of interest in this work.

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