

# **The First Asynchronous Online Evidence-Based Medicine Course To Target Syrian Health Workers: A Pilot Study**

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# The First Asynchronous Online Evidence-Based Medicine Course To Target Syrian Health Workers: A Pilot Study

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## Abstract

**Background:** Evidence-based medicine (EBM) is of critical value, and it was implemented worldwide in order to improve the quality of the delivered health care. However, not all Syrian health professionals are knowledgeable about its importance, methodology, and implementation. Online learning about EBM might be effective in improving the learning of health professionals.

**Objective:** This study was undertaken to test the effectiveness and the feasibility of an asynchronous online course about EBM in improving the competencies of Syrian health professionals in terms of EBM.

**Methods:** An online course about the EBM was developed in Arabic and uploaded to the Syrian Virtual University platform. To register in this online course, an electronic registration form was designed and distributed to medical groups on social media. For the measurement, both the pre- and post-test had the same three sections to measure the impact of this program on the knowledge, skills, and attitudes of participants. A section in the post-test has also been added to measure the effectiveness and ease of use of this program. Student t-test was used to analyze differences between the results of the participants.

**Results:** Nineteen participants filled out the e-registration form, the pre-test was forwarded to all 11 clinical practitioners who graduated from Syrian universities. Ten of them filled out the pre-test, while seven of them completed the post-test. The online course was found to be effective in terms of EBM knowledge, skills, and attitudes at  $P=0.05$ . Also, the online course was a feasible and easy-to-use way regarding EBM.

**Conclusions:** In order for EBM to be implemented in Syria, continuous medical education programs should be designed to target clinical practitioners. Asynchronous electronic medical education is an effective and a feasible mean for introducing the concept of EBM, improving its skills, and promoting positive attitudes of Syrian clinical practitioners towards it.

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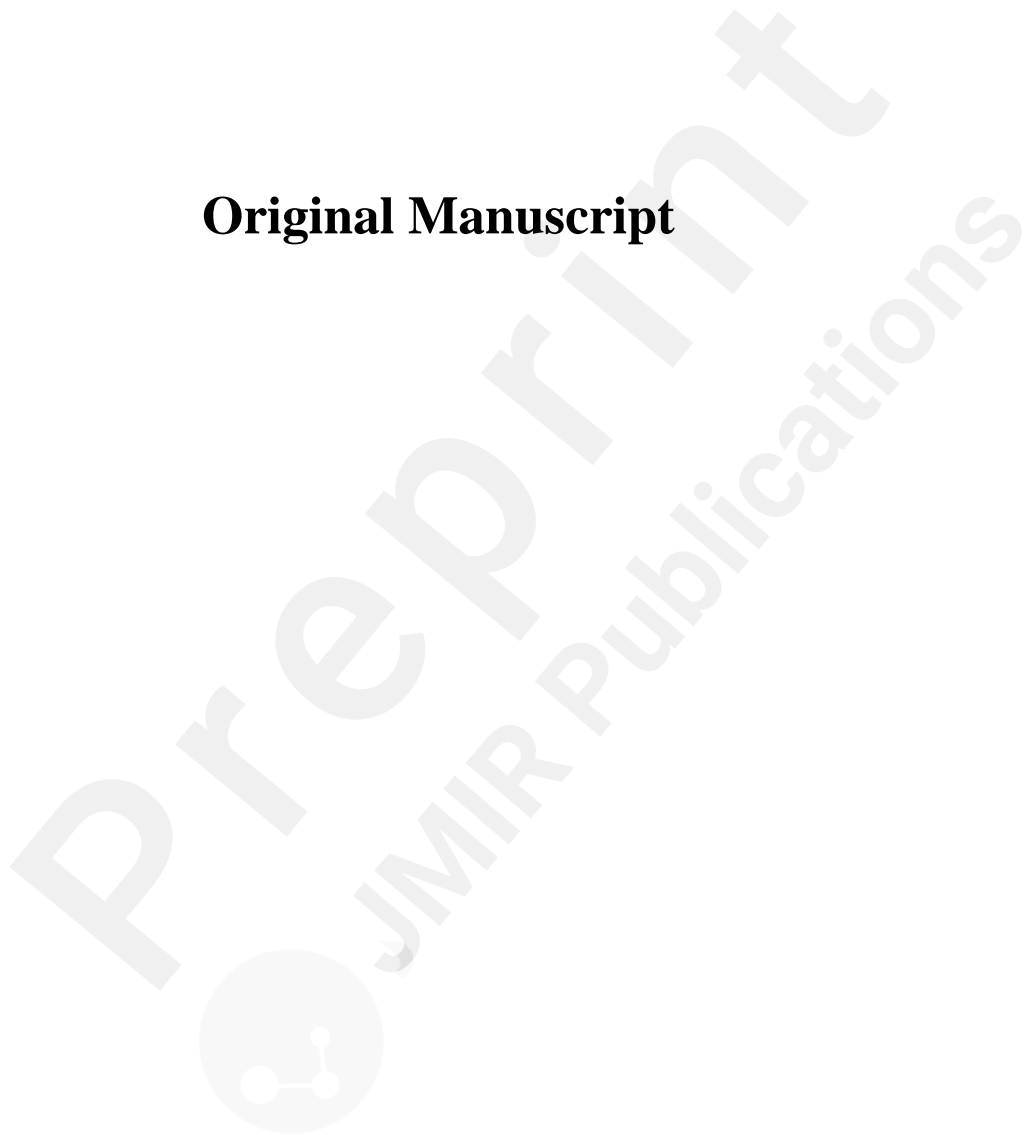
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## Original Paper

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## Abstract

Background: Evidence-based medicine (EBM) is of critical value, and it was implemented worldwide in order to improve the quality of the delivered health care. However, not all Syrian health professionals are knowledgeable about its importance, methodology and implementation. Online learning about EBM might be effective in improving the learning of health professionals.

Objectives: This study was undertaken to test the effectiveness and the feasibility of asynchronous online course about EBM in improving the competencies of Syrian health professionals in terms of EBM.

Methods: An online course about the EBM was developed in Arabic and uploaded to the Syrian Virtual University platform (SVU). To register in this online course, an electronic registration form was designed and distributed to medical groups on social media. For the measurement, both the pre- and post-test had the same three sections to measure the impact of this program on the knowledge, skills, and attitudes of

participants. A section in the post-test has also been added to measure the efficacy and ease of use of this program. Student *t*-test was used to analyze differences between the results of the participants.

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Conclusions: In order for EBM to be implemented in Syria, continuous medical education programs should be designed to target clinical practitioners. The results indicated that asynchronous online medical education is an effective and a feasible mean for introducing the concept of EBM, improving its skills, and promoting positive attitudes of Syrian clinical practitioners towards it.

Keywords: evidence-based medicine; continuous medical education; online learning; Syria; medical graduates; medical education ; online course

## Introduction

Evidence-based medicine (EBM) is the integration of well-designed research with

clinical experience and patient values that aims at developing decision-making through utilizing the best evidence [1]. The practice of EBM requires formulating a question from the clinical problem that being faced, searching the available literature to find and critically appraise the evidence in order to find the best application on the patient [2]. This process will be followed by the evaluation of each of the four last steps of EBM to make sure that the goal of EBM in improving patient care has been achieved [2].

EBM promotes a patient-centered approach by making patients' preferences and values an important component of the treatment process [3]. EBM is also a cost-effective approach since it promotes what has already been proven to be effective [4]. EBM has been of vital importance to countries with limited resources as it can benefit both healthcare provider and patient, it provides practitioners with an effective continuous medical education strategy through offering the required tools needed to keep up with the most recent scientific evidence [5], and would benefit patients as it will provide them with the best approved healthcare.

Teaching EBM was first introduced to the medical programs in 1990 at McMaster University [6]. Since then, it has started to be part of the medical programs offered in universities worldwide [7]. In the developing countries, however, teaching EBM was faced with major barriers, such as the lack of educational resources and the language barrier [5]. These barriers are more obvious in Syria as EBM was still not part of the undergraduate medical program in public universities [8]. Moreover, medical

education in Syria is delivered in Arabic and the language has been a significant barrier to learning with the vast majority of students having the desire to improve their English skills to be able to raise their scientific standards [9]. This resulted in producing doctors who are not familiar with EBM and lack the skills needed to learn about this concept on their own since educational resources regarding EBM are rare in Arabic. Another barrier is that clinical practitioners usually lack the needed time to master EBM skills [6].

E-learning is as an approach that can utilize the internet and digital technologies in order to deliver mediated, well-designed, learner-centered, and interactive learning to anyone, anyplace, and anytime according to instructional design principles [10].

Several studies found that e-learning was as effective as the traditional way of learning regarding EBM [11-13]. Furthermore, asynchronous online learning is superior to the face-to-face learning, because it offers the opportunity for learners to learn based on their own availability without worrying about a specific time or place [14]. This resulted in making this style of learning the perfect option for busy clinical practitioners, and the safest one for them as it goes in line with social distancing procedures during the COVID-19 pandemic [15].

Online learning reaches learners in different geographical places [14]. This has been of particular importance in war-torn Syria, where moving across the country is not an



option for many Syrians [16]. In addition, online learning in terms of medical education has already been proven to be successful in Syria during the ongoing crisis, and it was suggested to be further implemented to cover other health topics [17]. In terms of EBM, however, it was suggested to further implement peer-taught online course in developing countries as it was found to be an effective approach [18].

For all the above reasons, an EBM asynchronous online course was developed to be delivered in the Arabic language by a peer of the targeted study population in order to investigate its effects on Syrian medical graduates' competencies and to study its efficacy and feasibility.

## **Methods**

### **E-registration Form and Criteria of Participants**

An electronic registration form was designed using Google Forms™. It included an introduction about the online course and the reason behind choosing the internet means to deliver this course. The learning objectives of the online course were also included in that form in addition to how those objectives are connected to the learning contents of each video of the online course. The e-registration form also contained a detailed description of the expected time to finish the online course including the

duration of each video. This form worked as an advertising tool aside from its original work as a registering form. The e-form was distributed to medical groups on both Telegram™ and WhatsApp™. To be accepted in this online course, the participant should be a clinical practitioner who graduated from a Syrian medical faculty.

## **EBM Online Course**

The design of the online course followed the objective-based approach in which the learning objectives were set to meet the need of practitioners who are currently working in clinical setting and did not have the opportunity to learn about EBM in their undergraduate medical program.

The EBM online course had three main learning objectives. It aimed firstly at defining and introducing the concept of EBM with its five steps. Secondly, it aimed at improving the knowledge and skills about the methodology of EBM and its application to solve clinical problems that can be faced in clinical settings. The last learning objective bothered with the definition of Clinical Practice Guideline (CPG) and listing its importance in the clinical settings.

After setting those objectives, a screening process was made to the medical literature by one of the authors YK, who is also a peer of the targeted study population, to design the material of the online course. With the time problem and the language

barrier that deprive clinical practitioners from learning this concept in mind, 11 presentations were designed in Arabic using PowerPoint 2016™ software. Those were turned into eleven video lessons by recording the computer screen with an explanation of the presentation by YK in the Arabic language using two free video recording software, which are Loom™ and iFun Screen Recorder™. For editing purposes, OpenShot Video Editor™, which is an open-source software, was used to remove noises, silence, and errors clips from the videos. On average a lesson lasted for six minutes.

Topics were categorized into four learning units. The first learning unit talked about the first learning objective. At the start of the second unit, participants were introduced to a clinical problem, and they were asked to turn this problem into PICO format question (Patient, Intervention, Comparison, and Outcome) and search for an answer in one of the online medical search engines. It was a voluntarily task and participants were able to find out the best solution of the PICO task problem at the end of that unit. In the same unit, there was also a practical session where a clinical problem was presented, turned into a PICO question, and then a medical search engine (PubMed) was searched for an answer to that PICO question. In addition to the second unit, the third unit was also concerned with the second learning objective, it focused on the last three steps of the EBM implementation. It started by introducing the scientific evidence pyramid, then moved to defining the concept of validity and reliability. This unit was also concerned with the application of the evidence and the evaluation

process of each step of EBM. As for the last learning objective, it was covered in the fourth unit where it defined CPG, listed its components, databases and the benefits of following the recommendations of CPGs. Participants needed approximately 70 minutes to finish all materials of the EBM online course. (Table 1 shows the online course map)

Table 1. Evidence-based medicine in clinical settings online course map

Learning objectives	Learning Unit	Title of each session	Duration	PowerPoint Presentations
Defining the concept of evidence-based medicine, summarizing its benefits, and explaining its five steps	Introduction to Evidence-Based Medicine	Defining EBM	mins 5	Multimedia .Appendix 1
		The importance of evidence-based medicine	mins 8	Multimedia .Appendix 2
		Explanation of the five steps of evidence-based medicine	mins 5	Multimedia .Appendix 3
Apply the five steps of evidence-based medicine to solve clinical problems encountered during clinical work a) Convert your clinical problem into an answerable .question PICO b) Searching medical search engines for evidence using the PICO format	Clinical problem solving	PICO format	mins 8	Multimedia .Appendix 4
		How to search in medical search engines	mins 7	Multimedia .Appendix 5
		practical training	mins 5	Multimedia .Appendix 6
Apply the steps of evidence-based medicine to solve clinical problems encountered during :clinical work c) Critically evaluate .studies	Appraise, apply and evaluate our approach to solving a clinical problem	Critical appraising 1	mins 8	Multimedia .Appendix 7
		Critical appraising 2	mins 7	Multimedia .Appendix 8
		Application guide	mins 4	Multimedia

d) Application of the .Practical Guide e) defining the process of evaluating the steps of .EBM		and process calendar		.Appendix 9
Define the clinical practice guideline and explain its components and importance for health care	Clinical guidelines	Clinical practice guidelines	mins 6	Multimedia .Appendix 10
		The importance of clinical practice guidelines	mins 4	Multimedia .Appendix 11

## EBM Knowledge, Skills, and Attitudes

The EBM knowledge, skills and attitudes were defined in the context of this study as follows:

**EBM knowledge:** The understanding of the EBM triad and pointing out its importance and being able to explain the five steps of EBM with evidence pyramid. Also, defining CPG, its components and importance.

**EBM skill:** The ability to turn a clinical problem into a PICO format effectively and search for answer in online medical platforms. Apply the critical appraisal skills, the implementation of the evidence and the evaluation of the entire process.

**EBM attitudes:** The willingness to learn and improve knowledge and skills of EBM and support its implementation on a large scale among Syrian community.

## Measurements

The pre-test and the post-test were drafted in Arabic and designed using Google form™. The first section of the pre-test was concerned with the demographic information of the participants. The other three sections were designed to test the participants' knowledge, skills, and attitudes regarding EBM in the context of this study. All three sections were designed based on the learning objectives of the EBM online course. The knowledge section included 20 questions, 12 multiple choices questions (MCQs) and 8 true/false questions. To test skills, a clinical problem was introduced followed by eight MCQs about its PICO elements. The last section included 20 statements on Likert scale to test the attitudes of participants regarding EBM. As for the post-test, it differed from the pre-test by adding a section that assessed the usefulness and ease of use of the online course. This section included fourteen statements on Likert scale [19]. The assessment has been checked for content and face validity by the supervisor MD, who is an expert in the field of EBM and has been a member of Cochrane Collaboration. However, no criterion or construct validity of the questions was attempted.

## **Study Design and Procedures**

The contents of the course was validated by the supervisor MD according to the essential information presented by Cochrane Collaboration and all related international publications. After that, the course videos were uploaded to the Learning Management

System (LMS) of the SVU. The EBM online course was designed as one-group pre- and post-test study. Replies to the e-registration form expired after 72 hours. Then, participants were asked to answer the pre-test. After that, they were provided with the login data to access the online course on the LMS. On the first day, all asynchronous sessions were available for participants to enable them to attend the online course based on their own pace and schedule. The presentations and the scientific papers used to develop these presentations were provided for participants on the second day. However, these reading materials were only for more in-depth information and participants were informed as such. On the third day, an encouraging message and a reminder of the deadline, which is going to be the fourth day, was sent to participants. The post-test was shared with the participants on the last day along with an encouraging message for the participants to fill it even if they did not attend all sessions.

Participants were kept motivated during these four days by daily messaging explaining the significance of this online course and its benefits on their practice and the healthcare system. Also, they were kept encouraged to share their opinions and suggestion about the EBM online course. The degree of commitments of participants and interest in the EBM course were monitored by the research team (YK, MD), through observing and counting the number of downloads, videos watched and duration of access to the course, through a specific tracking system related to the SVU platform in collaboration with the technical support staff in the university without violation of private data and information of participants.

## Statistical Analysis

All data obtained from the pre-and post-tests were retrieved and put into EXCEL™ 2016. Paired one-tailed *t*-test was used to analyze differences between results of the participants in the pre-and post-test. The alpha value of  $P < .05$  was used to determine the statistical significance threshold.

## Ethics Approval

This study was reviewed and approved by the ethical approval committee in the Syrian Virtual University on the 15<sup>th</sup> of November 2021 (ID number: 2083/0). The informed consent was obtained from all potential participants through the e-registration form by declaring to them that the data they will share for the purpose of this research will be kept confidential and will only be used for this research.

## Results:

### Characteristics of Participants



Nineteen potential participants filled out the electronic registration form. Eight potential participants did not meet the inclusion criteria and the pre-test was sent to the remaining eleven. Regarding their gender, the participants were divided between seven males and four females. As for their medical field, eight of them were dentists, two of them were physicians, and only one pharmacist. The majority of participants, nine of them, graduated from Tishreen University, one graduated from Aleppo University, and one graduated from the International Private University for Science and Technology in Damascus. All of them were current master's students. (Table 2 shows the demographic characteristics of the participants in more detail). Ten participants filled out the pre-test, while seven completed the final test.

Table 2. The demographic characteristics of the participants

Character	Category	No. of participants
Gender	Female	4
	Male	7
Age	25 years	1
	26 years	6
	27 years	2
	31 years	1
	40 years	1
Graduation Year	2021	1
	2020	1
	2019	2
	2018	4
	2017	1
Medical Specialty	Dentistry	8
	Medicine	2
	Pharmacy	1
Master's Study	Medical Education	4
	Quality Assurance	1
	Cosmetic Dentistry	1

	Prosthodontics	1
	Oral Maxillofacial Surgery	1
	Otolaryngology	1
	General Surgery	1
	Microbiology, Hematology, and Immunology	1
Participants' self-perceived expertise in regard of EBM	One Degree	1
	Three Degree	2
	Four Degree	1
	Five Degree	2
	Seven Degree	2
	Eight Degree	3

## Efficiency and Ease of Use of the Online Course

Seven participants filled out the post-test. The majority of participants agreed on the positive statements used to test the effectiveness and ease of use of the online course. (Table 3 shows the statements and the number of participants who agree to them).

Table 3. The statements used to test the efficacy and ease-of-use of the online course and the number of participants who agreed with these statements.

The Statement	Agree/ totally Agree. n=7
The objective of the online course was clear	7
The content of the online course was understandable	7
The online course met my expectations	7
The online course offered me sufficient information for an introductory course	7
The content of the online course matched my educational level	7
I will be able to use what I learned in this online course	7
The content of the online course fits to my work setting	5
This online course will help me to better practice EBM	7
This online course will help me to improve the quality of my work	7
The difficulty level of the online course was appropriate	6

The online course was presented in a clear logical manner	7
The online format was a good way for me to learn EBM	7
I enjoyed taking the online course	7
I would like to take more of this kind of online course	7

The overall satisfaction with the online course was high, as four participants rated their satisfaction at 9 out of 10, while the other three participants rated their satisfaction at 10.

Most of the participants attended all asynchronous online sessions, while only two could not attend the last one. Most of them tried to solve the PICO task, as only one participant did not attempt to do so. Also, all participants agreed on communicating with them in case of another online course was developed in the future. The practical training session and the PCIO format session in the second learning unit were the most interesting and useful for four participants. Two of them found that the entire training program was useful and interesting, while one participant liked the topics of the third and fourth educational units. As for the least interesting and useful aspect, three participants answered with nothing of the online course being not interesting or useful. Two of them commented that having many definitions and terms affected the enjoyment and clarity of the learning process. Only one participant saw that the first lesson of the third unit was the least interesting and useful. The online course was feasible as the design of its materials and presenting them in asynchronous online sessions were utterly free of charge.

## Knowledge, Skills, and Attitudes of the Participants Regarding EBM

Only the results of the participants who completed both the pre-and post-test assessment were included. The data were exported from the Google form™ in Excel format. Paired one-tailed student *t*-test was done three times to each group of the data representing each of the three sections of the assessment. The online course showed that it is effective in terms of improving evidence-based medicine competencies. The average score in the knowledge section has clearly improved after attending the online course from 8.4 to 15, an improvement which was statically significant ( $P=.002$ ). As for the evidence-based medicine skills, even though it was a small increase in the average score between the pre- and the post-test from 3.1 to 4.4. However, it was still a statistically significant improvement ( $P=.03$ ). The average score in the attitudes regarding evidence-based medicine was improved in medical graduates who did not receive EBM training during their undergraduate years from 66.5 to 79.5, which was also statistically significant ( $P=.001$ ). The standard divination, however, was always greater in the post-test scores when compared with the pre-test, with the knowledge section having the greatest difference of the STDEV between the pre- and post-test. (Table 4)

Table 4. Participants' score (x) in the pre- and post-test

	Knowledge Section (x/20)		Skills Section (x/8)		Attitudes Section (x/ 100)	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test

X <sub>1</sub>	7.00	18.00	3.00	6.00	66	83
X <sub>2</sub>	6.00	14.00	1.00	3.00	68	80
X <sub>3</sub>	8.00	14.00	3.00	3.00	65	79
X <sub>4</sub>	10.00	18.00	4.00	7.00	63	75
X <sub>5</sub>	9.00	15.00	3.00	4.00	74	77
X <sub>6</sub>	9.00	7.00	3.00	2.00	60	71
X <sub>7</sub>	10.00	19.00	5.00	6.00	70	92
Average	8.4	15	3.1	4.4	66.5	79.5
STDEV	1.5	4	1.2	1.9	4.6	6.6
P	002.		0.03		001.>	

## Discussion

### Main Findings

Utilization of online learning in medical education can result in several opportunities for medical students. There are several online learning modalities that can improve clinical training such as simulation technology, synchronous learning delivery, and web-based or videoconferencing for standardized patient-based training [20]. In Syria, however, despite the growing demand for online medical learning resources, online learning there is still in its early stages [21]. Moreover, identifying English as a language barrier in Syria means that it is unlikely for Syrian clinical practitioners to benefit from the large already-existed English online learning resources [9]. Furthermore, the current situation in Syria makes it hard to organize a traditional course [17].

To the best of our knowledge, the course that was designed as part of this study was the first one in Syria to rely entirely on the asynchronous online means and to be

designed and delivered by a peer of the targeted study population in the Arabic language about evidence-based medicine. Additionally, it is the first online learning course in Syria that targeted clinical practitioners who did not have the opportunity to be introduced to EBM during their undergraduate level in an attempt to come up with a feasible yet effective way, in which EBM practice will be promoted in Syria and to reveal more of the opportunities that online learning offers in a low-resource and an unstable environment like the Syrian one. A goal that was achieved since there were a significant improvement in EBM learning after attending a course that was designed using open-sourced software programs.

Kirkpatrick's evaluation strategies represent one of the most comprehensive strategies for evaluating organizational training [22]. This online course was also found to be successful when being evaluated using the adaptation of that model to e-learning environment [22]. The assessment of the course shows a clear satisfaction, enjoyment, improvement in participants' learning and willingness to apply what they have learned after attending this course.

The concept of EBM was introduced in a way that is not only feasible but also goes in line with the social distancing procedures imposed by the threat of the COVID-19 pandemic. Also, asynchronous online learning was found to be suitable for the busy-scheduled clinical practitioners, as they all were able to attend approximately all sessions in just four days.

For EBM skills, this online course focused on acquiring practitioners with the needed

skills to practice EBM in clinical settings. Given the fact that there is pre-appraised evidence available online, this online course focused on the first two sets of EBM skills in formatting a clinical question and searching the literature online. For that purpose, the PICO task was designed and presented to be solved voluntarily by the participants followed by general feedback on that task. In addition to designing a practical session where the process of searching an online search engine was presented. Moreover, a population of clinical practitioners was targeted to try to make this EBM online course clinically integrated, as it was found that EBM skills can be best fostered during ward rotation [23]. These were found to be effective techniques as EBM skills were significantly improved in this 70-min- online course, which was provided over four days.

Nevertheless, the e-registration form with its content worked as an effective advertising tool for the online course, as more than half of the potential participants rated their self-perceived expertise regarding EBM with five degrees or above.

## **Limitations and Suggestions**

This was a pilot study conducted only on a small number of medical graduates. This limitation made it hard to study the effectiveness of the online learning method on elderly clinical practitioners, as they often have technophobia, which makes online

learning difficult for them [24]. Also, it is assumed that only participants who were interested to learn the concept of EBM had joined, which could raise bias in the results. The future work, however, will be on a larger more diverse sample, and critical appraisal tasks will be designed with general feedback to be delivered in the same technique done for the PICO task to reveal more benefits of the online learning in terms of evidence-based medicine.

In the future, it is possible to adopt a peer-review strategy to communicate feedback provided by participants on the work of their peers before introducing the general feedback and study the effectiveness of such an approach and its reflection on the participants' EBM skills. Specifically, that peers' role was found to be effective in improving EBM skills, which can overcome the limited number of EBM experts in Syria [18]. The effect of including a test after each asynchronous session is also worth studying as it enhances the retention rates since participants feel more engaged [25].

Since this Continuous Medical Education (CME) online course was found to be effective as an introduction of EBM, it can be disseminated further as part of a larger CME program to familiarize all clinical practitioners, who did not have this opportunity during their undergraduate studies, with the concept of EBM. It can also be presented at the undergraduate level as an introduction before going into the newly developed official curriculum.



## Comparison with Prior Work

The findings obtained through this research are consistent with the previously obtained findings that e-medical education is effective and feasible in terms of EBM knowledge and attitudes [11-12,26]. These studies focused on the comparison between the e-learning method and the lecture-based method, but they did not study the effects of e-learning on EBM skills. For EBM skills, e-learning was found to be effective, however, in an eight-week-long e-module where there was a tutor with experience in teaching EBM responsible for providing feedback on the multiple exercises and assignments incorporated in that e-module [13]. In another study, it was also found that e-learning can improve EBM skills. However, the e-module designed in that study contained summative, formative, and individual assessments [27]. In this study, EBM skills were improved by providing general feedback on a given task. Unlike this study, a 90-minute-long introductory EBM e-module, which consists of set of screens without explanation of those screens, failed to improve EBM skills, but succeeded in improving EBM knowledge and attitudes [19]. This online course improved EBM skills significantly in 70-minute-long video recordings of explanations for sets of presentations. In Syria, two other studies were found that were concerned with EBM teaching. The first one was based on the traditional way of learning to teach undergraduate population, and it was taught by experienced EBM instructors [8]. The second one relied on both asynchronous and synchronous types of online learning and

the online course was delivered over six weeks [18].

## Conclusions

Transforming healthcare in Syria from relying on expert opinion to relying on the latest scientific evidence starts by teaching the concept of evidence-based medicine at the undergraduate level and as a continuous medical education program. This study showed that asynchronous online medical education effectively introduces the concept of EBM, delivering its skills and promotes positive attitudes of Syrian clinical practitioners. Also, an online course that was designed with simple and accessible means was highly feasible and has been well received by the participants.

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## Conflict of Interests

All authors report no conflicts of interest relevant to this article

## Abbreviations

EBM: Evidence-based Medicine

MCQs: Multiple choices questions

PICO: Patient, Intervention, Comparison, and Outcome

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## Supplementary Files

English version of the Measurement of EBM online course.

URL: <http://asset.jmir.pub/assets/d2043ea4cc91610db1422cbcb59e0fce.docx>

The response letter.

URL: <http://asset.jmir.pub/assets/3f506f42965396a40b14ebade3e6e848.docx>

EBM Online Course data and statistical analysis.

URL: <http://asset.jmir.pub/assets/feedf1621cac0879f166cbd5a137c102.xlsx>



## Multimedia Appendixes

1st Lesson in the 1st Educational Unit PowerPoint Presentation.

URL: <http://asset.jmir.pub/assets/98e76024280bfe804fc5af7ae86c6ede.pptx>

2nd Lesson in the 1st Educational Unit PowerPoint Presentation.

URL: <http://asset.jmir.pub/assets/523a899d4b5d68cb77c439e00eff53f6.pptx>

3rd Lesson in the 1st Educational Unit PowerPoint Presentation.

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1st Lesson in the 2nd Educational Unit PowerPoint Presentation.

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2nd Lesson in the 2nd Educational Unit PowerPoint Presentation.

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1st Lesson in the 4th Educational Unit PowerPoint Presentation.

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2nd Lesson in the 4th Educational Unit PowerPoint Presentation.

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