

# The Satisfaction of Medical Practitioners from Continuing Medical Education Program of Tehran University of Medical Sciences

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## Abstract

**Background:** The concept of Continuing Medical Education in medical sciences has been rapidly gaining popularity during the last decades. The objective of this study was to assess the satisfaction of medical profession graduates participating in the programs of Continuing Medical Education (CME) in terms of their professional requirements.

**Methods:** In a cross-sectional, descriptive analytical study, a reliable and valid retest questionnaire was used to determine the satisfaction from continuing medical education CME program. One hundred and three medical profession graduates who had participated in CME program in 2006 were enrolled.

**Results:** The satisfaction for anesthesiologists with the compatibility of CME programs with their professional requirements was 28.3%; for general practitioners and pediatricians with the capability of professors in presenting the program, 40%; and for gynecologists and obstetricians with the capability of 31.6%.

**Conclusion:** We conclude from the results of this study that a high satisfaction was noticed among medical professionals that may be due to previous works of researchers who have assessed the needs precisely and standardized the modern teaching methods.

**Keywords:** Satisfaction; Medical profession; Continuing medical education

## Introduction

The concept of Continuing Medical Education (CME) in medical sciences has been rapidly gaining popularity during the last decades.<sup>1</sup> It is accepted as a standard among international, educational organizations<sup>2</sup> and is defined as educating medical doctors once they are graduated and practicing in clinics.<sup>3</sup>

Scientific and technological improvements, as well as social transformations, have rendered the medical society subject to serious changes.<sup>4</sup> The amendments in the educational system necessitate the

orchestration of CME to satisfy the needs of patients and the medical society.<sup>5</sup> Medical schools and the Department of CME need to consider such issues as the future of health problems, management of health and therapy services, and the approach to medical education and type of practice.<sup>6</sup>

CME will not be effective and efficient unless it is based on experience and accurate analysis of needs.<sup>7,8</sup> In this way, education will improve the clinical practice, will lower the costs, and increase the motivation of the medical personnel.<sup>6,9</sup> Assessment of educational needs and organizational requirements became part of the Continuing Professional Development (CPD) program of our government for promoting all the medical personnel in 1998. Therefore, the "audit" was introduced as an "essentially educational" process, and its organization was described<sup>7</sup> and the basics

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of needs assessment are well-defined, though there may not be ample evidence to recommend it yet.<sup>7-10</sup>

Various studies using diverse methods have been carried out in many universities to assess the educational needs of doctors in CME programs.<sup>11-17</sup> So this study was performed to evaluate the satisfaction of participants in CME program, in terms of their Professional requirements.

## Materials and Methods

In a cross-sectional, descriptive analytical study in 2006, 103 medical profession practitioners who had participated in CME program held by Tehran University of Medical Sciences were enrolled. The data-sampling instrument was a two-part questionnaire, the first part of which included sociological data in the form of packaged questions. The second part assessed the satisfaction of participants, using 2 statements and 5 choices based on the Likert scale. The questionnaire was self-performed, reliable and valid. The scientific reliability of the questionnaire was evaluated and confirmed by 40 experts. The reliability of the questionnaire was confirmed, using the test re-test. First, the questionnaires were sent for 10 participants and collected after 1 week. Then they were sent and collected again to yield a reliability of 80%.

The questionnaires were distributed among participants at the beginning of each educational program session and were collected at the end of the session. The results were obtained, using the SPSS software (version 10, Chicago, IL, USA) and their analysis was performed in terms of distribution of frequency, average and standard deviation according to Likert range. ANOVA test was used to compare the means for quantitative data. Chi-Square Test was used to compare the categorical data.  $p=0.05$  was the significance level of associations.

## Results

The highest age average pertained to gynecologists and obstetricians (46.52 years) and the lowest to general practitioners (41.72 years) (Table 1). The greatest average of years in practice belonged to pediatricians (17.53 years). The dominant female gender was observed in gynecologists and obstetricians (73.7%). The results showed that there was no significant relationship between age and medical profession, years in practice and medical profession, and gender and medical profession for doctors participating in the program.

The degree of satisfaction of general practitioners in the CME program considering their most important priorities (satisfaction with the program management) was 53.4%; with program timing, 33.3%; and with the compatibility of program with their professional needs, 26.7% (Table 2). The degree of satisfaction of pediatricians from CME program in relation to new scientific issues, compatibility of education program with their professional needs, the capabilities of the program, and the education bonus was 33.3% (Table 3). 31.6% of the gynecologists and obstetricians were satisfied with the compatibility of educational program with the professional requirements and capabilities of the program (Table 4). 10.5% of the participants were satisfied with the capabilities of the professors and 26.3% with the timing of programs. 28.3% of the anesthesiologists were satisfied with the compatibility of the program with their professional requirements, 25.6% with the novel issues, and 15.4% with the program management (Table 5). The highest satisfaction with compatibility of program with the professional requirements occurred with the pediatricians (33.3%). The satisfaction of the medical professionals in relation to CME program and their professional requirements was significant ( $p=0.001$ ).

**Table 1:** Gender, age and years in practice of participants in the CME program in Tehran University of Medical Sciences in 2006

Type of participant	Gender (male/female)	Age (mean±sd)	Years in practice (mean±sd)	Number of samples
General practitioners	16/14	41.72±10.96	14.07±10.54	30
Pediatricians	8/7	46.40±11.55	17.53±12.90	15
Gynecologists and obstetricians	5/14	46.52±8.44	16.05±8.49	19
Anesthesiologists	25/14	42.08±8.10	10.27±7.67	39
Statistical comparison	$p=0.062$ F=7.34	$p=0.19$ F= 1.59	$p=0.05$ F= 2.67	
Total	54/49			103

**Table 2:** The distribution of relative and absolute frequency of satisfaction among general practitioners participating in the CME program of Tehran University of Medical Sciences in 2006 in terms of their professional needs (n=30).

Title(No)	Very weak (1)		Weak (2)		Moderate (3)		Good (4)		Excellent (5)		Average	SD
	No	%	No	%	No	%	No	%	No	%		
	Satisfaction with accurate scientific information	0	0	9	30.0	2	6.7	12	40.0	7		
Satisfaction with novel issues	0	0	0	0.0	8	26.7	16	53.3	6	20.0	3.93	0.69
Satisfaction with capability of education with professional needs	0	0	1	3.3	3	10.0	18	60.0	8	26.7	4.1	0.71
Satisfaction with the capabilities of the education	0	0	1	3.3	7	23.3	15	50.1	7	23.3	3.93	0.78
Satisfaction with the capabilities of professor	0	0	0	0.0	3	10.0	15	50.0	12	40.0	3.3	0.65
Satisfaction with the program's timing	0	0	2	6.7	4	13.3	14	46.7	10	33.3	4.07	0.87
Satisfaction with the interactivity of sessions	0	0	0	0.0	7	23.3	14	46.7	9	30.0	4.07	0.74
Satisfaction with the program management	0	0	0	0.0	4	13.3	10	33.3	16	53.4	4.4	0.72
Satisfaction with the audiovisual equipment	0	0	5	16.7	4	13.3	15	50.0	6	20.0	3.73	0.98
Satisfaction with the education bonus	2	6.7	1	3.3	5	16.7	15	50.0	7	23.3	3.9	0.94

**Table 3:** The distribution of relative and absolute frequency of satisfaction among pediatricians participating in the CME program of Tehran University of Medical Sciences in 2006 in terms of their professional needs (n=15).

Title (No)	Very weak (1)		Weak (2)		Moderate (3)		Good (4)		Excellent (5)		Average	SD
	No	%	No	%	No	%	No	%	No	%		
	Satisfaction with accurate scientific information	0	0	4	6.7	1	63.7	5	33.3	5		
Satisfaction with novel issues	0	0	0	0.0	2	13.3	8	53.4	5	33.3	4.2	0.68
Satisfaction with capability of education with professional needs	0	0	0	0.0	2	13.3	8	53.4	5	33.3	4.2	0.68
Satisfaction with the capabilities of the education	0	0	1	6.7	4	26.7	5	33.3	5	33.3	3.93	0.96
Satisfaction with the capabilities of professor	0	0	1	6.7	2	13.3	6	40.0	6	40.0	4.13	0.92
Satisfaction with the program's timing	0	0	0	0.0	1	6.7	10	66.7	4	26.7	4.2	0.56
Satisfaction with the interactivity of sessions	0	0	3	20.0	4	26.7	6	40.0	2	13.3	3.47	0.99
Satisfaction with the program management	0	0	0	0.0	2	13.3	9	60.0	4	26.7	4.13	0.64
Satisfaction with the audiovisual equipment	0	0	1	6.7	2	13.3	10	66.6	1	6.7	3.71	0.91
Satisfaction with the education bonus	0	0	2	13.3	1	6.7	7	46.6	5	33.3	4.14	0.86

**Table 4:** The distribution of relative and absolute frequency of satisfaction among gynecologists and obstetricians participating in the CME program of Tehran University of Medical Sciences in 2006 in terms of their professional needs (n=19).

Title (NO)	Very weak (1)		Weak (2)		Moderate (3)		Good (4)		Excellent (5)		Average	Standard deviation
	No	%	No	%	No	%	No	%	No	%		
Satisfaction with accurate scientific information	0	0.0	7	36.8	2	10.5	8	42.1	2	10.5	4.17	0.58
Satisfaction with novel issues	0	0.0	3	15.8	2	10.5	11	57.9	3	15.8	3.79	0.98
Satisfaction with capability of education with professional needs	2	10.5	1	5.2	4	21.1	6	31.6	6	31.6	4	0.94
Satisfaction with the capabilities of the education	0	0.0	2	10.5	3	15.8	8	42.1	6	31.6	4	1
Satisfaction with the capabilities of professor	0	0.0	0	0.0	7	36.8	10	52.7	2	10.5	3.84	0.69
Satisfaction with the program's timing	0	0.0	0	0.0	1	5.3	13	68.4	5	26.3	4.32	0.48
Satisfaction with the interactivity of sessions	0	0.0	0	0.0	3	15.8	13	68.4	3	15.8	4.11	0.57
Satisfaction with the program management	0	0.0	1	5.3	3	15.8	13	68.4	2	10.5	3.89	0.74
Satisfaction with the audiovisual equipment	2	10.5	2	10.5	5	26.3	8	42.1	2	10.5	3.5	1.1
Satisfaction with the education bonus	0	0.0	2	10.5	8	42.5	5	26.3	4	21.1	3.68	1

## Discussion

The first component to the efficiency of the CME program will be the degree of satisfaction of participants. Teaching methods, educational materials, audiovisual equipment, and physical and organizational arrangements need to be adjusted according to the surveys from the participants. The priorities of the program are the ones considered by the planners to be of essential importance, whereas they may not meet the actual needs of the doctors; hence, the participants are the most accurate source for determining the priorities in such programs. Additionally, any educational activities not based on the actual needs of the participants will not only waste the time and finances of the doctors, but also will cause damages to the programming system, and will consequently bring about tensions, the most detrimental effects of which will particularly afflict the programs to counteract

mortality and morbidity in the society.<sup>18,19</sup> Any medical in service program must be accompanied by surveys taken from the participants. The results of this study revealed that the satisfaction of the participants in terms of their professional needs was the most important motive for them to take part in such programs. This result interestingly coincides with those derived from the educational program in Oromiyeh University of Medical Sciences, Iran<sup>15</sup> Shakurnia,<sup>4</sup> Phillips,<sup>10</sup> and Chan.<sup>11</sup> Other results from the study suggest that the optimal timing of the program would be 3 days. This result is in complete agreement with that of the educational programs held by the medical association of Khorasan Province, Iran.<sup>16</sup> The strong points of this program include the programming management, acquisition of accurate scientific information, new scientific achievements, capability of professors, novel teaching methods and interactivity of teaching sessions; a result which is in compliance with the

**Table 5:** The distribution of relative and absolute frequency of satisfaction among anesthesiologists participating in the CME program of Tehran University of Medical Sciences in 2006 in terms of their professional needs (n=39).

Title (NO)	Very weak (1)		Weak (2)		Moderate (3)		Good (4)		Excellent (5)		Average	Standard deviation
	No	%	No	%	No	%	No	%	No	%		
	Satisfaction with accurate scientific information	0	0	12	30.8	4	10.2	17	43.6	6		
Satisfaction with novel issues	0	0	1	2.6	15	38.5	13	33.3	10	25.6	3.82	0.58
Satisfaction with capability of education with professional needs	0	0	2	5.1	5	12.8	21	53.8	11	28.3	4.05	0.79
Satisfaction with the capabilities of the education	0	0	3	7.7	9	23.1	21	53.8	6	15.4	3.77	0.81
Satisfaction with the capabilities of professor	0	0	1	2.6	17	43.6	15	38.5	6	15.4	3.67	0.77
Satisfaction with the program's timing	0	0	0	0.0	10	25.6	23	59.0	6	15.4	3.9	0.64
Satisfaction with the interactivity of sessions=39	1	2.6	4	10.3	16	41.0	15	38.5	3	7.7	3.38	0.88
Satisfaction with the program management=39	0	0	1	2.6	9	23.1	23	59.0	6	15.4	3.87	0.70
Satisfaction with the audiovisual equipment =39	0	0	6	15.4	17	43.6	13	33.3	3	7.7	3.33	0.84
Satisfaction with the education bonus=39	5	12.8	3	7.7	12	30.8	17	43.6	2	5.1	3.26	1.06

studies performed by the association of general surgeons in 2006,<sup>3</sup> and another study performed by the association of paramedicine.<sup>17</sup>

But some studies depict results different from those in our study. In those studies, the satisfaction with the re-education bonus during the years 1999-2001,<sup>2</sup> 2007<sup>14</sup> was the most important motive for participation, whereas in our study the primary motive in the four groups of participants was not the bonus but the scientific improvements associated with their professional needs.

Previous studies reflect that to maintain the status of medical doctors in the society, the doctors particularly need to undergo programs of CME based on the novel scientific achievements.<sup>20-25</sup> In Dandee University, the satisfaction of participants in clinical evaluation (OSCE) was evaluated in terms of the need for

CME.<sup>19</sup> In Oromiyeh University of Medical Sciences in western Iran, the enhancement of CME program and application of modern teaching methods were the priorities of his study on general practitioners.<sup>15</sup>

The authorities in charge of CME in Tehran University of Medical Sciences are continuously revising their programs in order to achieve maximal cost-effective satisfaction of the participants. To define satisfaction, we need to answer the question how many of the preset objectives of the program have been accomplished and what are the weak and strong points? This method was completely consistent with those of non-Iranian researchers.<sup>1,2,9,20,25</sup>

We conclude from the results of this study that a high satisfaction was noticed among medical professionals that may be due to previous works of researchers who have assessed the needs precisely and

standardized the modern teaching methods.

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