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**Research Article**

# Evaluation of Professors' Satisfaction with a Short-Term Course of Medical Education in Birjand University of Medical Sciences During the COVID-19 Pandemic

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**Abstract**

**Background:** The aim of this study was to investigate the satisfaction of professors with the short-term course of medical education at Birjand University of Medical Sciences during the COVID-19 pandemic.

**Methods:** Initially, needs assessment was conducted for the content of the course; after determining the content, the course was held online through Adobe Connect system and offline through Navid system. Following completing the course, evaluation was performed, and finally, satisfaction with the course was assessed based on a 34-item questionnaire whose validity and reliability were established. In total, 44 participants in the course answered the questionnaire. The data were analyzed using t-test and correlation coefficient by SPSS, version 18.

**Results:** The mean age of the participants was 36.34 ± 5.64 years, and 56.8% (25 people) were female. In terms of academic rank, 75% were assistant professors. The average score of satisfaction was equal to 140.48, which indicates a high score of satisfaction with the course. In general, the score of satisfaction was higher than average in all fields. The average score of satisfaction in men was significantly lower than in women ($P < 0.001$). There was no significant relationship between satisfaction and degree, academic rank, age, and working experience ($P > 0.05$).

**Conclusions:** Professors' satisfaction with the online and offline medical education courses in the relevant systems is at a high level. Thus, it is suggested that combined in-person and online empowerment courses should be held in the post-COVID-19 era.

*Keywords:* Evaluation, Short Course, Medical Education, Birjand, Faculty Development, Satisfaction, COVID-19

## 1. Background

Faculty members of universities are considered as an essential element of progress and dynamism of scientific and academic centers (1); therefore, the empowerment of faculty members in the field of teaching leads to the achievement of goals and objectives in the field of education (2). Therefore, the empowerment of professors plays a fundamental role in the development of education at the university, and the educational empowerment of professors has a direct impact on educational performance (3).

Due to the role of professors in education and the significance of updating their information on pedagogic topics, the empowerment of professors has attracted researchers' interest in recent years (4). The purpose of empowering professors is to teach skills to faculty members according to their position and to offer efficient education in the university (5). From another point of view, with increasing progress in scientific fields, teaching and research methods and techniques, training, retraining,and revision of the material learned by professors are necessary in order to achieve a purposeful and efficient education (6).

There is no fixed model for empowerment courses (7), and various methods are used in different universities, (1) but one of the most principal methods of empowerment is short-term training courses, which is one of the common methods to improve the ability of professors and update their information (5).

In this regard, holding short-term medical education courses under the title of Medical Education course is approved and held at Birjand University of Medical Sci-

ences. Participation in these courses is necessary. In addition, such courses strengthen teachers' teaching skills, assessment, and teaching-related processes that lead to improved student's learning, teaching efficiency, improved quality of teaching, and increased health (8).

## 2. Objectives

The aim of this study was to investigate the satisfaction of professors with the short-term course of medical education at Birjand University of Medical Sciences during the COVID-19 pandemic.

## 3. Methods

This was a cross-sectional analytical study, and the statistical population consisted of the professors participating in the fourth course of medical education empowerment at Birjand University of Medical Sciences in 2020 - 2021 during the COVID-19 pandemic. The census method was used to determine the subjects who participated in the study. Professors who entered the study were completely satisfied and participated in at least 80% of the course topics, and other ones who did not wish to participate in the study were excluded from the process. It is noteworthy that the fourth medical education fellowship course in level 1 included 26 workshop titles and 55 hours, and level 2 included 19 workshop titles and 40 hours. The course was held offline through Navid system and online through Adobe Connect.

The data collection tool to assess the level of satisfaction with the quality of the training course was a 34-item researcher-made questionnaire with six dimensions (i.e., planning, educational environment, teaching method, goals, content, and evaluation). The questionnaire was rated based on a 5-point Likert scale ranging from very low to very high. Face and content validity of the questionnaire and the level of satisfaction with the quality of the training course was confirmed by medical education and curriculum experts. In addition, to determine the reliability of the questionnaire, Cronbach's alpha method was used, which yielded a reliability coefficient of 0.97. For data analysis, descriptive (mean, standard deviation, absolute frequency, and percentage) and inferential statistics (independent t-test and correlation coefficient) were used in SPSS version 18. A P-value of less than 0.05 was considered significant.

This study was presented after review by the Research Council of Birjand University of Medical Sciences and approval by the Ethics Committee of the university with the code IR.BUMS.REC.1400.196.

## 4. Results

In the current study, 44 participants in the course answered the evaluation questionnaire, the mean age of participants was 36.34 years with a standard deviation of 5.64 years, 56.8% (25 people) were women, and 2.2 43% (19 people) were men, and 75% were assistant professors.

The mean score of satisfaction was 140.48, which indicated high satisfaction with the course. In general, the satisfaction score was higher than average in all the fields. Table 1 shows the mean and standard deviations of satisfaction in each field.

**Table 1.** Mean Total Satisfaction Score and Questionnaire Domains

| Domains | Planning | Educational Environment | Teaching Method | Goals | Content | Evaluation | Total |
|---|---|---|---|---|---|---|---|
| **Mean (SD)** | 13.35 (2.30) | 21.11 (3.20) | 36.89 (5.83) | 12.61 (2.33) | 23.83 (4.41) | 32.66 (5.98) | 140.48 (21.77) |
| **Maximum score of each domain** | 15 | 25 | 45 | 15 | 30 | 40 | 170 |

According to independent t-test, the mean score of satisfaction in men was significantly lower than in women (126 vs. 151), but satisfaction score in different degrees and academic ranks of professors was not significantly different (Table 2).

**Table 2.** satisfaction Score Based on Gender, Degree, and Academic Ranking

| Variable | Mean (SD) | P-Value |
|---|---|---|
| **Gender** | | < 0.001 |
| **Female** | 151.44 (14.19) | |
| **Male** | 126 (21.83) | |
| **Degree** | | 0.90 |
| **Master** | 141.54 (27.38) | |
| **PhD** | 140.52 (22.17) | |
| **Academic rank** | | 0.85 |
| **Instructor** | 141.54(27.38) | |
| **Assistant professor** | 140.12(20.05) | |

No significant correlation was noted between age and satisfaction score (r = -0.16 and P = 0.29) and between working experience and satisfaction score (r = -0.06 and P = 0.66).

## 5. Discussion

The aim of the present study was to design, implement, and evaluate a short-term course (fellowship) in medical education at Birjand University of Medical Sciences during the COVID-19 pandemic. Considering the importance of faculty empowerment, the medical education fellowship course was planned and implemented in Birjand University of Medical Sciences virtually with regards to social distancing. Our results showed that general satisfaction and satisfaction in all areas were moderate to high. The satisfaction scores of the participants in all the areas was at a moderate to high level.

In Farsi et al.'s study, learners' satisfaction with the quality of the course during the corona pandemic was reported at a high level, although it was far from complete satisfaction (9). According to studies conducted during the COVID-19 pandemic, virtual training had a positive effect on learning, and satisfaction with this method was at a high level, but providing more technology and facilities to use this method will make it more effective (10).

According to the study of Azizi et al., the virtual teaching method was associated with more learning than the traditional teaching. At the same time, satisfaction with the electronic method was as much as the traditional method (11). Some studies have shown that e-learning leads to deeper and more lasting learning (12). Furthermore, the results of a systematic review study in Iran revealed that virtual education was equally or more effective than the traditional education method, and satisfaction with this method was high (13).

In general, traditional education was more desirable than e-learning in terms of implementing the first principles of education (14), but virtual education had several advantages. In comprehensive e-learning, access to content was available all day long. Therefore, it seems that applying this educational method could complement face-to-face education and lead to increased learning and satisfaction with education (15, 16). However, virtual education also has some limitations (17); therefore, in the post-corona era, the use of online and offline methods along with face-to-face courses can upturn the accessibility and satisfaction of learners.

During the COVID-19 pandemic, the use of virtual education has been considered mandatory, and it has been one of the most essential methods of education, but according to the results of this and other studies, it is recommended to use this method in combination with face-to-face training (12). In fact, to make better use of e-learning, it is inevitable to provide the necessary infrastructure and software (18).

In the present study, no significant relationship was observed between age and degree, and satisfaction. In contrast, various studies reported discrepant findings in this regard; some studies reported that satisfaction was different in various age and sex groups, while some others reported the same level of satisfaction. The lack of a significant association between satisfaction score and the variables studied in the present study can be due to the sample size and small changes in satisfaction scores among different groups. Although in both sexes, satisfaction was at an acceptable level, women had a higher satisfaction score.

### 5.1. Conclusions

In sum, professors' satisfaction with online and offline medical education courses in the relevant systems is at a high level. Thus, it is suggested that in the post-COVID-19 era, empowerment courses be held both in person and online.

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