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Organizational impact of faculty development programs on the medical teacher's competencies

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Abstract:

BACKGROUND: Faculty development programs as useful approaches for organizational development improved competencies in faculty members which assist them to cope with workload and environment changes. Evaluating organizational development for faculty development programs provides insight into the impact of these programs on system development. The aim of present study was conducted to study the organizational development for faculty development programs at Kerman University of Medical Sciences.

MATERIALS AND METHODS: This analytical and cross-sectional study was conducted between October and December 2020. The organizational development for faculty development questionnaire was sent to a simple random sampling of 100 faculty members who had been participated in the "Medical Education Fellowship" program. The data were analyzed using descriptive statistics including independent sample *t*-test, one-way ANOVA, and *post hoc*, using version 24.0 of SPSS.

RESULTS: The response rate was 82%. Most of the faculty highly agreed that the "Medical Education Fellowship" program had produced organizational development. The score of the "Development and sustaining faculty development programs" domain (mean = 3.35, standard deviation [SD] = 0.96) was higher than "Development and innovation in teaching and learning process" (mean = 3.31, SD = 0.74).

CONCLUSIONS: Specific characteristics of the organizational development process for faculty development programs in health profession education were recognized. The findings emphasized on the importance of these interventions on creating developments in the broader community system.

Keywords:

Empowerment, faculty, medical education, program evaluations, questionnaire, staff development

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Introduction

Educational excellence and health-care quality improvement need experienced and motivated faculty members as critical determinants in facilitating health development.^[1] A vital element to help faculty and their changing needs is faculty development programs.^[2] Faculty development programs define as a broad range of activities with the aim to improve the knowledge, skills, and behaviors of teachers and assist them to play their different roles. These educational interventions can serve

as a valuable approach in the promotion of organizational development and result in both individual and collective outcomes.^[3]

Given the evolving and expanding nature of faculty developments' concept, exploring their efficacy needs more rigorous researches.^[4] To date, a number of publications have reviewed the effectiveness of faculty development activities.^[5,6] Most assessed the changes at the individual level and short-term outcomes such as participant satisfaction instantly after the program,^[7,8] attitudinal changes, knowledge or skills improvement,^[9] and a few focused on the changes in the behavior of faculty.^[10]

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Especially assessing changes because of faculty development interventions over time is important both in identifying any enduring outcomes, understanding which interventions may be related with more sustained changes, and recognizing the development of faculty throughout their professions.^[11]

Recently, policymakers and funding agencies are requesting more to investigate evidence about the impact of faculty development programs on the organization at large.^[12] One of the impacts of any developmental program, such as faculty developments at organization level, is improving the individual and collective capacities.^[13,14] These new capabilities increased wider involvement and engagement of the faculty at the organizational level.^[15]

Burdick *et al.* described a 2-year, part-time fellowship in medical education methodology and leadership and its evaluation as a model to finding evidence for the connection between faculty development as a capacity building intervention in medical education and enhanced health outcomes by gathering quantitative and qualitative data on intermediate outcomes.^[16] Frantz *et al.* studied participant perceptions of a faculty development program, and capacity development was identified as one of the five key themes.^[17] Another study by these researchers (2019) explored the influence of a faculty development program to individual and collective capacity development in sub-Saharan Africa by using participant interviews.^[18] Notably, there is a lack of researches about investigating organizational development for faculty development in health profession education. These researches assist to understand the faculty development effects at organizational level and providing lessons for policymakers of faculty development programs to design future interventions more effectively. The aim of this research was to study the organizational development for faculty development programs at Kerman University of Medical Sciences.

Materials and Methods

Study design and setting

The present research was an analytical and cross-sectional study which was conducted at Kerman University of Medical Sciences (KMU) in Iran between October and December 2020.

Ethical consideration

The KMU's institutional review board approved the study (No. IR.KMU.REC.1399.524). The participants did not receive any incentives, and participation was voluntary.

Study participants and sampling

Simple random sampling was used in the study, and faculty members who had been participated in the "Medical Education Fellowship" program were included. The "Medical Education Fellowship" is one of the faculty development interventions implemented at KMU to assist faculty members to accomplish their teaching roles. The program was performed at Education Development Center of KMU twice from September 2015 to September 2017, each continued for 1 year and covered four modules of main areas of medical education including curriculum and educational planning, teaching methods, student assessment, and new technologies in e-learning. Each module contained eight sessions which lasted 2 and 1/2 months. The content was designated by a panel of experts, based on reliable medical education resources and the literature on similar faculty development programs. In these programs, 100 faculty members of Kerman University of Medical Sciences were participated voluntary. A combination of student-centered and teacher-centered methods including lecture, problem-based learning, team work, projects, question and answer, discussions in small groups, e-learning, and virtual education was applied to deliver the courses.^[19]

Data collection tool and technique

We used organizational development for faculty development questionnaire to evaluate the organizational development for health profession education in the context of the "Medical Education Fellowship." Previously, this questionnaire was developed,^[14,20] and psychometrically evaluated to ensure that it is relevant to the specific context of medical education.^[21]

The original questionnaire contained two sections. The first section, consisting of open-ended questions, covered demographic data including age, gender, department, educational department, rank, and work experience. The second section outlined 21 five-point Likert-type scales across three categories to identify the organizational development for faculty development programs. These three categories included "Development and innovation in teaching and learning process" with 13 items, "Development and sustaining faculty development programs" with 4 items, and "Development of educational leadership and management" with 4 items. A 5-point Likert scale (very low to very much) was also used to record the faculty responses. Based on the educational content of the "Medical Education Fellowship," just the first two categories of the questionnaire were used in this study. Hence, the reliability of the modified questionnaire was investigated again by Cronbach's alpha in our context. Cronbach's alpha coefficient for all items of the questionnaire was 0.80, which was suitable.

We conducted an electronic questionnaire to the 100 faculty members who had been participated in the “Medical Education Fellowship” program. The questionnaire was started with an explanation about the purpose of the study, an assurance of confidentiality, and clarified that completion of the questionnaire would be regarded as agreement to contribute and for anonymized data to be published. Reminders were sent on approximately 4-week intervals after the original invitation via E-mail and social media.

Data were processed and analyzed using version 24.0 of SPSS (SPSS Inc., Chicago, Illinois, USA). Descriptive statistics were used due to respondent numbers. The difference in mean score of the organizational development within demographic variable was tested with independent sample *t*-test, one-way ANOVA, and *post hoc*. $P < 0.05$ was taken as statistical significance.

Results

From 100 questionnaires, 82 were returned, with a response rate of 82%. Female participants (61.5%) were more than the male participants. Most of the participants were assistant professors (86.8%) and 73.2% were affiliated to clinical science departments. Most had 1–5 years’ experience of being faculty member (76.7%), with the majority from the school of medicine of them (71.8%).

Most of the faculty highly agreed that the faculty development programs had produced organizational development. The majority chose very much and much options (60.63%) and the other responded with the average option. The score of the “Development and innovation in teaching and learning process” category (mean = 3.35, standard deviation [SD] = 0.96) was higher than “Development and sustaining faculty development programs” (mean = 3.31, SD = 0.74).

There were no significant differences across the scores of the two categories when comparing by gender, but there was a significant difference for clinical science teachers compared with basic science faculty, assistant professors compared with associate professors, and teachers with less work experience compared with more experienced teachers. Measures of ANOVA indicated a significant difference between the scores of all categories and the different departments.

Discussion

This study explored the organizational development for faculty development programs at Kerman University of Medical Sciences. We found that the capabilities in the “Development and sustaining faculty development

programs” category showed the most important aspects of organizational development for faculty development programs. This category refers to the attention and tendency of faculty in medical education and their support and cooperation with others in the workplace, which is necessary to sustain and develop the programs. Results of a few previous papers about the organizational impact of faculty development programs are consistent with some of the developed capacities in the “Development and sustaining faculty development programs” category in current study. Tax and *et al.* reported comfortable participating in discussions with other faculty members.^[22] However, there are some new and important capacities in relation to the increased motivation and effort of participants of these programs to become familiar with medical education which present the high commitment that is established by many participants on faculty development programs for health profession education.

The “Development and innovation in teaching and learning process” category refers to improving abilities in instructional process as the basic role of faculty members, including various teaching and student assessment methods. Because of the importance of this role, most of faculty development interventions focus their aims and expected learning outcomes in this area.^[8,23] Although, one significant finding of this study is providing evidence on the applying new knowledge and skills to modify teaching by the participants through involving in the individual and collective enhancement.

Longer faculty development programs which extended over time tend to yield more lasting, durable, and organizational outcomes rather than short-term and one-time interventions.^[24] The “Medical Education Fellowship” run twice, each one spread out over 1 year. Organizational development for these courses is possible when the participants met over time and engaged in educational activities following the faculty development activity.

The innovation of our study is highlighting the organizational development in the context of faculty development programs for health profession education which consider not only the impact on individuals but also within the wider organization. An important feature of the organizational development is accomplishing a common agreement about the future path of a faculty development programs. This important way is essential for defining clear objectives of the program, determines the way of monitoring, evaluation and providing resources to support a program.

Finally, within the existing relatively limited literature on organizational development in the context of faculty

development, there is a noticeable paucity of this type of research in the health profession education context and future research is recommended.

Limitation and recommendation

The present study has several limitations. The study population was small and limited to a selected group of faculty members from one university of medical sciences. This restricts the generalizability of our findings. Evaluating organizational development for faculty development programs in other context and universities is recommended. Furthermore, we measured only the faculty development participant's perceptions, which could be a source of bias. Therefore, using other insights such as policymakers, funding agencies, and student's perceptions was suggested.

Faculty development can be used as a potential tool to engage faculty in organizational development. There are increasing demands for evaluating the impact of faculty development programs, especially to show potential for sustainability by wider involvement of the participants in their workplace and at the system level to produce organizational development.

Conclusions

The study identified specific features of the organizational development process in the context of a faculty development program and highlighted the importance of these programs on producing changes in the wider social system. Further research across different faculty development programs is recommended to identify if our findings are consistent and have potential to inform future policy and practice for faculty development programs.

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This study is based on a research plan approved at Kerman University of Medical Sciences and the design code is 99000636.

Conflicts of interest

There are no conflicts of interest.

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