Integration of Medical Education in Medical Services: A Cross Sectional Study

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Abstract- Ministry of health and Medical Education (MOH&ME) with the goals of attaining the comprehensive self sufficiency in medical fields and accountability of universities to public health needs were established in Iran in 1985. After that, ministry moved one step towards the *integration* of medical education into the health services in 1994. A dilemma about returning the system into the prior situation was increased in 2002, during which the parliament tried to change the situation toward disintegration. We have studied the attitudes of key academic persons regarding the *segregation* of medical universities (MOH&ME establishment) and "*Integration"* of medical education into the health delivery system. A descriptive, cross sectional and correlation study was conducted on 556 universities staffs in 11 universities throughout the country. We applied a questionnaire with 28 questions on 5 axes. The analytical test used in this study was Pearson chi-square. The most understudied staffs, agreed with *Integration philosophy*. They believed that, although it seems the quality of medical education has declined, but some effective factors such as increasing admitted students, irregular increasing of universities and self controlling of educational hospitals, deficit of educational budget and other reasons were the main effective causes in this declining of quality, and most of them believed that the reintegration of MOH&ME into the ministry of sciences organization will not benefit for the country. This study has presented some reasons of proposed declining the quality of medical education and some suggestions for development of present system.

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Introduction

One of the components of the Edinburgh declaration written in 1988 was to encourage and facilitate cooperation between the ministries of health, ministries of educations, community health services and other relevant bodies in joint policy development, program planning, implementation and review (1). Three years before the Edinburgh meeting in 1985, an act was passed by the parliament of the Islamic Republic of Iran which established a new, integrated ministry of health and medical education. This ministry was responsible not only for the health care of the people but also for the education of health care personnel (2). Following the establishment of ministry of health and medical education (MOH&ME) in 1994, the ministry moved one step closer towards the true integration of medical education and health services that was accomplished by integrating provincial health organizations into the universities of medical sciences and thereby establishing the universities of medical education and health services (3). Walton (2001) in an article under the title of "*Global demands on Medical Education*" has stated that, the Iranian system of integration between the health care services and the health education sector, regarded as a model for other countries, is of the greatest interest internationally (4). Gezairy (2002) has also stated that the Islamic Republic of Iran has for more than 15 years, invested energy, experience, and recourses in an inspiring and pioneering integration of medical education with health care (2). Professor Henry E Walton, former president of the world Federation of Medical Education (W.F.M.E) called Iran's Integrated system "Medical education of the 21st century" (5). After about 16 years experience of the

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MOH&ME establishment and after 8 years integration of education with services fields, a dilemma about strengths and weaknesses increased in 2002 during which the parliament tried to change the situation and many challenges and arguments in cons and pro of integration and its successfulness raised in the country amongst academicians and politicians and in the parliament and we decided to review the opinions of academicians around integration. In this study, we have made enquiries the staff universities view points about this controversy.

Patients and Methods

This is a "descriptive", cross sectional and correlation study that is conducted on 556 faculty members throughout the country. Sample frame in this study were gathered from 11 universities out of 38 governmental universities (30%) in Iran. The method of selecting universities was clustering and random selection. Selected universities were Tehran, shaheed Beheshti, Iran, shiraz, (the first level universities) and Rafsanjan, Arak, Bandarabbas, Djahrom, kurdestan, Gilan and Mazandaran (the second level) universities of medical sciences. We have calculated the sample size via formula $\frac{[Z\%_2]^2\, pq}{d^2}$ with confidence of 99% ($Z = 2.57$) and confidence interval 0.04. We estimated "P-size" with a pilot study about 50%. Thus, required sample number was calculated 1032 people. Therefore, the response rate was >50% (556 out of 1032) in the study. Data gathering in this study was done via selection of focal points in universities and research questionnaire which were distributed in proportion to sample size randomly. In this study "segregation" means:

- Detachment of medical sciences from other sciences in universities (establishment of Ministry of Health and Medical Education, «MOH&ME» in 1985).
- «Integration» means: mixing of medical education system with health services system in 1994.
- Disintegration means: separation of medical education from MOH&ME to join again to the ministry of science. Thus, on the basis of the above mentioned objectives, definitions and investigation variables, we applied a questionnaire with 28 questions on 5 following axes:

∗ Integration philosophy (5 questions).

∗ Medical training situation (10 questions).

∗ Outcomes of MOH&ME establishment and Integration (6 questions).

∗ Outcomes of disintegration (7 questions).

∗ To seek offers and improving suggestions.

Validity of questionnaire was confirmed by the experts, and reliability was confirmed by a pilot study. The analytical test used in this study was Pearson chi-square test (SPSS.10, SPSS Inc., Chicago, IL).

Limitations in this study were: limited responses (response rate was 50%), Time limitation and psychological stress during the survey because of limited time to reevaluate the subject in the parliament.

Results

The most understudied staff agreed with “Integration Philosophy”, but the majority believed that, integration is not an advanced idea (Table 1).

One of the most important educational subjects is the educational quality. Most of studied staff believed that the quality of medical education has declined after integration. But they also believed that, some other factors are interfering such as: increasing the number of universities, increase of admitted medical student’s capacity, decrease of medical education budgets, self controlling of educational hospitals and defects of teachers and students selection laws (Table 2).

We asked the staff about 5 medical progress indicators. Most of them accepted only two indicators from 5 proposed one. These two indicators were:

1. Establishment of surveillance system
2. Promotion of health indicators.

Table 3 shows, staff universities view points about these 5 indicators.

Table 1. University staff’s view points about “Integration Philosophy”

Subject	Agreed	Neutral	Disagreed	Total
A rational and interactive relation should be presented between society, health system and medical education	95.8%	2.4%	1.8%	100%
The content of curriculum should be composed on the basis of real society needs	97.5%	0.7%	1.8%	100%
Universities are responsible for providing, protecting and promoting of the society Health	63%	7.1%	29.4%	100%
It is also Ideal that the education in non- medical fields, Integrate with their own practical fields	48.5%	22.5%	29%	100%
“Integration” is an advanced idea, but in our country it has not been fully completed yet	22.6%	17.6%	59.8%	100%
Average of agreements with Integration philosophy	65.5%	10.1%	24.4%	100%

Table 2. Staff's points of view about the quality of "medical education"

Subject	Agreed	Neutral	Disagreed	Total
The quality of medical education has declined after integration	62.2%	18%	9.8%	100%
The quality of medical education is not undesirable in comparison with other scientific fields	36.2%	27%	36.8%	100%
Irregular increase of universities has been effective on medical education quality declining	84.2%	6%	9.8%	100%
Irregular increase of the admitted medical students has been effective in medical education declining	87.4%	4.4%	8.2%	100%
Increasing medical education budgets has not been appropriate in comparison with its developments	89.1%	15.3%	5.3%	100%
Medical equipments have been developed significantly in the last decade	72.1%	12.9%	15.1%	100%
Increasing of diagnostic and remedial budgets has not been appropriate in educational systems				
Spending of educational budgets for remedial affairs, have been effective in medical education quality declining	62.1%	15.7%	12.2%	100%
Self controlling of hospitals has affected the decline of medical education quality	79.5%	12%	8.5%	100%
Defects of teachers & students selection Laws and regulations, have been effective in medical education quality declining	78.2%	12.8%	9%	100%

The average of studied staff views about the outcomes of disintegration of medical universities from MOH&ME was negative (Table 4). Nevertheless, most of staff (46%) in a separate question believed that it is better to merge medical training in to the Ministry of Sciences, Researches and Technology.

Out of several significant analytical data, we have selected the following Data:

- The rate of agreement with the philosophy of integration is more in the first level universities than second level universities ($P = 0.003$)
- More educated level of people, more agreement with influencing factors on the quality decline of Training ($P = 0.02$)
- Educational authorities agree with the factors influencing on the quality decline of training ($P = 0.001$)
- Exceeding increase of the admitted students to the governmental and nongovernmental universities resulted of integration ($P = 0.004$)
- Exceeding increase of universities capacity resulted of integration ($P = 0.01$)
- Self controlling hospitals has affected the decline of medical Training quality ($P = 0.04$)

Table 3. Staff universities view points about the outcomes resulted from MOHME establishment and Integration of medical Education in to the Health services

Subject	Agreed	Neutral	Disagreed	Total
At present, we have attained to self sufficiency in medical	64.4%	10.4%	25.2%	100%
Self sufficiency in medical fields resulted from MOHME establishment	34.8%	22%	43.2%	100%
Increasing of applicable and field researches resulted from integration of medical education and services	35.4%	27.6%	47%	100%
Establishment of surveillance system in the country resulted from integration	36.8%	32.1%	31.1%	100%
Improvement of health indicators resulted from integration	42.5%	18.6%	38.9%	100%
Special services like different tissue transplantations resulted from MOHME establishment	35.3%	26.6%	38.1%	100%

Table 4. Staff universities views on "Reintegration" of medical universities in Ministry of Sciences, Researches and Technology

Subject	Agreed	Neutral	Disagreed	Total
It imposes high expenditure	64.3%	18.5%	17.2%	100%
It improves remedial problems in society	39.3%	30.6%	47.1%	100%
There will be occurred some disturbances that the society can not accept them	51.5%	18.7%	29.8%	100%
There will appear a lot of conflicts in the system	62.1%	13.5%	23.4%	100%
It is repetition of trials & errors	48.9%	20.3%	30.8%	100%
It will postpone the system in different aspects	67.7%	10.2%	22.1%	100%
Ministry of Sciences, Researches and Technology is perfectly ready for disintegration	22.5%	37.9%	39.6%	100%

Discussion

The social accountability concept ties the medical schools endeavors to its impact via education, research, service delivery, and health care organization (6). Society expects the profession to respond appropriately to its perceived individual and collective health problems (7). Thus, we must ensure that curriculum content reflects national health priorities and the availability of affordable resources (1). Physicians must become more skilled in working with patients and populations to alter poor lifestyle choices, and medical education should contribute to meeting the health care needs of the medically underserved (8). Therefore, social accountability of universities and community Oriented Curriculum are Two important components of *"Integration Philosophy"*.

In our study, the most understudied staffs (65.5%), agreed with *"Integration Philosophy "*, and this agreement is more in the first level universities than second level significantly (*P = 0.003*).

Nevertheless, most of the staff (46%), believed that, it is better that medical Education merged again into the form of 1985.

This recent view point is in contrary to the first one, and perhaps this contradiction was due to presence of psychosocial stress of *"Integration Implementation"* in our Country.

Quality in medical education results from a coordinated effort to ensure relevance and efficiency in the education of future doctors and to ensure these doctors's optimal fit in society Implicit in the notion of quality is a special consideration for *social accountability* (6).

In our study, most studied staff (62.2%) believed that the quality of medical education has declined after the establishment of MOH&ME, but they also believed that some external causes such as: Increasing admitted student (*P* = 0.004), Irregular Increasing of universities (84.2%), self controlling of educational hospitals (*P* = 0.04), deficit of educational budget (89.1%), and *etc.* are some important factors in educational quality declining, and these factors are not obligatory related to *"Integration"* or *"Segregation"*.

Sayyari *et al.* believe that the following successes have been due to integration of medical education in to the health delivery system in Iran along 16 years ago (9).

- Self sufficiency in medical fields, especially in training of general practitioners and specialists
- Development of medical researches
- Establishing the surveillance system
- Improvement of health indicators
- Self sufficiency in special services such as tissue transplantations

In this study, most of the studied staff, accepted only two out of the prior mentioned indicators, were related to MOH&ME establishment and *"Integration"*. These two indicators were: 1. Establishment of surveillance system and 2. promotion of health indicators.

Nevertheless, considering all of the above mentioned view points, most of the understudied staff believed that *"Reintegration"* imposes high "expenditure" and "does not improve remedial problems" causing disturbances and conflicts in society, and it will postpone the system. On the other hand, at present, Ministry of Sciences, Researches, and Technology is not perfectly ready for Disintegration of MOH&ME.

Of course many of experts believe that the shortage in education quality is also observed in the Ministry of Science, Research and Technology but actually, it must be exactly assessed too. In conclusion, this study can concluded the following offers to improve medical education quality:

1- Balancing the rate of the number of governmental and nongovernmental universities according to the needs of society.
2- Re-defining the missions and functions of governmental and nongovernmental universities according to the needs in different stages.

3- Providing the real required budget for diagnosis, treatment, education, research, prevention and health promotion.
4- Cutting off the self controlling system of educational hospitals.
5- Improving procedures on training status.
6- Trying to establish a real laws and regulations concerned with the selection of students and teachers.
7- Completing the health care delivery system, specially referring system.
8- Providing independency of universities gradually, and ultimately,
9- Completing the existing integrated system toward a real integration.

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