

Original Article

Description of the experiences of faculty members from knowledge enhancement workshops in Ahvaz Jundishapor university of medical sciences: A qualitative study

Ayyub Mojaddami ¹, Akbar Babaei Heydarabadi ², Arash Salahshouri ^{3*}, Mohammad amin Habibi ⁴, Saeed Ghanbari ⁵, Kaveh Eslami ⁶, Abdolhossein Shakurnia ⁷, Elham Karbol ⁸, Mojdeh Ebrahimpour ⁸

¹ Toxicology Research Center, Medical Basic Sciences Research Institute, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

² Associate Professor, Department of Health Education and Promotion, School of Health, Social Determinants of health Research Center,

Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

³Assistant Professor, Department of Health Education and Promotion, School of Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

⁴ Expert in Cultural affairs, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

⁵ Assistant Professor of Biostatistics, Department of Biostatistics and Epidemiology, School of Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

⁶ Associate Professor of Clinical Pharmacy, Department of Clinical Pharmacy, School of Pharmacy, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

⁷ Assistant Professor of Medical Immunology, Department of Immunology, School of Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

⁸ Expert in Education Development Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

Article Info



Article history:

Received 6 July. 2022

Accepted 28 Jan. 2023

Published 27 Mar. 2023

Abstract

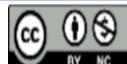
Background & Objective: Despite the fact that knowledge enhancement workshops are held in medical sciences universities of the country, studies have shown that the status of programs and activities related to these workshops have not been evaluated. In this regard, the present study aimed to describe the experiences of faculty members from knowledge enhancement workshops held at Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.

Materials & Methods: This inductive qualitative study was performed based on conventional content analysis from October 2021 to May 2022. The required data were collected through 18 in-depth semi-structured and in-person interviews with 16 faculty members of Ahvaz Jundishapur University of Medical Sciences. Participants were selected by purposive sampling method and the sampling continued until data saturation. The data were analyzed in MAXQDA software (version 10) using the Braun and Clarke method.

Results: The interviews were divided into more than 401 open codes, 31 subcategories, 14 categories, and 2 main categories (themes). The themes that emerged included "challenges and weaknesses" and "solutions to improve the workshops". The theme of challenges and weaknesses was divided into eight categories, including the topic needs assessment, appropriateness of the content, methods of holding and teaching, registration in workshops, the time of workshops, the place of workshops, evaluation methods, and instructors of workshops. Moreover, the theme of solutions was divided into six categories, namely improvement of the selection process of instructors, usage of the capable and expert selection process of instructors, improvement of the topic needs assessment methods, modification of content matters, facilitation of information channels, and improvement of the categorization evaluation system.

Conclusion: The main goal of knowledge enhancement workshops is to improve the abilities of professors. Therefore, paying attention to the challenges, weaknesses and providing solutions can improve the quality of these workshops and also encourage the faculty members to participate in them.

Keywords: Evaluation, Faculty Members, Knowledge Enhancement Workshops



Copyright © 2021, This is an original open-access article distributed under the terms of the Creative Commons Attribution-noncommercial 4.0 International License which permit copy and redistribution of the material just in noncommercial usages with proper citation

Introduction

Human resources are the most valuable asset of an organization and the basis for dynamism and productivity (1, 2). In universities and higher education centers, the main human resources are faculty members, since in such organizations, the main and specialized activities are performed by faculty members. Therefore, paying attention to them indicates the importance of human capital in universities and higher education centers (3).

Faculty members are an integral part of any educational system and the quality of their work largely depends on their dynamics in this system. Therefore, the abilities of faculty members directly affect academic performance in higher education (4, 5). Furthermore, given that human resources are trained by faculty members in universities, the universities should invest in their faculty members as the main force of development and education of future experts and pursue their development and empowerment (6).

The empowerment of human resources in educational institutions is of particular importance since they play an essential role in the development and progress of society in many aspects. In this regard, universities must adopt appropriate mechanisms for this empowerment (7, 8). Empowerment is a strategy for the development and prosperity of the organization (9, 10) and employees are the main factor of empowerment (11). Therefore, organizations have gradually realized the importance of empowering their employees (12). The World Bank defines empowerment as the process of increasing the capacity of an individual or group to make purposive choices and transform those choices into actions and desirable results (13).

In education, empowerment means the provision of all faculty members with the opportunity to participate in decisions that affect them (14). Since faculty members are the basic assets of the university, the improvement of their educational abilities depends on the abilities of the educational system and the training of skilled human resources. Therefore, it seems necessary to hold training workshops aimed at empowering the professors (15-17). Accordingly, it became mandatory for university professors to participate in empowerment workshops held for faculty members in various educational, research, and cultural fields. Effectiveness of workshops increases the level of professional commitment and ultimately improves the quality of provided services (16).

The empowerment of professors also refers to the set of activities that an educational institution carries out to prepare its faculty members to cope with their workload and environmental changes (18) and fulfill their professional roles (19). Moreover, it leads to the realization of the extensive missions and goals of the educational institution (20).

In recent years, universities of medical sciences in Iran have seriously pursued the implementation of faculty empowerment programs. Since they spend a lot of time and money on the implementation of such programs, reliable and scientific evaluations are necessary to show the level of the educational effectiveness of these workshops in general, and also to identify their challenges and strengths. Therefore, many studies have been performed in this regard. In a study recently conducted in the Faculty of Medicine of Tehran University, Tehran, Iran, one of the most important indicators from the point of view of faculty members were the problems related to their abilities and the inadequacy and inappropriateness of the existing educational methods (21). In another study, most of the professors criticized the workshops since they did not provide the participants with enough time to practice, criticize, and perform (22).

In some studies, the factors related to the appropriate empowerment workshops of faculty members, included inhibiting factors, motivational factors, structural factors, process factors (3), lack of motivation, and insufficient attitude towards the use of various applied educational methods (22), and education, coordination, and notification challenges (23). Another study conducted in Mashhad, Iran, evaluated the effect of faculty members' empowerment workshops on their satisfaction and knowledge regarding teaching and evaluation skills (24).

Based on the review of the related literature, the empowerment workshops are often evaluated through surveys and self-evaluation in terms of the levels of learning, attitude change (25, 26), and acquired knowledge (27) and in the form of quantitative studies. However, essential analyses to improve these programs, identify their challenges and weaknesses, and provide effective solutions to improve their implementation are very rare, especially with a quantitative approach. Therefore, the present qualitative study aimed to describe the experiences of faculty members in this regard. It is hoped that the findings of this research can

be used for appropriate educational planning to improve the quality of the above-mentioned workshops.

Materials & Methods

Design and setting(s)

This inductive qualitative research was performed using conventional content analysis (28) from October 2021 to May 2022.

Participants and sampling

The participants in this research were faculty members of Ahvaz Jondishapur University of Medical Sciences, Ahvaz, Iran. Purposive sampling with maximum variation was used to select participants. Therefore, it was attempted to select a heterogeneous group of faculty members with a wide range of demographic characteristics (e.g., gender, age, education status, and field of study). Interviews with faculty members were conducted in person and continued until data saturation was reached, which happened after 18 in-depth interviews with 16 faculty members (Table 1).

The inclusion criteria were employed as a permanent or contractual faculty member, the experience of participation in at least one knowledge enhancement workshop, and willingness to participate in this study.

Data collection methods

The data collection method was semi-structured in-depth interviews. The form of semi-structured interviews was prepared by the researchers based on the literature review, which consisted of two parts. The first part included several questions about age, gender, academic rank, department, work experience, name of the faculty, and the number of times of participation in knowledge enhancement workshops. The second part included a list of some basic open questions for use in a semi-structured interview. Examples of open questions are: "What are your experiences and opinions about the topics of the workshops and their selection method?" and "What do you think about the scientific content of the workshops?"

They were also asked to share their opinions and experiences regarding the characteristics of the instructor, the teaching method of the workshops, the influence of the instructor on the audience, the executive management, conditions and educational environment of holding workshops, the evaluation of workshops, impact of workshops on faculty members, suitability of the goals of the workshops to the needs of faculty members, and the necessity or non-necessity of

the workshops. As the last question, they were asked to express their suggestions for the improvement of the quality of these workshops.

Afterward, according to the explanations of participants and the experience of the interviewer, if there were any ambiguity in the statements of participants, they were asked probing questions, such as "Please explain what you said", "Can you elaborate on your answer?", and "Do you mean...?" to help everyone share their experiences. At the end of each interview, participants were asked to share any information they felt was important but not covered in the interview. Interviews with faculty members were conducted individually and in person.

Two pilot interviews were conducted to test the semi-structured interview questions. After determination of the clarity and comprehensibility of the interview questions in the pilot test, the data form was applied to all samples. All interviews were conducted by two researchers (first and second authors) and the mean duration of each interview was 35 min. In total, 630 min of audio was recorded. In addition, field notes were taken immediately after each interview as another method of data collection and examination of the non-verbal behaviors of the participants. All interviews were recorded using a tape recorder and then transcribed verbatim in Persian. Finally, the notes were shown to the participants to confirm the recorded statements. After the end of each interview, study data were transcribed for analysis.

Data analysis

Typed interviews and field notes were entered into qualitative data analysis software (MAXQDA version 10) and analyzed using the thematic analysis method according to the steps defined by Braun and Clarke (29). Since the study was performed based on an inductive approach, no categories were defined in advance. The first step included the transcription of interviews and the identification of the primary codes according to the purpose of the study. The codes were determined based on the recommendations of Saldaña (30) and similar codes were grouped to generate subcategories, categories, and themes. Finally, themes and sub-themes were named and defined (30).

Rigor

The trustworthiness of the study was evaluated based on four criteria established by Lincoln and Guba (31, 32). A) To assess the credibility of the data, the opinions of

faculty members with different perspectives were compared to ensure the triangulation of the data source. In addition, the study was designed to include more than one researcher. Long-term contact with the participants, appropriate interaction with them, and data review by the participants and colleagues increased the validity of the data. B) To increase the dependability of the data, various measures were taken, such as step-by-step repetition and data collection and analysis, review by experts, long-term engagement of researchers with the data, and immersion in the data. The consolidated criteria for reporting qualitative research checklist was used to ensure accuracy in the present study. C) To achieve confirmability, the text of several interviews, extracted codes and classes, and the formation method of classes and themes were presented to external observers so that they could check the confirmability of the data. D) Moreover, the provision of direct quotations and examples increased the transferability criterion.

Results

A qualitative analysis of 18 interviews conducted with 16 faculty members participating in knowledge enhancement workshops (Table 1) resulted in the extraction of 401 open codes. These codes were finally reduced to 208 codes with constant comparison of data as the analysis progressed. After categorization, there were 31 subcategories, 14 categories, and 2 main categories or themes, including 1) challenges and weaknesses of knowledge enhancement workshops and 2) solutions to improve the conditions of workshops.

1. Challenges and weaknesses of holding knowledge enhancement workshops

Based on the experiences of the participants, the challenges and weaknesses of knowledge enhancement workshops include eight subcategories, namely topic needs assessment, appropriateness of the content, methods of holding and teaching, registration in workshops, the time of workshops, the place of workshops, evaluation methods, and instructors of workshops (Table 2). Unprincipled and unscientific choice of topics and lack of attention to the interests of the faculty members in the selection of the topics of knowledge enhancement workshops comprise the subclasses developed in the needs assessment that some participants mentioned as challenges and weaknesses of knowledge enhancement workshops.

Table 1. Demographic characteristics of study participants

	Variable	Frequency	Percent
Age	<40 years	4	25%
	40-50 years	7	43%
	>50 years	5	31%
Sex	Male	9	56%
	Female	7	43%
Faculty	Public health	4	25%
	Pharmacy	2	12%
	Paramedicine	2	12%
	Medical	3	18%
	Nursing & Midwifery	2	12%
	Dentistry	2	12%
	Rehabilitation	1	6.25
Working years	<5 years	2	12%
	5-10 years	5	31%
	>10 years	9	56%
Educational group	Basic sciences	13	81/25%
	Clinical	3	18%
	Instructor	1	6/25%
Academic rank	assistant professor	6	37/5%
	Associate professor	8	50%
	professor	1	6/25%

In this regard, a faculty member said: "*There has been no needs assessment of topics; even if there has, it was in the form of only a questionnaire. The selection of workshop topics is based on the availability of professors*" (associate professor, with a history of participating in seven workshops).

Another participant stated: "*The tastes and interests of the faculty are not considered while choosing the topics of the workshops. Most of the topics of the knowledge enhancement workshops revolve around a certain political-intellectual current*" (assistant professor, with a history of participating in seven workshops).

According to the faculty members, the provided content does not meet the needs of the audience and is imbalanced which is another challenge of knowledge enhancement workshops. In this regard, a faculty member said: "*The educational content of these workshops is not profound enough to meet the needs of the faculty (their ability to answer the questions of students or families). The workshops should enhance the abilities of the faculty members to answer the moral and educational questions of the students*" (associate professor, with a history of participating in eight workshops).

An associate professor from the Faculty of Medicine said: "*Since the lecturers of knowledge enhancement workshops mostly come from a seminary, the basis of the content of all of the workshops is religious teachings and there is nothing about other topics. In these workshops, there is no balance in terms of the presented content*" (associate professor, with a history of participating in three workshops).

"*The method of holding the workshop and its teaching*" was another challenge of the knowledge enhancement workshops. Several faculty members admitted that the lack of electronic education, interactive learning activities, and audio-visual aids

in teaching minimizes the attractiveness and variety of these workshops. In this regard, an instructor from the Faculty of Paramedicine stated: "*The method of holding all the knowledge enhancement workshops is face-to-face and in the form of lectures. No interactive learning methods are used, such as question and answer.*" (Associate professor, with a history of participating in six workshops).

A faculty member from the faculty of paramedicine also stated: "*The method of holding these workshops is totally traditional, while it is possible to use virtual teaching platforms, such as Sky Room, so that faculty members from all universities can participate*" (instructor, with a history of participating in six workshops).

Table 2. Themes, subcategories, and codes of challenges and weaknesses of holding workshops

Themes	Categories and subcategories	Samples of codes
Challenges and weaknesses	Topic needs assessment	Unprincipled and unscientific choice of topics Selection of workshops without need assessment, selection of topics based on access to instructors, more emphasis on religious topics
		Lack of attention to the interests of the faculty members in the selection of the topics Failure to pay attention to the interests of the audience, bias towards particular topics, bias towards topics related to a particular school of thought
	Appropriateness of the content	Lack of fitness of the content to the needs of the audience Lack of fitness of the content to the educational needs of students and families
		Imbalanced content Emphasis only on theoretical topics, combination of topics of all workshops with religious topics, repetitiveness of the content of workshops
	Methods of holding and teaching	Lack of electronic education Emphasis only on holding the workshops in person
		Lack of interactive learning activities Lack of usage of online methods, such as video conference
		Lack of audio-visual aids in teaching Only oral instruction, usage of only markers for instruction
	Registration in workshops	Limited registration time Only one or two days for registration
		Difficulty of registration methods Registration for workshops in person, registration for workshops by phone, lack of usage of electronic registration
		Limited registration capacity Limited registration capacity
		Poor notification of the schedule of the workshops Notification through billboards; notification for only a limited period, lack of posting the annual workshop schedule on the university website
	Time of workshops	Time of workshops Holding workshops during breaks, holding workshops during dead time, holding workshops at the same time as other events, and holding workshops during working hours of faculty members
		Long duration of workshops Holding workshops for 10-20 hours, holding workshops over several consecutive days
	Place of workshops	Inappropriate physical space Lack of suitable and sufficient space for holding teamwork meetings, inadequate ventilation of the conference hall
		Equipment and design of the conference hall Lack of comfortable seats and suitable audio equipment in the conference hall, traditional arrangement of chairs in the conference hall
	Evaluation methods	One-dimensional evaluation Lack of evaluation of moral skills, lack of evaluation of the content of workshops, lack of attention to the unethical behavior of the instructor
		Inappropriate implementation of the evaluation Completion of evaluation forms in a short period, completion of evaluation forms during the workshop, lack of cooperation of the audience in completing the workshop evaluation form
		Superficiality of the evaluations Lack of usage of the results of evaluation forms, lack of feedback to the audience about their opinions of the evaluation
	Instructors of workshops	Unrealistic representation of topics Imposition of personal views on the audience, lack of expression of positive points about other countries in related workshops, focusing on the weaknesses of other countries in workshops with related topics
		Bias toward topics Lack of attention to the questions of opponents, bias towards some social issues

Another challenge and weakness of holding knowledge enhancement workshops are associated with the methods of registration in these workshops. In this regard, faculty members stated that limited registration time, the difficulty of registration methods, limited registration capacity, and poor notification of the schedule of the workshops were some of the challenges of registering for these workshops. In this regard, a faculty member from the Faculty of Rehabilitation

said: "*Registration time is very short; for example, we receive the registration message today, but when we want to apply for registration, the deadline is expired or the registration capacity is full*" (Associate professor, with the history of participating in one workshop).

A faculty member from the Faculty of Pharmacy said: "*The workshop registration is announced through posters. Where can I see them? If the comprehensive program of the*

workshops is posted on the university website from the beginning of the year with the electronic registration link, it will be easier for us to make a decision and register" (associate professor, with the experience of participating in eight workshops).

The time of the workshops was another challenge according to the majority of the participants. They declared that the inappropriate time of the workshops and also the long duration of some workshops were among the reasons that prevented them from participation. A faculty member from the Faculty of Health admitted: "*The time of most of these workshops is not appropriate; for example, they are held during the break time of the professors, during dead time, such as lunchtime, at the same time as other events, or during the time of the classes of the faculty members*" (assistant professor, with the experience of participating in one workshop).

Furthermore, regarding the long duration of some workshops, a faculty member from the Faculty of Medicine said: "*The duration of some of these workshops is 16 h over two days. When my students are in the department and I also have a patient, how can I attend the workshop for two days?*" (Associate professor, with the experience of participating in three workshops).

Some participants listed the inappropriate physical space and inadequate ventilation of the conference hall as an obstacle to the participation of the faculty members in the knowledge enhancement workshops. A faculty member from the nursing and midwifery faculty stated: "*Due to the few numbers of educational workshops during the academic year, the majority of the faculty members participate in these workshops to gain cultural points, so the physical space and ventilation of the halls is not adequate for such a population.*" (Assistant professor, with the experience of participating in four workshops).

The evaluation method was another challenge that emerged with subclasses of one-dimensional evaluation, the inappropriate conditions of the implementation of the evaluation, and the superficiality of the evaluations. The participants acknowledged that one-dimensional evaluation was a common problem of knowledge enhancement workshops; accordingly, there was a lack of evaluation of the moral skills of lecturers, a lack of evaluation of the content of workshops, and a lack of attention to the unethical behavior of the instructors. Therefore, the evaluation was considered to be one-dimensional. In this regard, a faculty member from the Faculty of Nursing and Midwifery stated: "*Evaluation of workshops mostly includes things, such as the physical space and cooling and heating of the hall. No one evaluates the moral skills of the instructor or the content of the workshop, and this is an important flaw in the evaluation of these workshops*" (associate professor, with the experience of participating in eight workshops).

Some other participants complained about the inappropriate conditions of the evaluation. As examples of these

unfavorable conditions, they mentioned the completion of the evaluation forms in a short period of time during the workshop and the lack of cooperation of the participants in completing the evaluation forms of the workshops. A faculty member from the Faculty of Health stated: "*They distribute the evaluation forms in the last few minutes of the workshop, which is not a good time at all because everyone is in a hurry to leave the meeting hall. Some professors do not complete them at all, and some of them answer the questions without even reading them*" (associate professor, with the experience of participating in seven workshops).

According to the participants, the questionnaires were completed and filed without giving feedback to the audience about their opinions about the evaluation as an example of the superficiality of the process that is repeated every year. In this regard, a pharmacy faculty member stated: "*Workshop evaluation has become a superficial process. Paper forms are constantly filled and stored without giving us feedback about the participants' opinions or using its results in practice*" (associate professor, with the experience of participating in 10 workshops).

Finally, challenges related to workshop instructors included two subcategories of "*unrealistic representation of topics*" and "*bias toward topics*". Unrealistic representation of the topics refers to the discussion of the topics of the workshops in a way that is far from reality. In other words, it means informing the audience unrealistically, which can be due to the bias of the teachers toward the topics of the workshops. Therefore, this issue caused challenges, such as an attempt to impose personal views on the audience, lack of expression of positive views about other countries in related workshops, attempt to focus on the weaknesses of other countries in workshops with related topics, lack of attention to the questions posed by opponents, and bias toward some social issues.

In this regard, one of the dental faculty members stated: "*Usually, the lecturers of these workshops are biased towards the topics, so in the workshops with topics about Western countries, they only express negative points*" (assistant professor, with the experience of participating in one workshop).

"In workshops with social and political issues, lecturers usually try to impose their personal points of view on the audience and sometimes they may not respond to questions and opposing opinions" (associate professor, with the experience of participating in eight workshops).

2. Solutions to improve the conditions of workshops

As mentioned above, there are challenges and weaknesses in the knowledge enhancement workshops that require appropriate solutions to solve them. Based on the data analysis, suggested solutions in six categories were proposed by participants to improve the conditions of workshops, which included improvement of the selection process of instructors, employment of capable and expert instructors, improvement of the topic needs assessment methods, modification of content, facilitation of information channels, improvement of

the evaluation system, combined use of seminary and academic instructors, employment of university or non-seminary instructors competent in religious and moral issues, and the use of several instructors for a workshop.

One of the faculty members stated: "*Since the audience is diverse, I think it is better to use a combination of seminary instructors and academic experts in teaching these workshops so that the topics can be examined from both religious and scientific points of view so that the interests of different audiences are considered*" (associate professor, with the experience of participating in seven workshops).

Another way to improve the conditions of workshops is to use capable and expert instructors. Based on the analysis of interviews, the use of instructors with effective communication skills, scientific mastery, proficiency in classroom management techniques, and appropriate moral/personal characteristics can motivate faculty members to participate in these empowerment workshops.

In this regard, a faculty member from the Faculty of Rehabilitation stated: "*For knowledge enhancement workshops, the selected instructor should know the language of the university and be able to speak and listen to the audience. In other words, they must be proficient in classroom management techniques*" (professor, with the experience of participating in one workshop).

The participants declared that the quality of the conditions of knowledge enhancement workshops can be refined by improving the topics needs assessment by the faculty members, based on the needs and challenges of the audience, with the aim of empowering professors to respond to the needs of their students, by combination of the opinions of the leader and his deputies, and finally, by selection of the workshop topics with regard to social conditions.

A faculty member from the Faculty of Dentistry said: "*If the topics of the workshops are selected based on the needs assessment process and by the professors themselves, or if these topics are selected based on existing social needs and challenges, they will be more interesting to the audience*" (associate professor, with the experience of participating in six workshops).

"If all institutions and deputies of the university, such as the Deputy of Education or Research, participate in the selection and needs assessment of the topics of the knowledge enhancement workshops, more interesting and realistic priorities will be selected, rather than the cliche way that the leadership body alone determines a number of repetitive topics for the workshops every year" (Assistant professor, with the experience of participating in one workshop).

From the point of view of the participants, modification of the contents of the workshops was one of the solutions that can improve the conditions of these workshops by prevention of repetitive topics, provision of new content, consideration of different aspects of a topic in workshops, and the lack of promotion of a special model favored by the lecturer.

A faculty member from the Faculty of Medicine stated: "Since usually, 90% of the faculty members of each university are permanent, if you are looking to improve the conditions of holding workshops, repetitive topics should be eliminated and the educational content of the workshops should be updated" (Professor, with the experience of participating in five workshops).

Another participant from the Faculty of Dentistry stated: "*The promotion of the special model favored by the lecturer, which is sometimes done by some lecturers of the workshops, causes the audience to lose interest in these workshops. This issue should be prevented*" (associate professor, with the experience of participating in six workshops).

According to the obtained results, some participants considered that using a variety of notification systems for workshops is an important factor in increasing the participation of faculty members. The participants suggested that the faculty members should be notified through SMS and social networks and also the comprehensive program of these workshops should be posted on the university website.

A faculty member from the Faculty of Paramedicine stated: "*My suggestion is that the enhancement workshops should be planned annually and posted on the university website so that everyone can see them from the beginning of the year*" (associate professor, with the experience of participating in six workshops).

Improvement of the evaluation system can happen through the improvement of participation in evaluation, diversity in evaluation methods, and practical usage of the evaluation results. The participants believed that the creation of a commitment to completing the evaluation forms and the allocation of more time for the evaluation can increase the participation of faculty members in the evaluation.

A faculty member from the Faculty of Nursing and Midwifery stated: "*If the issuance of the certificate of participation in the workshop depends on the completion of the evaluation form, it will create an obligation that most of the participants must participate in the evaluation, although it requires a longer time limit for completion of the evaluation form, even after the workshop*" (associate professor, with the experience of participating in eight workshops).

They also considered that the evaluation system of knowledge enhancement workshops can be improved by the creation of multiple evaluation methods, practical usage of the feedback of the professors, and more attention to the criticisms and suggestions of the faculty members.

In this regard, a faculty member from the Faculty of Pharmacy stated: "*Limiting the evaluation to paper forms is not a good idea. It is better to design an electronic form at the same time so that the participants can evaluate the workshops at a convenient time and even a few days after the workshop*" (associate professor with the experience of participating in 10 workshops).

"Everybody knows that using the results of previous evaluations and taking into account the criticisms and

suggestions of the participants in the workshops can double their interest to participate in the next evaluations and improve the evaluation system" (Faculty of Health, associate professor, with the experience of participating in seven workshops).

Discussion

Two main issues were identified in this study; first, the challenges and weaknesses of knowledge enhancement workshops, and two, solutions to improve the conditions of workshops. The following discussion examines these issues further.

One of the results of this study was the challenge related to topic needs assessment. Accordingly, it can be said that the lack of an appropriate topic needs assessment process is one of the reasons for the dissatisfaction of faculty members, which has caused them to be disinterested in participating in these workshops. In line with this study, the results of a study performed in Kermanshah, Iran, indicated that one of the obstacles to research workshops to empower faculty members is the weaknesses in needs assessment (15). It should be noted that from a scientific point of view, the first step in the design of any educational program is the determination of the educational needs of people (33).

Moreover, the first step in educational planning is the identification of educational needs and their prioritization. If this step is performed well and correctly, the implementation of educational development processes will be easier and more effective (33, 34). For this purpose, in the solutions section, the participants suggested the improvement of the topic needs assessment methods through various mechanisms, such as the selection of topics with a needs assessment by the faculty members, based on the needs and challenges of the audience, with the aim of empowerment of professors to respond to the needs of their students, combination of the opinions of all institutions and deputies in the selection of topics, and the selection of topics that suit the social conditions.

Furthermore, the analysis revealed that the easy access of the workshop organizers to some professors and lecturers causes them to select the topics for knowledge enhancement workshops according to the expertise of the available lecturers. However, this is not in accordance with the scientific principles of determining educational priorities. It also causes the selection of professors for these workshops not to go through a desirable process.

For this reason, the participants have suggested that the characteristics of a good professor (as summarized in Table 3) be considered for the selection of instructors. Other proposed solutions to improve the selection process of instructors included the use of academic and non-seminary instructors capable of religious and moral issues, the combined use of seminary and academic lecturers, and the use of several instructors for one workshop.

Among other challenges and weaknesses of holding knowledge enhancement workshops were the issues related to the disproportion between the content and the needs of the faculty members, students, and their families. In this regard and based on the explanation of the experiences of participants, several solutions were proposed, such as the prevention of workshops with repetitive topics, encouragement to teach new content, consideration of different aspects of the topic in workshops, and lack of promotion of the special model favored by the lecturer. In a study performed by Ahmadi *et al.*, content-related issues were considered a challenge in the faculty member empowerment programs of Ahvaz Jondishapur University of Medical Sciences; however, in that study, other solutions were proposed to improve these issues (23), which were different from the results of the present research.

It must be emphasized that the participants complained about the combination of topics of all workshops with religious and political issues. Therefore, considering their interest in moral, educational, and skill-development topics, it is suggested to hold workshops with educational and psychological topics that aim to improve their lifestyle and behavior. In line with the findings of the present research, those of the study performed by Jafari *et al.* mentioned issues, such as lack of expertise, lack of mastery, and poor content among the challenges of enhancement workshops faculty members (15).

Another challenge in knowledge enhancement programs was related to the holding and teaching methods of these workshops. Accordingly, the insufficient use of new educational technologies (audio-visual devices, clips, or applications) and lack of usage of interactive learning activities were listed as weaknesses of these workshops. In other studies, interactive learning has been mentioned as one of the basic approaches to enhance learning in education (35). Moreover, the participants of the aforementioned study declared that more emphasis was placed on holding workshops in person and they were often held in the

form of lectures. This can be due to various reasons, such as fear of technology and technological illiteracy (36).

Table 3. Themes, subcategories, and codes of solutions to improve the scientific conditions of workshops

Themes	Categories and subcategories		Samples of codes
Solutions for the improvement of workshops	Improvement of the selection process of instructors	Combined use of skilled instructors	Employment of university or non-seminary instructors competent in religious and moral issues, combined use of seminary and academic instructors, employment of several instructors for a workshop
	Employment of skilled and expert instructors	Use of instructors with effective communication skills	Willingness to respond to the audience, comprehension of the university language by the workshop instructor; mastery of the techniques of attracting the audience, ability to build friendly relationships with participants, rhetorical speech, good manners and appropriate behavior, self-control and patience, confidentiality, ability to win the trust and respect of the audience
		Use of instructors with scientific mastery	Usage of expert instructors, mastery over the topic of the workshop, scientific ability to respond to different points of view, scientific ability to respond to ambiguities based on religious and intellectual documents, ability to combine workshop topics with contemporary science
		Use of instructors with proficiency in classroom management techniques	Creativity in teaching, simple and fluent expression of ideas, ability to engage the audience with the subject, ability to prepare group activities for the audience, ability to use interesting and practical examples, ability to ask for the opinions of the audience, comprehension/management of different points of view, ability to manage topics, ability to adjust the scientific content according to the level of faculty members, provision of the opportunity to express opposing views
	Improvement of the topic needs assessment methods	Use of instructors with appropriate moral/personal characteristics	Good morals, friendliness, sense of humor and happy spirit, charismatic personality
		Topics needs assessment	Selection of topics based on a needs assessment from the faculty members, selection of topics based on the needs and challenges of the audience, selection of topics that empower professors to respond to the needs of students, selection of topics by the combination of the opinions of the leadership body and other deputies, selection of topics based on the opinions of all institutions, selection of topics according to social conditions
Improvement of the evaluation system	Modification of content	Modification of the contents	Prevention of workshops with repetitive topics, provision of new content, consideration of different aspects of a subject in workshops, lack of promotion of the favorite model of the instructor
	Facilitation of information channels	Use of a variety of notification systems for workshops	Notification via SMS, social networks, posting the comprehensive program of empowerment workshops on the university website
	Improvement of the evaluation system	Improvement of participation in the evaluation	Obligation to complete the evaluation forms, provision of a longer evaluation time
		Diversity in evaluation methods	Evaluation through electronic forms, evaluation through paper questionnaires
		Practical usage of the evaluation results	Implementation of the results of evaluations, more attention to the provided criticisms and suggestions

In another study, poor communication due to the inadequacy of the communication system and the inadequate policies of communication technology, which demotivates employees, were among the challenges to employee empowerment, which is in line

with the findings of the present study (37). Therefore, according to the statements of participants, to solve this problem, it is possible to overcome these weaknesses to some extent by improving the selection process of lecturers through the use of professors who are

proficient in classroom management techniques (the characteristics of these professors are summarized in Table 3).

Another challenge of holding knowledge enhancement workshops is related to registration, which is an obstacle to the participation of professors in these workshops and includes various issues, such as the limited registration time, difficulty of registration methods, limited registration capacity, and poor notification of the schedule of workshops. One of the reasons for the limited registration capacity of these workshops is the low capacity of the physical space of the halls where the meetings are held. Therefore, by holding these workshops simultaneously in person and online or holding several meetings throughout the year, this challenge can be minimized to some extent.

Based on the analysis of the results and given the important role of issuing a certificate of participation in these workshops in the promotion of faculty members, after the start of registration, people who have the possibility to apply in person will register faster. Therefore, the announced capacity for participating in the workshop will reach its limitation very soon, which causes dissatisfaction among many professors who fail to register. Moreover, many professors who are in clinical environments do not have the opportunity to visit in person and thereby, do not have the opportunity to register and complain about the difficulty of the registration methods. This challenge can be overcome by the use of an online registration system along with in-person registration.

The failure of some faculty members to register for these workshops can be due to the lack of information about the time of registration and the start of the workshops, which is, in turn, due to a failure in the notification system. In other studies, the weakness in notification systems (15) as well as insufficient coordination and inefficiency of the information system (23) were known as the obstacles to holding empowerment programs. Therefore, some participants suggested the facilitation of notification through SMS and social networks as well as posting a comprehensive program of empowerment workshops on the university website at the beginning of each year.

One of the problems of holding knowledge-enhancement workshops is related to its time, which includes the long duration of the workshops and the inappropriate time of the workshop. In line with the results of the present research, findings of a study conducted by Khodayi *et al.* showed that faculty

members do not have enough time to participate in educational or research workshops due to their busy schedule in the college or hospital; however, they prefer to spend their limited free time by participating in research programs due to personal interests, such as promotion of scientific rank and financial benefits (3). Therefore, holding knowledge enhancement workshops for faculty members in a short period and between two academic semesters and also during the summer holiday can increase their participation.

Despite significant improvements in the infrastructure of universities, it can still be said that the lack of a suitable physical location is a challenge in holding training workshops, which can negatively affect the willingness of people to participate in them. In this regard, Hidaka *et al.* (2015) identified limited resources as the main obstacle to program development (38). It must be mentioned that due to the importance of participation in knowledge enhancement workshops for obtaining points in cultural activities that help with the vertical promotion of faculty members, these workshops become very crowded. Therefore, it is natural that universities have problems with the provision of physical space, facilities, and equipment. However, the use of virtual educational platforms, such as Skyroom and the Navid system, along with in-person training can prevent the excessive number of audience. Moreover, by using online education, it becomes possible for faculty members of different universities to participate in a workshop. One of the positive things carried out by the Empowerment Committee is the evaluation of lecturers after each training workshop, which leads to the reception of appropriate feedback regarding the programs. However, the faculty members mentioned the evaluation methods used for knowledge-enhancement workshops as an important challenge. One of the challenges of the evaluation of these workshops is the one-dimensional evaluation. Accordingly, in these evaluations, no attention is paid to the moral skills of the lecturer, the content, and the unethical behavior of the lecturer. This is in contradiction with the fact that the observance of ethical principles in the university is considered a teaching standard and plays an important role in the formation of a mutual relationship between the lecturer and the audience (39).

This attitude (one-dimensional) toward evaluation is not specific to knowledge enhancement workshops and is observed in most educational workshops organized at the university level. However, the comprehensive evaluation of the workshops is one of the factors that

can improve the quality of university skill enhancement workshops. In other words, objective indicators should be defined for both the educational activities and the moral/behavioral skills of the instructors, based on which, they can be evaluated throughout the year. Moreover, based on the obtained results, if there are weaknesses, they should be followed up and fixed.

Another evaluation challenge is the inappropriate implementation conditions of the evaluation. Accordingly, the participants believed that completing the workshop evaluation forms in a short period and during the workshop cannot be an accurate expression of their opinions. It seems that to maximize participation in the evaluation process, the organizers of the workshops distribute the evaluation forms before the lecture is finished and the audience leaves the meeting. However, this can cause the participants to complete the evaluation form without reading it. Therefore, various suggestions were made to improve the evaluation process, such as the conduction of evaluation through electronic forms along with the paper forms, an increase of the evaluation time to a few days after the workshop, and obligation of participants to complete the evaluation forms (e.g., issuing a certificate only if the evaluation form is completed).

Based on the analysis of the results, the professors believed that evaluation of these workshops is superficial and the organizers of the workshops complete and store the questionnaires only to fulfill their responsibility, without even analyzing the responses and giving feedback to the audience about their opinions. Waruni and Rod (2020) in their study claimed that revision following corrective feedback can improve activities (40). In this regard, in the present research, the participants suggested using the results of questionnaires completed by the professors for the conduction of the workshops and also paying more attention to their suggestions and criticisms provided in the evaluation forms. In line with these results, Sabri *et al.* have considered a systematic evaluation system for the development of empowerment programs as a necessity (16). Moreover, in a study conducted by Jafari, citing Mohammadi, it was mentioned that performance evaluation, feedback, and development have the greatest effect on the employee empowerment variable (15).

The last discovered challenge was the unrealistic representation of the topics and bias towards the topics of the workshops. Based on the results, the professors participating in the knowledge enhancement workshops

complained about the unrealistic representation of the topics and bias towards the topics by some of the workshop instructors. They stated that such issues reduce their desire to participate in these workshops. Examples of these challenges expressed by the participants are summarized in Table 2. It seems that the use of evaluation results in the selection or elimination of previous instructors to use capable and expert instructors can solve this problem. However, this solution will be effective when a complete and comprehensive evaluation form is designed in this regard which contains questions about the different aspects of the instructors and their scientific and moral abilities.

Conclusion

The main mission and goal of knowledge enhancement workshops are to improve the educational, epistemic, and skill-related abilities of the professors besides their scientific abilities. Therefore, paying attention to the challenges, weaknesses, and solutions provided to improve the quality of these workshops can persuade and encourage faculty members to participate in these educational programs and activities. Officials and planners of knowledge enhancement workshops can increase the effectiveness of the workshops by overcoming the challenges and weaknesses and removing obstacles to the participation of faculty members in workshops and the application of the solutions provided by them. These solutions include improvement of the process of selection of lecturers, employment of capable and expert lecturers; improvement of the topic needs assessment methods, modification of the content, improvement of notification systems, and improvement of the evaluation system. Therefore, although the training and improvement of human resources are considered one of the basic and effective solutions for human resource maintenance and productivity (41), it should be targeted, planned, and based on a predetermined schedule (10).

Limitations

The conservatism of some participants in answering the questions of the interview was a limiting factor. The strength of the research is that in this study, for the first time, the researchers investigated the experiences of the participants of knowledge-enhancement workshops, and practical solutions were also presented to solve the relevant challenges. Although this study was performed

on only a small number of faculty members at one university (due to the nature of qualitative research), its strength is that their experiences can be shared with other universities to form national-level guidance regarding the measures that can be taken to improve knowledge-enhancement workshops.

Ethical considerations

This study was conducted based on the principles of the Declaration of Helsinki. Before the study, the approval of the Ethics Committee of Ahvaz Jondishapur University of Medical Sciences (IR.AJUMS.REC.1399.314) was obtained. Complete confidentiality of research data was guaranteed. All the participants of this study were informed about its purpose and importance and entered the study after providing written and oral consent. Participants were informed that their participation was voluntary and that they could withdraw from the study at any time.

Authors' contributions

All the authors participated in the process of the initial writing of the manuscript, its revision, presentation of the idea and initial design, and collection and analysis of data. Moreover, all authors accept the responsibility for the accuracy and correctness of the contents of the present manuscript and approve the final version of the manuscript.

Acknowledgments

This article was the result of a research project approved by Ahvaz Jondishapur University of Medical Sciences. The authors would like to express their appreciation and gratitude to the Research Deputy of the university and all the people who participated in this study.

Conflict of interests

The authors report no actual or potential conflict of interest.

References

1. Rahimi E, Dehghani A, Baharlou R. Faculty members' viewpoints on their empowering factors and developing a structured questionnaire. *Iranian journal of medical education*. 2013;13(1):29-38. [\[http://ijme.mui.ac.ir/article-1-2257-en.html\]](http://ijme.mui.ac.ir/article-1-2257-en.html)
2. Hoseyni SN, Mirzaei M, Faryabi R, Mokhtari Ardekan AM, Shaker Ardekani M, Mirzaei Alavijeh M. Effective factors in job motivation of faculty members in Shahid Sadoughi University of medical sciences: an application of Herzberg's motivation theory. *Iranian Journal of Medical Education*. 2014;13(12):1040-50. [\[http://ijme.mui.ac.ir/article-1-2843-en.html\]](http://ijme.mui.ac.ir/article-1-2843-en.html)
3. Khodaey L, Ghaffari R, Baradaran Binazir M, Behshid M, Sharifi Z. Faculty Members' Experiences of Empowerment Programs in Tabriz University of Medical Sciences-A Qualitative Study. *Journal of Medical Education Development*. 2021;14(42):54-66. [\[https://www.sid.ir/paper/415794/en\]](https://www.sid.ir/paper/415794/en)
4. Mirzaei-Alavijeh M, Rajati F, Hatamzadeh N, Solaimanizadeh L, Jalilian F. The psychological empowerment of faculty members: Across-sectional study in kermanshah university of medical sciences. *International Journal of Health and Life Sciences*. 2019;5(2). [\[10.5812/ijhls.94545\]](10.5812/ijhls.94545)
5. Hosseini SN, Mirzaei Alavijeh M, Ataee M, Jalilian F, Karami Matin B, Rastegar L. E-learning adoption by faculty members of Kermanshah University of Medical Sciences and Health Services: Faculties' viewpoints. *Iranian Journal of Medical Education*. 2014; 14(5): 437-47. [\[http://ijme.mui.ac.ir/article-1-3192-en.html\]](http://ijme.mui.ac.ir/article-1-3192-en.html)
6. Mohammadi H, Salehi M, Jabbari N. The Role of Organizational Culture on Faculty Members' Reformation. *Research in Medical Education*. 2020;12(2):21-30. [\[10.29252/rme.12.2.21\]](10.29252/rme.12.2.21)
7. Karami Matin B, Mirzaei Alavijeh M, Jalilian F, Hosseini SN. Use of adoption technology model to predicting E-learning intention perform among faculty members. *Future of Medical Education Journal*. 2015; 5(3): 34-40. [\[10.22038/FMEJ.2015.5455\]](10.22038/FMEJ.2015.5455)
8. Mazloomy Mahmoodabad S, Norouzi S, Norouzi A, Mirzaei Alavijeh M. Educational needs of faculty members of Shahid Sadoughi University of Medical Sciences in 2011. *The Journal of Medical Education and Development*. 2012;7(3):79-92. [\[http://jmed.ssu.ac.ir/article-1-168-en.html\]](http://jmed.ssu.ac.ir/article-1-168-en.html)
9. Pitoyo D, Yuniarah T, Ahman E, Suparno S, editors. *Model of Employee Empowerment and Organizational Performance at National Strategic Manufacturing Companies in West Java*. In 1st International Conference on Economics, Business, Entrepreneurship, and Finance (ICEBEF 2018) Atlantis Press; 2019. [\[https://doi.org/10.2991/icebef-18.2019.48\]](https://doi.org/10.2991/icebef-18.2019.48)
10. Asadi A, Taheri M, Salari A. The survey of educational needs to empower faculties in GUMS. *Research in Medical Education*. 2016; 8(2): 37-48. [\[10.18869/acadpub.rme.8.2.37\]](10.18869/acadpub.rme.8.2.37)
11. Xiaojun F, editor *Employee Empowerment in the NetworkEra*. 4th International Conference on Economics, Management, Law and Education (EMLE 2018); 2018: Atlantis Press. [\[https://doi.org/10.2991/emle-18.2018.89\]](https://doi.org/10.2991/emle-18.2018.89)
12. Shukla A, Singh S, Rai H, Bhattacharya A. Employee empowerment leading to flexible role orientation: A disposition-based contingency framework. *IIMB management review*. 2018; 30(4): 330-42. [\[https://doi.org/10.1016/j.iimb.2018.08.002\]](https://doi.org/10.1016/j.iimb.2018.08.002)
13. Abel SE, Hand MW, editors. *Exploring, defining, and illustrating a concept: Structural and psychological empowerment in the workplace*. *Nursing forum*; 2018. [\[10.1111/nuf.12289\]](10.1111/nuf.12289)
14. Fayyaz R, Shah Talebi B, Ebrahimzadeh R. Developing a Model for Empowerment of Faculty Members in Islamic Azad University: A Qualitative Study. *Strides in Development of Medical Education*. 2020;17(1). [\[https://doi.org/10.22062/sdme.2020.91549\]](https://doi.org/10.22062/sdme.2020.91549)
15. Jafari M, Laei S, Kavyani E, Jalali R. Exploring Components, Barriers, and Solutions for Faculty Members' Research Empowerment Programs Based on the CIPP Model:

A Qualitative Study. *Journal of Occupational Health and Epidemiology*. 2020;9(4):213-8. [\[10.52547/johe.9.4.213\]](https://doi.org/10.52547/johe.9.4.213)

16. Sabri M, Shahidi S, Alimohammadi N, Omid A, Avizhgan M. The Effect of Participation in Empowerment Workshops on the Quality of Teaching and Professional Commitment of Faculty Members of Isfahan Medical School. *Research in Medical Education*. 2022;14(3):1-9. [\[10.52547/rme.14.3.1\]](https://doi.org/10.52547/rme.14.3.1)

17. Karimian Z, Abolghasemi M. Comparison between the Viewpoints of Faculty Members Regarding the Share of Scholarship Functions in Different Disciplines. *Journal of Medical Education Development*. 2018;11(29):63-76. [\[10.29252/edcj.11.29.63\]](https://doi.org/10.29252/edcj.11.29.63)

18. Salajegheh M, Gandomkar R, Mirzazadeh A, Sandars J. Identification of capacity development indicators for faculty development programs: A nominal group technique study. *BMC Medical Education*. 2020;20(1):1-8. [\[https://doi.org/10.1186/s12909-020-02068-7\]](https://doi.org/10.1186/s12909-020-02068-7)

19. Afshar L. Faculty Development; Prerequisite for Medical Student's Professional Formation. *Afzalipour Journal of Clinical Research*. 2017; 2(3-4): 124-9. [doi: [10.2212/ajcr.2017.60711](https://doi.org/10.2212/ajcr.2017.60711)]. [In Persian].

20. Boucher BA, Chyka PJ, Fitzgerald Jr WL, Hak LJ, Miller DD, Parker RB, et al. A comprehensive approach to faculty development. *American Journal of Pharmaceutical Education*. 2006;70(2). [\[10.5688/aj700227\]](https://doi.org/10.5688/aj700227)

21. Sarshar M, Jouybari L, Mehravar F, Momtazmanesh N, Sanagu A, Hasanzadeh G. The Experiences and Perspectives of Basic Sciences Faculty Members of Medical School of Tehran University of Medical Sciences Regard to Different Teaching Metho. *Development Strategies in Medical Education*. 2014;1(1):27-36. [\[http://dsme.hums.ac.ir/article-1-42-en.html\]](http://dsme.hums.ac.ir/article-1-42-en.html)

22. Mirzazadeh A, Alizadeh M, Shariati M, Sadighpour L. The effect of interactive and effective lecturing workshop for developing faculty members in teaching: an experiment of utilizing peer observation of teaching and feedback. *Strides in Development of Medical Education*. 2018;15(1). [\[https://doi.org/10.5812/sdme.86954\]](https://doi.org/10.5812/sdme.86954)

23. Ahmadi S, SAYAH BM. Understanding Faculty Members Attitude on Empowerment Programs at Ahvaz Jundishapur University of Medical Sciences: A qualitative study. 2017. [\[https://doi.org/10.29252/jrms.19.3.279\]](https://doi.org/10.29252/jrms.19.3.279)

24. Eslami N, Hoseini M, Makarem A, Gholami H. A Survey on the Effect of In-Service Training Courses on The Satisfaction, Educational, and Assessment Skills of the Academic Staff of Mashhad University of Medical Sciences. *Journal of Mashhad Dental School*. 2020; 44(1): 3-13. [\[10.22038/JMDS.2020.37496.1777\]](https://doi.org/10.22038/JMDS.2020.37496.1777)

25. Steinert Y, Mann K, Centeno A, Dolmans D, Spencer J, Gelula M, et al. A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education: BEME Guide No. 8. *Medical teacher*. 2006;28(6):497-526. [\[10.1080/01421590600902976\]](https://doi.org/10.1080/01421590600902976)

26. Newman LR, Pelletier SR, Lown BA. Measuring the impact of longitudinal faculty development: a study of academic achievement. *Academic Medicine*. 2016;91(12):1676-83. [\[10.1097/ACM.0000000000001016\]](https://doi.org/10.1097/ACM.0000000000001016)

27. Kojuri J, Amini M, Karimian Z, Dehghani MR, Saber M, Bazrafcan L, et al. Needs assessment and evaluation of a short course to improve faculties teaching skills at a former World Health Organization regional teacher training center. *Journal of Advances in Medical Education & Professionalism*. 2015;3(1):1. [\[https://jamp.sums.ac.ir/article_40915.html\]](https://jamp.sums.ac.ir/article_40915.html)

28. Hsieh H-F, Shannon SE. Three approaches to qualitative content analysis. *Qualitative health research*. 2005;15(9):1277-88. [\[10.1177/1049732305276687\]](https://doi.org/10.1177/1049732305276687)

29. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative research in psychology*. 2006;3(2):77-101. [\[10.1191/1478088706qp063oa\]](https://doi.org/10.1191/1478088706qp063oa)

30. Saldaña J. The coding manual for qualitative researchers. *The coding manual for qualitative researchers*. 2021;1:440.

31. Adler RH. Trustworthiness in qualitative research. *Journal of Human Lactation*. 2022;38(4):598-602. [\[https://doi.org/10.1177/08903344221116620\]](https://doi.org/10.1177/08903344221116620)

32. Lee S-H. *Naturalistic Inquiry/Qualitative Studies. Scholarly Research in Music*: Routledge; 2022. p. 87-94.

33. Afshar A, Nasirzadeh M, Salimabadi Y, Iranmanesh F, Hosseinzadeh L. A Survey on Needs of Rafsanjan University of Medical Sciences Faculty Members in 2018: A Descriptive Study. *Journal of Rafsanjan University of Medical Sciences*. 2020;19(3):279-94. [\[10.29252/jrms.19.3.279\]](https://doi.org/10.29252/jrms.19.3.279)

34. Mirzaei Karzan A, Keikhavani S, Hosseinzadeh M. Educational needs assessment of faculty members in Ilam UMS. *Journal of Medical education development*. 2013;6(11):61-71. [\[http://zums.ac.ir/edujournal/article-1-152-fa.html\]](http://zums.ac.ir/edujournal/article-1-152-fa.html)

35. Tuma F. The use of educational technology for interactive teaching in lectures. *Annals of Medicine and Surgery*. 2021;62:231-5. [\[https://doi.org/10.1016/j.amsu.2021.01.051\]](https://doi.org/10.1016/j.amsu.2021.01.051)

36. Mardiana H. Lecturers' attitudes towards online teachin in the learning process. *Register Journal*. 2020;13(1):77-98. [\[https://doi.org/10.18326/rjt.v13i1.77-98\]](https://doi.org/10.18326/rjt.v13i1.77-98)

37. Alalie HM, Harada Y, Noor I. Overview of employee empowerment to improve organisations. *International Business Management*. 2016;10(12):2430-6. [\[10.12816/0002369\]](https://doi.org/10.12816/0002369)

38. Hidaka BH, Asghar A, Aktipis C, Nesse RM, Wolpaw TM, Skursky NK, et al. The status of evolutionary medicine education in North American medical schools. *BMC medical education*. 2015;15(1):1-9. DOI: 10.1186/s12909-015-0322-5

39. Sultana M. Ethics in teaching profession. *ABC Journal of Advanced Research*. 2014; 3(1): 44-50. [\[10.15590/injpams/2014/v3i1/53475\]](https://doi.org/10.15590/injpams/2014/v3i1/53475)

40. Ekanayaka WI, Ellis R. Does asking learners to revise add to the effect of written corrective feedback on L2 acquisition? *System*. 2020;94:102341. [\[10.1016/j.system.2020.102341\]](https://doi.org/10.1016/j.system.2020.102341)

41. Seifhashemi F, Abbaspour A, Khorsandi A, Ghiasi S. Design and validation talent management model of Islamic Azad University schools (sama) organization. *Journal of School Administration*. 2019;7(2):394-14. [\[10.34785/J010.2019.547\]](https://doi.org/10.34785/J010.2019.547)