

**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 workshops 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 programmes was viewed as highly controversial.	1

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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 identify faculty development needs.	1
Educational needs assessment of faculty members of Qom University of Medical Sciences, (Iran)	Izadkhan 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 programme in these identified areas.	1

FDP = faculty development programme.