Faculty development programmes in medical education in the Eastern Mediterranean Region: a systematic review

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Abstract

Background: Faculty development is essential for enhancing medical education. The World Health Organization in 2013, promoted faculty development based on moderate quality of evidence and conditional recommendations.

Aims: To conduct systematic review of faculty development programmes in medical education in the Eastern Mediterranean Region (EMR), during 2013 to 2020.

Methods: A systematic research was conducted in PubMed, Google Scholar, EMBASE and ERIC using appropriate Boolean operators. Articles in English from the EMR, explicitly mentioning "faculty development" in medical education, in the title, abstract or anywhere in the text, during 2013–2020 were included.

Results: Two thousand three hundred and forty-seven (2347) articles were retrieved, of which 54 were considered for further analysis based on Kirkpatrick's Model for program evaluation. Articles were grouped into 4 themes: evaluation of new interventions (n = 21), evaluation of already implemented interventions (n = 13), needs assessment (n = 16), and recommendations and guidelines (n = 4). It was revealed that 23 studies addressed level 1 (reaction), while 4 studies addressed level 4 (results) of the Kirkpatrick's Model of program evaluation.

Conclusion: Faculty development should be need-based and provide hands-on training. Longitudinal programmes are recommended for maximum benefits.

Keywords: faculty development, education and training, systematic review, transforming

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Introduction

It has been documented that almost all countries experience shortages of health professionals accompanied by inadequate skills eventually affecting millions of people without proper access to primary health services (1). The World Health Organization (WHO) has emphasized that health professionals form one of the 6 building blocks of the health care system and therefore issued guidelines exclusively focused on "transforming and scaling up health professionals' education and training" (2) and urged all countries to strengthen education and training of health professionals to achieve the objective of universal equitable access to good quality health services (2–5).

The WHO has identified 5 critical domains to ensure the provision of rational policies and scientific guidelines for integrating professional development of health professionals' education and training to achieve responsive health care delivery:

- education and training institutions,
- accreditation and regulation,
- financing and sustainability,
- monitoring and evaluating,
- governance and planning.

The domain "education and training" is given primary importance with the vision of bringing greater alignment between educational institutions and health care systems (6). Taking into consideration the available scientific literature support and existing policy issues, 12 essential recommendations were put forward (2). These areas were identified by WHO on the basis of 2 parameters, "quality of the evidence supporting these recommendations" and "strength of the recommendation" (Table 1).

Considering the quality of the evidence, level of recommendation and institutional strength, this review focuses on faculty development in medical education in the WHO Eastern Mediterranean Region (EMR).

Globally, many researchers have acknowledged that when faculty members are not properly trained, it not only affects the students' learning but also the well-being of the larger population, who seek them for their health needs (7).

Education experts recommend a culture of faculty development that fosters the skills of reflective teaching grounded in the observation of student learning through formal and informal opportunities (7). To prevent

Table 1 List of recommendations for transforming and scaling up the education of health professionals and training based on quality of evidence and strength of recommendation (after WHO) (1)

Key area	Recommendation	Quality of supporting evidence[a]	Strength[b]
Faculty development	1. HPETI should consider designing and implementing continuous professional development programmes for faculty and teaching staff relevant to the evolving health care needs of their communities.	Moderate	Conditional
	2. Governments, funders and accrediting bodies should consider supporting mandatory FDPs that are relevant to the evolving health care needs of their communities	Low	Conditional
	3 .HPETI should consider innovative expansion of faculty, through the recruitment of community-based clinicians and health workers as educators	Low	Conditional
Curriculum Development	4. HPETI should consider adapting curricula to the evolving health care needs of their communities.	Low	Conditional
Simulation methods	5. HPETI should use simulation methods (high fidelity methods in settings with appropriate resources and lower fidelity methods in resource limited settings) of contextually appropriate fidelity levels in the education of health professionals.	Moderate	Strong
Direct entry of graduate	6. HPETI should consider direct entry of graduates from relevant undergraduate, postgraduate or other educational programmes into different or other levels of professional studies	Moderate	Conditional
Admission procedures	7. HPETI should consider using targeted admissions policies to increase the socioeconomic, ethnic and geographical diversity of students.	Low	Conditional
Streamlined educational pathways and ladder programmes	8. HPETI should consider using streamlined educational pathways, or ladder programmes, for the advancement of practising health professionals	Low	Conditional
Inter-professional education	9. HPETI should consider implementing inter-professional education in both undergraduate and postgraduate programmes.	Low	Conditional
Accreditation	10. National governments should introduce accreditation of health professionals' education where it does not exist, and strengthen it where it does exist.	Low	Strong
Continuous professional development	11. HPETI should consider implementing continuous professional development and in-service training of HPs relevant to the evolving health care needs of their communities.	Moderate	Conditional
Governance and planning	12. Government at the highest level should demonstrate political commitment for HPETI. Formal collaboration and shared accountability between the Ministry of Health, the Ministry of Education, and other related ministries. A national plan to produce and retain graduates informed by the needs and absorptive capacity of the labour market, and aligned with the national creation or strengthening of national or sub-national institutions, capacities or mechanisms to support transforming and scaling up health professionals' education and training.	–	–

HPETI = health professionals' education and training institutions.
[a]WHO followed the GRADE system, which categorized the quality of evidence as high, moderate, low and very low (based on nature of study design, potential bias, imprecision data, ethical issues, inconsistency of results, dubious publication, dose response, confounders, etc.).
[b]The strength of the recommendation echoes the degree to which the Guideline Development Group was positive that the anticipated benefits were greater than the potential risks.

unexpected misalignment of the faculty development programme with health care delivery needs, several points should be considered before implementation such as recognizing the institutional/administrative culture, conducting needs assessment, integrating principles of adult learning into the instructional design and so on (*8,9*). Several systematic reviews have reported either faculty satisfaction or changes in their attitudes, knowledge or skills as a result of participating in the faculty development programme (*8*).

This review was carried out to capture the scientific literature available in the EMR in terms of faculty development.

Our objective was to conduct a systematic review of interventions, guidelines, needs assessment and evaluation of faculty development in the field of medical education in the Eastern Mediterranean Region during the period 2013–2020.

Methods

Formation of task force group

A task force group of 3 educators from the College of Medicine and Medical Sciences, Arabian Gulf University, was formed. The criteria for selection were:

- completion of formal training in medical education (all members of the task force group have PhD in medical education),
- proven practical experience in faculty development,
- proficiency in educational research methodology.

Development of a conceptual framework

The initial phase of brainstorming of the task force group led to the development of a conceptual framework to guide literature review. This framework recognizes the fact that faculty members of medical education play several roles, of which teaching is inevitable. It underscores the truth that there are multiple factors which influence the teaching ability of the faculty, and that faculty development programmes have been shown to advance the skills of the medical faculty at various levels resulting in different types of outcomes. It was decided to analyse outcomes of these interventions, based on Kirkpatrick's Model of educational outcomes (*10*), which proposes a practical matrix for this purpose, with 4 levels of outcomes: learners' reaction (satisfaction/perception towards the educational experience); learning (demonstrable changes in any of the domains of knowledge, attitude and skills); behaviour (application of newly acquired skill in to practice) and results (changes at a higher level such as patient outcome, institutional growth, etc.). It was emphasized that these outcomes may not be hierarchical, and this model represents a holistic and broad evaluation of an educational training programme (*8*,*11*).

Design

Based on the literature support (*8*,*12*), we decided to focus on the theme "faculty development" (*2*). We unanimously agreed to include articles which explicitly mentioned "faculty development" in the title, abstract or anywhere in text. All forms of activities (workshops, webinars, fellowship programmes) irrespective of nature of duration or method of implementation, were included.

All articles relating to faculty development published in the field of medical education between 1 January 2013 and 15 November 2020 were included. The literature search was conducted in English, and in-depth review was limited to suitable articles with the full text available in English.

All study designs were included. Pure descriptive studies without a primary focus on faculty development were excluded. Systematic reviews, opinion papers or short communications, and conference presentations were excluded in our study protocol. We included faculty development programmes designed for all faculties, including the basic science and the clinical faculties. Any interventions devised to enhance the teaching effectiveness or learning outcomes in other health care professionals (e.g. dental, nursing, physiotherapy) were excluded from this review.

All 21 countries of the WHO Eastern Mediterranean Region (EMR), Afghanistan, Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates and Yemen, were included.

Search strategy and sources of papers

The literature search was carried out in 2 major databases, PubMed and Google Scholar. The key words used were "faculty development", "medical education" and "name" of the EMR country of interest. Filters were used to exclude conference proceedings, dental faculty, nursing faculty and physiotherapy faculty. In addition, we conducted manual searches on the important journals in the field of medical education and the EMR: Eastern Mediterranean Health Journal, Academic Medicine, Medical Teacher, Medical Education, Teaching and Learning in Medicine and the Saudi Journal of Medical Sciences. We hand-searched some of the important references from the reference lists of popular review articles. We conducted a similar search in EMBASE and ERIC, using the same key words, however, this additional search did not yield any new articles.

Registration in the National Center for Biotechnology Information (Bethesda, Maryland) account was done using the email ID whocccmms@gmail.com, created by the task force group.

A structured search was carried out using appropriate Boolean operators "AND", "OR" and "NOT". The search was repeated for all the countries of the WHO Eastern Mediterranean Region. The articles retrieved were stored in individual collections in the National Center for Biotechnology Information for easy referencing and retrieval.

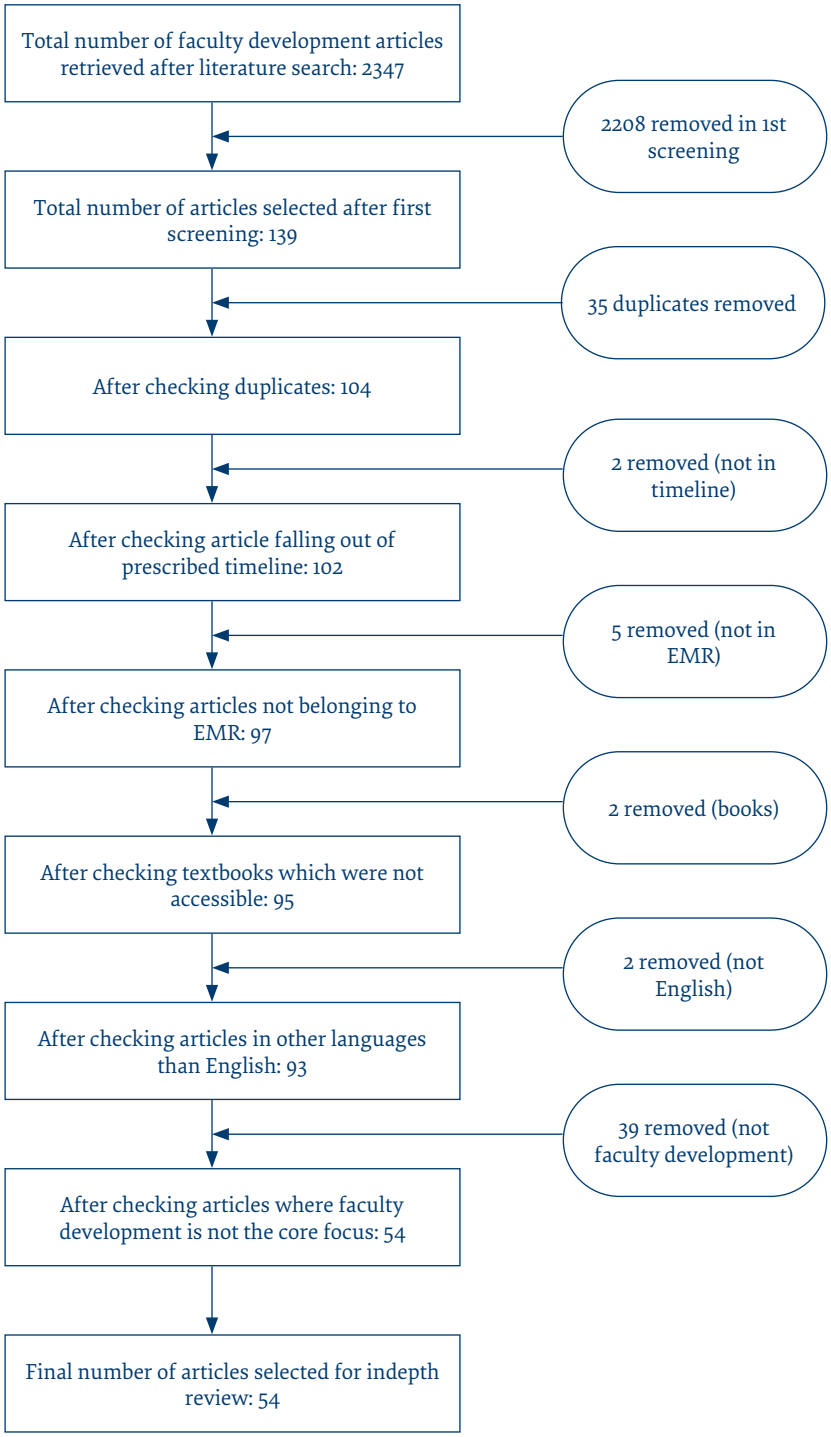
We retrieved 1237 articles from PubMed using the above-mentioned search criteria. A similar search was carried out in Google Scholar and 1110 articles were retrieved.

Selection methods and judgment of quality of manuscripts

The literature search retrieved 2347 abstracts for faculty development in total. A 2-step process was used in the process of selecting articles suitable for review (*8*). For the first step, the titles of all faculty development studies were screened by 2 authors independently (APK and HA) to extract suitable articles for the next step. This resulted in 139 articles. These were transferred into *Excel* using a structured format. In the second step, 2 authors (APK and HA) independently evaluated each abstract and determined whether the article met the inclusion criteria. In this stage 85 abstracts were excluded due to reasons such as duplication (35), not falling within the time period 2013–2020 (2), not related to the EMR (5), books not accessible for further review (2), language other than English (2) and faculty development not the core focus of the manuscript (39). Any disagreements in the process of judgment among the reviewers were settled through detailed discussion. Consequently, 54 studies on faculty development were taken forward for further analysis and review (Figure 1).

The selected articles were divided equally between the reviewers (APK and HA) in such a way that each article was reviewed in detail based on an already agreed

Figure 1 **Selection methods for the review and judgement of quality of faculty development manuscripts**



structured format. Any differences in retrieved data were agreed upon during discussion.

Results

The 54 faculty development articles were grouped based on their content into 4 themes: handling and evaluation of new interventions, description/evaluation of already implemented interventions, description of needs assessment for faculty development programmes, proposed recommendations and guidelines for conducting faculty development programmes.

In theme 1, 21 articles highlighted issues related to planning and implementation of evaluation of new interventions held across 6 countries in the EMR (Table 2) (*13–33*). The Islamic Republic of Iran (*14,18,19,20,26,33*) and Saudi Arabia (*17,24,25,27,31*) had the most studies published, followed equally by Pakistan (*15,22,23,32*) and Egypt (*13,28,29,30*). Seven studies were based on different aspects of online tools and related pedagogy (*13,21,22,27–31*). Other important thrust

Table 2 Theme 1: articles/reports addressing planning and implementation of evaluation of new interventions (workshops, lectures, seminars, webinars, short courses, certificate programmes, educational videos)

Title	Author	Country	Intervention/study procedure	Major findings/conclusions	Kirkpatrick's level of evaluation
Use of short videos for faculty development in adaptation of interactive teaching strategies for virtual classroom	Ahmed et al., 2020 (13)	Egypt	20 short-format educational videos were created and shared through YouTube channel to help faculty progress in their adaptation to virtual teaching	300% increase in viewership with 9433 views reached in first 10 days. 236 viewers were satisfied whereas 4 did not find the videos very useful. Zoom breakout rooms, chat, poll/gaming functions were some of the methods recommended by the viewers	1
Assessing the impact of faculty development fellowship in Shiraz University of Medical Sciences	Ebrahimi et al., 2012 (14)	Iran (IR)	A teacher training programme in workshop format, covered effective teaching methods, feedback, knowledge assessment, and time management	85% of the participants were satisfied with the scientific content of the programme. The post-test scores of the intervention group were higher ($P < 0.001$) than the control group. The behavioural changes at the workplace were compared using ratings by their students before and after the programme.	1, 2, 3
Micro-feedback skills workshop impacts perceptions and practices of doctoral faculty	Baseer et al., 2020 (15)	Pakistan	Quasi-experimental design with a repeated measure, 2-group separate sample, pre- post-test model. A micro-feedback skills workshop to enhance feedback skills of doctoral supervisors using microteaching technique	The participants indicated a high level of satisfaction with the workshop. A learning gain of 56% was observed on pre–post objective structured teaching exercise scores. Self-selection bias, small sample size and non-blinding of the reviewers were some of the limitations.	1, 2
Satisfaction with 2-day communication skills course culturally tailored for medical specialists in Qatar	Bylund et al., 2017 (16)	Qatar	Implementation and evaluation of a 2-day communication skills training course covering 7 culturally adapted modules	Participants rated the module on breaking bad news as the most useful, and small group role-play as the most helpful course component. There was no significant association between previous experience and course outcome. It is recommended to use communication skills training developed by western countries with some cultural modifications.	1
Research methodology workshops evaluation using the Kirkpatrick's model: Translating theory into practice	Abdulghani et al., 2014 (17)	Saudi Arabia	Series of 5 research methodology workshops were conducted over 3 years and evaluated based on 4 levels Kirkpatrick model. Mixed method study.	Perception of satisfaction was mixed. The improvement in post scores across all the workshops were statistically significant ($P < 0.005$). Further follow-up showed that 56.9% started research and 6.9% published their research. Previous knowledge about research and other related factors were listed as confounding variables.	1, 2, 3, 4
Effect of faculty training programmes on improving quality of residency exams in 2013–2014	Derakhshan et al., 2015 (18)	Iran (IR)	Quasi-experimental study, conducted in 3 phases. Initially a learning resource along with MCQs were shared with 7 departments for evaluation, then feedback given based on evaluation followed by a separate workshop for each department.	Results showed a significant difference in evaluation of MCQs after the workshop ($P < 0.001$). faculty development programmes are very effective in facilitating good practices and need to be promoted.	1, 2, 3

Table 2 Theme 1: articles/reports addressing planning and implementation of evaluation of new interventions (workshops, lectures, seminars, webinars, short courses, certificate programmes, educational videos) *(continued)*

Title	Author	Country	Intervention/study procedure	Major findings/conclusions	Kirkpatrick's level of evaluation
Design, implementation, and evaluation of a medical education fellowship programme for the faculty members of Kerman University of Medical Sciences based on the Kirkpatrick Model	Dehghani et al., 2019 (19)	Iran (IR)	A 1-year fellowship programme in medical education for faculty members	Majority of the participants were satisfied with the programme and there was a significant increase in the knowledge of faculty members ($P < 0.05$). A positive change was recorded in their behaviour. This study was from a single university with a small sample size and without a control group, which were documented as limitations.	1, 2, 3
The impact of skills education of presenting the effective feedback to the internist professors of Medical Sciences University of Birjand on the application of those skills in the clinical education by professors	Bazaz et al., 2015 (20)	Iran (IR)	A 6-hour workshop on the skills of providing feedback to medical students	Skill of providing feedback by professors, improved significantly ($P < 0.05$) after the workshop, showing that training medical professors through faculty development workshops has a direct impact on their application during clinical education.	1, 2
An online academic writing and publishing skills course: help Syrians find their voice	Sabouni et al., 2017 (21)	Syria	Conducting and evaluating a low-cost online course using a hybrid teleconferencing and social media platform on academic writing and publishing	83% of the participants felt confident to write an academic paper and average student satisfaction was 8.4 out of 10. Heterogeneous population, lack of validated questionnaires and self-reporting bias were some of the limitations of this study.	1, 2
Establishing a blended learning programme through situated faculty development: experiences and reflections	Naseem et al., 2015 (22)	Pakistan	A blended learning programme (BLP) at a multi-campus university through a situated learning approach for faculty development.	Provision of professional development opportunities for faculty members in the form of teaching support and mentoring should be considered for development of a BLP. Availability of resources, dedicated faculty, preparedness of the institution and robust technology are the facilitating factors for successful implementation of BLP.	Data not available
Implementing a teaching and learning enhancement workshop at Aga Khan University: reflections on the implementation and outcomes of an instructional skills workshop in the context of Pakistan	Rodrigues et al., 2019 (23)	Pakistan	Initiation, implementation, and institutionalization of the teaching and learning enhancement workshop (TLEW) (a Canadian-based instructional skills workshop.	All participants strongly appreciated the role of TLEW in promoting engaged learning. On evaluation, the scores for reaction, learning, behaviour and results were 4.59 (SD 0.36), 4.34 (SD 0.41),4.35 (SD 0.46) and 4.30 (SD 0.55) respectively. However, many faculties stated that institutional support and recognition were crucial for active participation in TLEW.	1, 2, 3, 4
Faculty development for learning and teaching of medical professionalism	Al-Eraky et al., 2015 (24)	Saudi Arabia	Designing and evaluation of faculty development programme on learning and teaching professionalism in the Arabian context, using participatory design, in 3 steps: orientation workshop, vignette development, and teaching professionalism.	32 vignettes were developed, with a series of 7 questions/ triggers to guide students' reflection on professionalism. Students expressed that learning experience was enjoyable (mean 4.28, SD 0.81) and vignettes were authentic to real practice (mean 4.17, SD 0.82). Faculty felt that the programme was engaging, developed better vignettes and also transferred their learning to their workplace.	1, 2, 3
Residents as professionalism teachers and assessors; a pilot study on implementing a faculty development programme leading to Curriculum Development	Ismail et al., 2017 (25)	Saudi Arabia	faculty development programme in professionalism (definition, attributes, teaching methods and assessment of professionalism) for medical residents was delivered through blended mode (workshop, interactive lecture, online videos and reading materials)	Satisfaction index was 95%. More than 75% of the residents expressed that they were never exposed to any activity about professionalism' teaching and assessment, before this intervention. Periodic review, feedback analysis and evaluation were recommended on a regular basis.	1

Table 2 Theme 1: articles/reports addressing planning and implementation of evaluation of new interventions (workshops, lectures, seminars, webinars, short courses, certificate programmes, educational videos) *(concluded)*

Title	Author	Country	Intervention/study procedure	Major findings/conclusions	Kirkpatrick's level of evaluation
Investigating the effect of teaching aesthetic skills to faculty members on development of their effective teaching performance	Eslamian et al., 2017 (26)	Iran (IR)	Quasi-experimental study with 2-group pre- post-test design. Investigated the effect of teaching aesthetic skills to faculty members.	Paired *t*-test showed significant increase in mean effective teaching scores, in the experimental group. Applying aesthetic skills by faculty members is shown as a way of promoting their effective teaching performance. Therefore, faculty members are recommended to develop knowledge and skills to utilize aesthetic skills in the teaching process.	1, 2
Development and evaluation of an online course about the social accountability of medical schools	Abdalla et al., 2019 (27)	Saudi Arabia	A 4-module course was developed on social accountability and delivered online through the Moodle platform	75% of participants completed all modules. The discussion threads had a mean of 36 responses per module. All participants expressed that the course had a clear take-home message. The majority agreed the new concepts introduced in addition to correcting some of their misunderstandings. Time management and Internet were documented as main problems	1, 2
A virtual medical faculty development programme for remote teaching, pilot for replication	Hegazy et al., 2020 (28)	Egypt	An interventional prospective study to equip educators with technology competencies to conduct remote online learning through a virtual faculty development programme	81% of participants completed the programme and 80% were satisfied with the programme. The perceived increase ability of the participants to share and record video lectures after the virtual faculty development programme was highly significant ($P < 0.001$). The limitations were that it was single centre study, and an extended evaluation was needed to study the impact of intervention.	1
Tailoring online faculty development programmes: overcoming faculty resistance	Ahmed, 2013 (29)	Egypt	A novel training approach where faculty members were given the choice of using web-based modules, and email-based discussion forums to promote self-directed learning	Faculty benefited and were satisfied with the training. Faculty showed resistance to learning when they were moved away from their comfort zone. Ensuring a safe learning environment to study at their own pace and place was more acceptable than mandating faculty development training. Opinion of an external expert was considered a valuable tool to minimize resistance.	1
Online faculty development using cognitive apprenticeship in response to COVID-19	Eltayar et al., 2020 (30)	Egypt	A stepwise approach with video recording on MCQ design, followed by coaching in small groups was done, and finally, learners were asked to create new MCQs and send them via email for further feedback	"Reflection", "articulation" and "exploration" of previously constructed MCQs resulted in better MCQs post-workshop. Proper hands-on design, providing options that suit trainees' preferences, giving feedback and scaffolding can produce satisfactory learning even during online sessions.	1, 2
YouTube videos as a tool for faculty development in medical education: A learning analytic overview.	Hassanien et al., 2018 (31)	Saudi Arabia	Using video-based lectures as a tool for faculty development	Video-based lectures can be considered a valuable tool in FD. Shorter video-based lectures show higher audience retention. Synchronous interaction during the lectures should be considered for greater effectiveness and audience retention.	1
Scientific writing: hands-on workshop analysis among the faculty of medical sciences	Khan et al., 2020 (32)	Pakistan	Cross-sectional analytic study to conduct a faculty development workshop, with pre- and post-workshop assessment	A significant difference was detected between the of knowledge of participants before and after the workshop	1, 2
The effect of interactive and effective lecturing workshop for developing faculty members in teaching: an experiment of utilizing peer observation of teaching and feedback	Sadighpour et al., 2018 (33)	Iran (IR)	A descriptive study to design, implement and evaluate an interactive and effective lecturing workshop	Observing the performance, providing training opportunities, and providing feedback were effective to improve the quality of faculty development programmes in effective lecturing	1, 2, 3

FDP = faculty development programme,
MCQ = multiple choice question.

Table 3 Articles classified according to Kirkpatrick's Model evaluation

Theme	No of articles (reference numbers)					Total
	Level 1	Level 2	Level 3	Level 4	Data not available/ not applicable	
1 Conducting and evaluation of new interventions	6 (13,16,25, 28,29,31)	7 (15,20,21, 26,27,30,32)	5 (14,18,19, 24,33)	2 (17,23)	1 (22)	21
2 Description/ evaluation of already-implemented interventions	4 (34,37,43,46)	1 (44)	3 (38–40)	2 (36,41)	3 (35,42,45)	13
3 Description of needs assessment for faculty development programmes	13 (47–52,54–56,58, 60–62)	1 (59)	1 (53)	0	1 (57)	16
4 Proposed recommendations and guidelines for conducting faculty development programmes	0	0	0	0	4+1 (overlap with Theme 2)	04
Total	23	9	9	4	9	54

FDP = faculty development programme.

areas were feedback (*15,20*), professionalism (*24,25*), communication skills (*16*) and aesthetic skills (*26*). In this category, 7 studies showed level 2, and 5 studies showed level 3 of Kirkpatrick's Model evaluation, which is the maximum when compared to other themes. This category reported level 4 for 2 studies (Table 3).

In theme 2, 13 articles discussed interventions already implemented across 7 countries in the EMR (Table 4) (*34–46*). Saudi Arabia (*37,40,41,46*) contributed most in this domain followed equally by Pakistan (*34,42*), the Islamic Republic of Iran (*35,43*) and Egypt (*44,46*). In general, these studies documented a high satisfaction among faculty members towards faculty development. One study focused on online education (*34*), one was devoted to mentoring (*42*) while 4 were based on various aspects of assessment (*37,38,40,41*). In this category, 4 studies showed level 1, and 2 showed level 4 of Kirkpatrick's Model evaluation. Evaluation data were not available for 3 articles under this theme (*35,42,45*) (Table 3).

In theme 3, 16 articles from 4 countries in the EMR addressed important aspects related to needs assessment for faculty development programmes (Table 5) (*47–62*). The Islamic Republic of Iran (*47,49,51–53,59–62*) and Saudi Arabia (*48,54,55,57*) contributed the most, followed by Pakistan (*50,58*) and Egypt (*56*) in discovering the emerging needs for faculty development programmes. In this category, 13 articles exhibited level 1, and one each for level 2 and level 3 of Kirkpatrick's Model evaluation (Table 3).

In theme 4, 5 articles proposed recommendations and guidelines for conducting faculty development programmes (Table 6) (*1,35,63–65*). Around 46% of the faculty development studies (23) in the EMR focused on reaction (satisfaction/perception – level 1 of Kirkpatrick's Model) whereas only 7% (4) evaluated results (changes in patient outcome, institutional growth, etc. – level 4 of Kirkpatrick's Model). Only 7% (4 out of 54) showed proposed recommendations and guidelines for faculty development.

Discussion

Among other important areas recommended by the WHO, faculty development is considered very critical in health professionals' education. At national and institutional levels, faculty development was attributed to curriculum reforms, institutional accreditation and selection criteria for potential leadership positions (*36,37,53*).

The findings under evaluation of new faculty development programmes include high levels of faculty participation in virtual classrooms supporting the utility of using online formats as a flexible way of providing faculty development programme, and the need for virtual medical faculty development programmes to provide and boost the technological competencies required to implement effective remote teaching/learning. While the current global environment demands implementation of online and hybrid formats of teaching and learning, certain skills are universal for these processes irrespective of mode of delivery. Needed skills identified for the faculty include provision of feedback, academic reporting and professionalism. Provision of development opportunities for faculty members in the form of teaching support and mentoring were considered important priorities. Facilitating factors for effective implementation of blended learning include institutional preparedness and availability of robust technologies.

The findings for evaluation of new interventions aligned significantly with findings for already implemented interventions. The faculty development programmes which are delivered through information and communication were found to be effective and associated with high levels of satisfaction. However, significant consensus exists on the fact that face-to-face lectures cannot be replaced by online lectures. The findings include the need to expand faculty development programmes to include individualized and specialist programmes. A recommendation emerged to conduct longitudinal programmes with certification and an emphasis on providing a critical portfolio of skills

Table 4 Theme 2: articles/reports addressing description/evaluation of already implemented interventions

Title	Author(s)	Country	Nature of intervention/ study procedure	Major findings/conclusions	Kirkpatrick's level of evaluation
Online education during Covid-19 pandemic; an experience of Riphah International University Faculty of Health And Medical Sciences	Rahim et al., 2020 (34)	Pakistan	A survey-based descriptive study to evaluate faculty satisfaction with using e-learning resources and its related faculty development activities	Almost all (96.3%) of the faculty were satisfied with the faculty development activities; 70% disagreed that face-face lectures can be replaced by online lectures. 66.9% disagreed that they are attentive during the online lectures, 33.8% felt that preparation for online lectures requires a lot of effort and 52.5% said that learning new technologies was difficult. Major challenges faced were network issues 56.3% and lack of computer skills 64.4%.	1
Current status of faculty development of medical sciences universities in Iran: a qualitative study	Mohammaditabar et al., 2019 (35)	Iran (IR)	Analysis of faculty development activities in medical universities in the Islamic Republic of Iran based on expert views	Iranian medical universities should consider other aspects of faculty members, including individual, organizational and ethical dimensions and specialized services instead of attending only to the educational and research dimensions in the faculty's upcoming programmes. It is recommended that a comprehensive FDP be developed at medical universities with the aim of upgrading and updating faculty members' abilities.	Not applicable
Faculty development initiatives at the College of Medicine & Health Sciences (COMHS), Sultan Qaboos University, Muscat, Oman	Al Wardy, 2020 (36)	Oman	Feedback on interventions consisting of short courses, workshops, and a series of lectures	It was reported that majority of faculty development programme participants were highly satisfied with the content of the programme and also revealed positive changes in their teaching behaviours. Some of them were selected for leadership positions. Several accreditation and achievements of COMHS were partly attributed to FDPs. It was recommended to conduct longitudinal programmes with certification.	4
An overview of faculty development programme in the medical education department, Faculty of Medicine, King Abdul Aziz University	Al Shawwa et al., 2015 (37)	Saudi Arabia	A retrospective data-base study on the faculty development activities conducted by the department of medical education	The number of workshops on student assessment was the highest among other domains. Female faculty participation was generally higher. Seeking international academic accreditation and the curriculum reform were 2 major driving forces that affected faculty development programme participation. The big challenge for the medical education department was to continuously assess the emerging needs and provide targeted training.	1
The effect of multiple-choice questions workshop on the knowledge and practice of academic staff, Faculty of Medical Laboratory Sciences, University of Gezira, Sudan	Osman, 2018 (38)	Sudan	Evaluation of an faculty development workshop on the knowledge and practice of academic staff of writing multiple-choice questions	There was a significant improvement in item writing, especially in the areas of linguistics mainly grammar, spelling and punctuations.	3
The impact and effectiveness of faculty development programme in fostering the faculty's knowledge, skills, and professional competence: a systematic review and meta-analysis	Guraya, 2019 (39)	United Arab Emirates	A total of 37 studies that explored the impact of faculty development programmes on medical and allied health faculty's professional development were selected	This meta-analysis reported a mean effect size of 0.73, which reflects significant positive impact of faculty development programmes in enhancing faculty's knowledge and professional competence. This review included studies related to all medical and allied health disciplines, therefore, it was recommended for future study to conduct a more precise and dedicated analysis focused on a specific discipline.	2, 3
Effectiveness of longitudinal faculty development programmes on MCQs items writing skills: A follow-up study	Abdulghani et al., 2017 (40)	Saudi Arabia	Examining the long-term impact of faculty development programmes on the quality of multiple choice question (MCQ) items' and its effect on the students' overall competency during their yearly academic assessment	Easily and poorly discriminating questions, non-functioning distractors, and item writing flaws were decreased significantly, whereas distractor efficiency, mean score and high cognitive level (K2) questions were increased substantially during each successive academic year. Improved quality of MCQs led to increased competency level of the borderline students. Active faculty participation was the crucial element for success of longitudinal faculty development programmes.	3

Table 4 Theme 2: articles/reports addressing description/evaluation of already implemented interventions *(concluded)*

Title	Author(s)	Country	Nature of intervention/ study procedure	Major findings/conclusions	Kirkpatrick's level of evaluation
Faculty development programmes improve the quality of multiple-choice questions items' writing	Abdulghani et al., 2015 (41)	Saudi Arabia	Evaluation of long-term faculty development programme in order to improve the quality of MCQ item' writing, following a 2-day workshop conducted for 25 newly recruited faculty.	Significant improvement was found in the difficulty index values of pre- to post-training. Also, non-functioning distractors and item writing flaws were less often reported in the post-training items, leading to better achievement from students. The limitations of the study included: single groups of faculties and students and future workshops to include more assessment tools for different contexts and other forms of examinations.	4
Mentoring programme for faculty in medical education: South-Asian perspective	Shamim, 2013 (42)	Pakistan	Provision of an insight into the mentoring programmes for faculty development	Formal faculty mentoring programmes in medical education can be beneficial for faculty and institutes of South Asia in improving the standards of education and research possibilities. It was recommended that sociocultural contexts should be given primary importance while implementing mentoring programmes.	No evaluation was done
Faculty members' experiences about participating in continuing education programmes in 2016–2017: a qualitative study.	Pourghane et al., 2018 (43)	Iran (IR)	Qualitative study, evaluating a continuing education programme through eliciting the experiences of faculty members who participated in at least 3 continuing education programmes.	Three main themes that emerged were "continuous strategic education", "push for coercion of education" and "shaky background". Continuing education programmes addressing poor teaching, planning malfunction and inefficient evaluation were shown to be essential for successful and motivating FD.	1
Evaluation of the Joint Master of Health Professions Education: a distance learning programme between Suez Canal University, Egypt, and Maastricht University, The Netherlands	Talaat et al., 2013 (44)	Egypt	A descriptive study to evaluate the Joint Masters programme (process-based, formative programme evaluation)	Main strengths of the Joint Masters programme were identified as capacity building and career development in health professions education. Flexibility, partnership with a European university, distance learning skills, and lifelong learning skills were other points of strengths. The programme had a positive impact on the learners in terms of increasing their knowledge and skills. 87% of students were satisfied with the programme and 90% would recommend this to their friends. Dependence, reluctance and lack of commitment among few participants were regarded as a weakness of the programme.	1, 2
Role of Suez Canal University, Faculty of Medicine in Egyptian Medical Education Reform	Hosny et al., 2016 (45)	Egypt	Description of factors on how the Faculty of Medicine, Suez Canal University in Egypt initiated a change in medical education inside and outside Egypt since its establishment in 1978	The Center for Research and Development conducted multiple international and national workshops. The faculty medical education department offers Masters and PhD programmes as well as a joint Masters programme in medical education with Maastricht University. Community-based education, problem-based learning, integration between basic and clinical sciences, student-centred education, Comprehensive evaluation and evidence-based medicine were some of the reforms by the Faculty of Medicine, Suez Canal University.	Not applicable
Factors to be considered in designing a faculty development programme for medical education: local experience from the Western region of Saudi Arabia	Algahtani et al., 2020 (46)	Saudi Arabia	A descriptive study was conducted in multiple universities in the Western Region of Saudi Arabia about their perception of faculty development programmes	Many faculty members perceived that FDPs were motivating the teachers to become better by establishing a positive climate for teaching and learning through skilled and dedicated staff support. The items that were most preferred were "become better teachers" followed by "improving students" learning", the other items perceived as important were "serve personal needs", "facilitate effective pedagogy" "foster faculty career development", "providing food and refreshments", "cultural tradition of support" and "grant funding".	1

FDP = faculty development programme
MCQ = multiple choice question.

Table 5 Theme 3: articles/reports addressing description of needs assessment for faculty development programmes

Title	Author	Country	Nature of intervention/study procedure	Major findings/conclusions	Kirkpatrick's level of evaluation
Faculty development in developing countries: the case of a large state University, Iran	Zahedi, 2015 (47)	Iran (IR)	Mixed methods study conducted to ascertain faculty needs for planning faculty development programme. Focus group discussion along with a 42-item questionnaire were used.	Results showed faculty development was needed in 4 main areas: education, research, leadership and management, and communication. Empowerment programmes in all 4 domains were recommended for better outcomes.	1
Effectiveness and needs assessment of faculty development programme for medical education: experience from Saudi Arabia	Algahtani et al., 2020 (48)	Saudi Arabia	A multicentre descriptive study to assess the effectiveness of and need for faculty development programmes in medical education among faculty members	49 needs were identified by the faculty, out of which "improving personal qualities" and "providing greater educational involvement" were considered as most important, whereas "Institutional and research-related aspects" were considered less essential. A unified faculty development diploma was recommended to be established in Saudi universities to address professional needs of medical faculty.	1
Educational needs assessment of Kharazmi University new faculty members in academic year of 2013–2014	Javanmard et al., 2018 (49)	Iran (IR)	A mixed methods evaluation of the training needs of new faculty members	The study identified 5 major areas of training needs, which were classroom management, research methodology, teaching–learning strategies, communication skills and psychological skills.	1
Faculty development – looking through different lenses	Anwar et al., 2015 (50)	Pakistan	A mixed methods evaluation of how the faculty and students perceive the needs, barriers and possible solutions for instructional, professional and organizational development of faculty	Lack of motivation, poor time management, deficiencies in curriculum understanding and alignment with instruction and assessment, unawareness of innovative instruction and assessment tools, lack of feedback use and reflection, poor learning environment, and almost no rewards and recognition of excellence in teaching emerged as impediments to faculty development. Innovative instructional training, development of research, leadership and scholarship, with organizational restructuring and support, were recommended for strategic faculty development.	1
Faculty members' opinion regarding faculty development needs and the ways to meet the needs	Zahedi et al., 2015 (51)	Iran (IR)	Questionnaire-based descriptive study to determine the needs of professional development among faculty members in regard to educational, research, executive, & communicational areas	4 potential areas, educational, research, executive and communicational skills, were identified for faculty development programme. Furthermore, these needs existed regardless of the type of college, academic rank or employment status. Other suggestions put forward were: exchanging experience with other universities, holding long-term training courses, holding training workshops and establishing communities of practice.	1
Investigating educational needs of faculty members of basic sciences of Faculty of Medicine: educational and personal development needs	Khaleghitabar et al., 2016 (52)	Iran (IR)	A descriptive cross-sectional study to investigate the educational needs of medical faculty members and the priorities to be considered in faculty development programmes.	FDP needs were documented for educational technology skills, student learning and development skills, educational software application, curriculum and educational planning, teaching and class management skills, assessment and evaluation skills, and scientific writing skills. In addition, face-to-face workshop presentation (58.1%), morning to afternoon presentation (85.3%), emails for communication (40.3%), and blended teaching (35.5%) were the preferred logistics for faculty development programme.	1

Table 5 **Theme 3: articles/reports addressing description of needs assessment for faculty development programmes** *(continued)*

Title	Author	Country	Nature of intervention/study procedure	Major findings/conclusions	Kirkpatrick's level of evaluation
Needs assessment and evaluation of a short course to improve faculties teaching skills at a former World Health Organization regional teacher training centre	Kojuri et al., 2015 (53)	Iran (IR)	A nominal group technique followed by a 5-point Likert scale questionnaire to assess the need to define the core contents of faculty development programme and to determine if participation in that programme reinforced new teaching skills.	Participants' overall satisfaction with the workshosps was high. The mean post-test score was significantly higher in the intervention group ($P < 0.001$). The behavioural changes were assessed with ratings by their undergraduate and postgraduate trainees before and after the programme, which was significantly higher in the intervention group ($P < 0.001$). Longitudinal and cohort studies were recommended to evaluate the long-term effects of faculty development programme. Participating in faculty development programmes might have been influenced by credit gained towards academic promotion.	1, 2, 3
Needs assessment for a longitudinal faculty development programme at the College of Medicine, Aljouf University, Sakaka, Saudi Arabia	El Naggar, 2016 (54)	Saudi Arabia	Descriptive questionnaire-based study aiming at assessing the faculty members' needs for a longitudinal faculty development programme.	96% felt that they benefited from faculty development workshops, 87% preferred fixed weekly training sessions with interactive hands-on exercises. There was a felt need for a longitudinal FDP in areas related to "student assessment", "curriculum development", "teaching & learning", "quality & accreditation", in the same order of preference.	1
The educational needs of a sample of faculty members at the College of Medicine in King Saud University	Alolayan et al. , 2018 (55)	Saudi Arabia	A descriptive cross-sectional study to identify the needs of medical faculty members for faculty development activities.	There is a need for faculty development programmes in preparing a detailed plan to teach the curriculum, identifying the initial skills needed by students to understand the lessons, preparing the teaching environment for the activities of teaching and learning, maintaining the focus and attention of students, respecting the diversity and differences in students' thinking, considering logical sequence in presenting ideas, dealing with students with impartiality and objectivity, listening to students and accepting their ideas, preparing objective tests in line with the curriculum objectives, using the evaluation results to modify weaknesses and enhance strengths.	1
Needs assessment for faculty development at an Egyptian medical school: a triangulation approach	Abdelkreem et al., 2020 (56)	Egypt	Mixed-methods research to assess faculty satisfaction with current faculty development programmes, perceived development needs, delivery and scheduling preferences	Highest priority given for discipline-specific and research domains. Awareness of teaching needs has been shown to increase among faculty and most preferred short interactive online workshops. Perceived faculty development needs were shown to be affected by accreditation standards, academic reward systems, and socioeconomic factors. Compulsory participation in faculty development programmeswas viewed as highly controversial.	1

Table 5 Theme 3: articles/reports addressing description of needs assessment for faculty development programmes *(concluded)*

Title	Author	Country	Nature of intervention/study procedure	Major findings/conclusions	Kirkpatrick's level of evaluation
Role of faculty development programmes in improving teaching and learning	Kamel, 2016 (57)	Saudi Arabia	Review article	Professional training programmes produce promising outcomes in learning and teaching practices and many FDPs have proven effective in developing faculty skills and educational leadership. Indeed, today, faculty development constitutes a strategic lever for institutional excellence and quality, and essentially important means of advancing institutional readiness to bring in the desired change in response to the ever-growing complex demands facing universities and colleges.	Not applicable
A needs assessment for faculty development at 2 medical colleges of Dow University of Health Sciences, Karachi	Shah et al., 2018 (58)	Pakistan	Cross-sectional study using a re-validated questionnaire	For all domains, faculty perceived their knowledge to be moderately high. However, they also expressed their desire to improve their skills further in all domains and were willing to attend faculty development programmes. Lack of objective assessment and generalizability were the given limitations of this study.	1
Concise, intensive or longitudinal medical education courses, which is more effective in perceived self-efficacy and development of faculty members?	Mojtahedzadehet al., 2016 (59)	Iran (IR)	Before and after quasi-experimental stud: 6 day, 1-month intensive, and 6-month longitudinal faculty development courses were conducted for 3 different groups of faculty.	There was a significant increase in faculty's perceived self-efficacy and perceived empowerment in pre- and post-tests in 1-month and 6-month courses, but no significant difference was found in the 6-day course. This study revealed that long-term courses were more effective than the short-term ones. Thus, longitudinal courses are recommended for greater effectiveness.	2
Educational needs assessment of faculty members at Ilam University of Medical Sciences	Mirzaei 2013 (60)	Iran (IR)	Descriptive study, a questionnaire containing 47 items in 6 domains were administered following an interview, to determine priority educational needs for faculty development	Recent teaching methods, student assessment, writing in English, information and communications technology skills and communication skills were the top priority while the least important topics were journal club, objective structured clinical examination, ethics in research, applying computer in education, professionalism and scientific translation.	1
Educational needs assessment of faculty members in Ardabil University of Medical Sciences	Shafaei-Khanghah et al., 2017 (61)	Iran (IR)	Cross-sectional descriptive study	The participants belonged to 2 groups, clinical and basic sciences. They differed in their preferences in areas related to ethics, information technology and usage of electronic resources. However, both groups mentioned training in writing of scientific texts in English. The lowest priority for both groups was "familiarity with English journals". It was suggested to have a dynamic and continuous assessment system to identifyfaculty development needs.	1
Educational needs assessment of faculty members of Qom University of Medical Sciences, (Iran)	Izadkhah et al, 2019 (62)	Iran (IR)	Cross-sectional analytic study	The top rated areas were "how to develop creativity in the students, in the field of research", "how to work with *SPSS* software", "motivation management", "professional rules and regulations", and "methods of providing individual counselling services to the community". It was recommended to the institution to consider faculty development programmein these identified areas.	1

FDP = faculty development programme.

Table 6 Theme 4: articles/reports addressing proposed recommendations and guidelines for conducting faculty development programmes (FDPs)

Title	Author(s)	Country	Nature of intervention/study procedure	Major findings/conclusions	Kirkpatrick's level of evaluation
Report on the intercountry meeting on strengthening medical education in the Eastern Mediterranean Region, Cairo, Egypt	WHO, 2015 (63)	EMR	A large, intercountry meeting for discussing the current status of medical education in the EMR	Challenges include lack of interest and apathy at institutional and personal levels and lack of leadership. faculty development programmes should be conducted on a regular basis and inked to faculty promotion criteria.	Not applicable
Review of medical education in the Eastern Mediterranean Region: challenges, priorities, and a framework for action	WHO, 2015 (64)	EMR	Mixed method study –s literature search, survey, and in-depth interviews to provide a framework, describing how the different contextual and system variables influence policies and quality of medical education	Most faculty development programmes are ad hoc and are not based on needs assessment. Need to strengthenfaculty development to cover competencies as effective medical educators. faculty development should be comprehensive and address areas such as educational leadership.	Not applicable
Transforming and scaling up health professionals' education and training: World Health Organization guidelines 2013	WHO, 2013 (1)	EMR	Guidelines for regional and country-based policy and technical dialogues, health, finance and labour, on how best to finance health professionals' training and prepare health professionals for the 21st century	5 key areas identified were: education and training institutions, accreditation, regulation, financing and sustainability, monitoring and evaluating, and governance and planning.	Not applicable
The components of the development of faculty members at universities of medical sciences in Iran and the world: a systematic review	Mohammaditabar et al., 2018 (65)	Iran (IR)	A systematic review on the components of faculty development at Iranian universities of medical sciences and across the world	Four dimensions of individual, professional, educational, and organizational development were identified. faculty development programme programmes should be designed to target specific subgroups and cover a wide range of skills, not just education.	Not applicable
Current status of faculty development of medical sciences universities in Iran: a qualitative study	Mohammaditabar et al., 2019 (35)	Iran (IR)	Analysis of faculty development activities in medical universities in the Islamic Republic of Iran based on expert views	Iranian medical universities of should consider other aspects of faculty members, including individual, organizational, and ethical dimensions and specialized services instead of attending only to the educational and research dimensions in the faculty's upcoming programmes. It is recommended that a comprehensive faculty development programme be developed at medical universities with the aim of upgrading and updating faculty members' abilities.	Not applicable

<tablenote>*EMR = Eastern Mediterranean Region.*
FDP = faculty development programme.

in the context of faculty development programmes. Longitudinal programmes were recommended on the basis of long-lasting benefit in terms of career development and capacity-building (*40,43,44,48,51,59*), even though "short interactive online workshops" were preferred by a few faculty (*56*).

Perceived faculty development needs were shown to be affected by accreditation standards, academic reward systems and socioeconomic factors (*56*). Categories of faculty development needs identified as top priority in the literature were: "Educational research", "leadership and management", "communication" (*47,51,60*), "improving personal qualities", "providing greater educational involvement" (*48*), "classroom management", "teaching-learning strategies" (*54*), "psychological skills" (*49*), "technology skills" (*52,60,61,62*), "curriculum planning" (*52,54*), "assessment and evaluation" (*52,54,60*), "scientific writing" (*52,60*), "quality and accreditation" (*54*), "identifying the skills needed by students", "maintaining the focus and attention of students"(*55*), "journal club", "objective structured clinical examination", "ethics in research", "professionalism", "scientific translation"(*60*) and "feedback and counselling" (*61*). However, "institutional and research-related aspects" were considered less essential in some studies (*48*). Suggested mechanisms for addressing these needs include institution-based exchange programmes, training courses, and communities of practice. Faculty willingness to engage in development activities was high.

Well planned faculty development programmes were shown to facilitate community-based education, problem-based learning, integration between basic and clinical sciences, student-centred education, comprehensive evaluation and evidence-based medicine (*45*). In terms of delivery formats, face-to-face sessions, morning to afternoon schedule (sessions starting in the morning and ending by noon) and blended teaching modules were the preferred logistics for faculty development programmes (*52*). Availability of resources, dedicated faculty, preparedness of the institution, institutional support, innovative hands-on training, exchanging experience with other universities, timely recognition of faculty, robust technology and establishing communities of practice were seen as facilitating factors for a successful faculty development programme (*22,23,50,51*). To create a positive climate for the faculty development programme other factors to consider include: "serving personal needs", "facilitating effective pedagogy", "fostering of faculty career development", "providing food and refreshments", "cultural tradition of support" and "grant funding" (*46*).

Several recommendations and suggestions emerged from the review. Empowerment programmes were recommended in all the areas of need identified to realize better outcomes from the medical education faculty; faculty development programme should not be ad hoc but rather structured, conducted on a regular basis and linked to faculty promotion criteria. Key areas of faculty development programme should include education and training institutions, accreditation, regulation, financing and sustainability, monitoring and evaluating and governance and planning. The programme should be targeting the needs of specific subgroups and should provide a wide range of skills, not just education. Dimensions in faculty development programme should include individual, professional, educational and organizational development. It was recommended to introduce a unified faculty development diploma (*48*) in addition to modifying the modules/protocols developed by western countries to suit the local culture (*16*). It is suggested that faculty development should be embedded as an integral component of the ongoing accreditation process of the institution so that it would become a priority for deans and other administrators (*67*). Faculty development should also be linked to timely recognition like funding, promotion, reward, etc. (*68*). Incorporation of the opinion of external experts was suggested as a strategy to minimize resistance to faculty development (*29*).

Contextual issues that surround the evaluation, assessment and implementation of faculty development programmes emerged from this review. Lack of motivation, poor time management, deficiencies in curriculum, malalignment of instruction and assessment, lack of awareness about innovative instruction and assessment tools, lack of feedback, insufficient use of reflection, poor learning environment, and almost no rewards/recognition for excellence in teaching emerged as impediments to faculty development (*40,43,44,48,50*). The biggest challenge was to continuously assess the emerging needs for targeted training (*37*). Compulsory participation in faculty development programme was viewed as a highly controversial concept (*56*).

Limitations documented in many of the studies include self-selection bias, small sample size, non-blinding of the reviewers (*15*), single university study, absence of control group (*19*), heterogeneous population, lack of validated questionnaires, self-reporting bias (*21*), lack of long-term evaluation to study the impact of intervention (*28*), improper time management and low internet speed (*27*), and lack of objective assessment and generalizability.

Searching only few databases can be considered a limitation of this study. The search protocol included the words "faculty development", while ignoring synonyms like "faculty capacity building", "faculty professional development", "faculty empowerment" "faculty training" and "continuous professional development", which could be considered for future studies.

The identified gaps in the literature for future research include, "explore reasons for no/poor publication record in countries with no/low search yield", "studies with level 4 Kirkpatrick's Model evaluation", "longitudinal follow-up with student/patient outcomes", "locally feasible

recommendations/guidelines for level 4 Kirkpatrick's Model evaluation", "factors influencing/limiting the participation of faculty in FD", "FD in online assessment" and "FD in workplace-based assessment".

Conclusion

This focused literature review may act as a vector to ignite innovative ideas and fuel sustained efforts towards FD in medical education. Faculty development should be coupled with updated needs assessment and hands on training to achieve the goal of Health for All.

Longitudinal high quality research programmes are essential to ascertain the effectiveness of FDP in improving the competency of medical faculty and students. Future research should also consider studying the impact of FDP on students' learning outcomes as well as patient outcomes.

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Programmes de perfectionnement du corps enseignant dans le domaine de l'éducation médicale dans la Région de la Méditerranée orientale : une analyse systématique

Résumé

Contexte : Le perfectionnement du corps enseignant est essentiel pour améliorer l'enseignement de la médecine. En 2013, l'Organisation mondiale de la Santé a encouragé le perfectionnement du corps enseignant fondé sur des bases factuelles de qualité modérée et des recommandations conditionnelles.

Objectifs : Réaliser une analyse systématique du perfectionnement du corps enseignant dans le domaine de l'éducation médicale dans la Région de la Méditerranée orientale, entre 2013 et 2020.

Méthodes : Une recherche systématique a été menée dans PubMed, Google Scholar, EMBASE et ERIC en utilisant les opérateurs booléens appropriés. Des articles en anglais provenant de la Région de la Méditerranée orientale mentionnant explicitement le « perfectionnement du corps enseignant » dans le domaine de l'éducation médicale, dans le titre, le résumé ou à tout autre endroit du texte, pendant la période 2013-2020, ont été inclus.

Résultats : Deux mille trois cent quarante-sept (2347) articles ont été récupérés, dont 54 ont été retenus pour une analyse plus approfondie, sur la base du modèle de Kirkpatrick pour l'évaluation des programmes. Les articles ont été regroupés en quatre thèmes : évaluation de nouvelles interventions (*n* = 21), évaluation d'interventions déjà mises en œuvre (*n* = 13), évaluation des besoins (*n* = 16), recommandations et lignes directrices (*n* = 4). Il s'est avéré que 23 études ont permis de déterminer le niveau 1 (réaction), tandis que quatre études ont exploré le niveau 4 (résultats) du modèle de Kirkpatrick pour l'évaluation des programmes.

Conclusion : Le perfectionnement du corps enseignant devrait être basé sur les besoins et fournir une formation pratique. Des programmes longitudinaux sont recommandés pour obtenir un maximum de bénéfices.

برامج تطوير قدرات أعضاء هيئة التدريس في مجال التعليم الطبي في إقليم شرق المتوسط: استعراض منهجي

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الخلاصة:

الخلفية: يُعدُّ تطوير قدرات أعضاء هيئة التدريس أمرًا ضروريًّا لتعزيز التعليم الطبي. وقد عززت منظمة الصحة العالمية، في عام 2013، تطوير قدرات أعضاء هيئة التدريس استنادا إلى دلائل جودة معتدلة وتوصيات شرطية.

الأهداف: هدفت هذه الدراسة الى إجراء استعراض منهجي لبرامج تطوير قدرات أعضاء هيئة التدريس في التعليم الطبي في إقليم شرق المتوسط، خلال الفترة من 2013 وحتى 2020.

طرق البحث: أُجري بحث منهجي في قواعد البيانات الطبية: ERIC, EMBASE, Google Scholar, and PubMed، باستخدام مشغلات منطقية (بولينية) مناسبة. وأدرجت مقالات باللغة الإنجليزية من إقليم شرق المتوسط، تذكر صراحةً «تطوير قدرات أعضاء هيئة التدريس» في التعليم الطبي، إما في العنوان، وإما في الخلاصة، وإما في أي مكان داخل النص، خلال الفترة من 2013 وحتى 2020.

النتائج: اسْتُرجع 2347 مقالًا، منها 54 نُظِرَ في إخضاعها لمزيد من التحليل استنادًا إلى نموذج كيركباتريك لتقييم البرامج. وجُمعت المقالات تحت 4 مواضيع: تقييم التدخلات الجديدة (العدد = 21)، وتقييم التدخلات المنفذة بالفعل (العدد = 13)، وتقييم الاحتياجات (العدد = 16)، والتوصيات والمبادئ التوجيهية (العدد = 4). وتم الكشف عن أن 23 دراسة تناولت المستوى 1 (رد الفعل)، بينما تناولت 4 دراسات المستوى 4 (النتائج) من نموذج كيركباتريك لتقييم البرامج.

الاستنتاجات: ينبغي أن يستند تطوير قدرات أعضاء هيئة التدريس إلى تحديد الاحتياجات بالإضافة إلى توفير التدريب العملي. ويوصى بتقديم البرامج الطولانية لتحقيق أقصى الفوائد.

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