

# Assessment of Success Rate of Gifted and Talented Students in Entrance Exam of Medical School at Shiraz University of Medical Sciences, 2017

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## Abstract

**Introduction:** Gifted and talented students receiving extra educational services, up to date advanced curriculum, additional short and long-term courses due to their educational needs, better instructors, and more challenging educational environments than non-gifted students at regular education programs and schools. The present study has been conducted under assess success rate of gifted and talented students in entrance exam of Medical School at Shiraz University of Medical Sciences.

**Methods:** The present study is a mixed method study including two quantitative and qualitative sections respectively conducted at Medical School affiliated to Shiraz University of Medical Sciences, Shiraz, Iran. In order to conduct quantitative section, target population consisted of medical students fulfilling a researcher-made questionnaire which validity and reliability have been checked. Qualitative section has been started respectively attending focus group with Medical Education experts and structured interviews about the effect of gifted and talented schools on Medicine field entrance. Data after being gathered were analyzed using SPSS software.

**Results:** The present study is a mixed method study having two quantitative and qualitative sections conducted at Shiraz University of Medical Sciences. In quantitative section, target population consisted of Shiraz medical students. To gather data a valid and reliable researcher-made questionnaire was administered to students that 255 of them were fulfilled. In qualitative section semi structured interviews was done to ask Medical Education experts' opinions. After data were gathered, SPSS software version 16 was used to analyze quantitative data.

**Discussion and Conclusion:** By focusing on studies conducted in other countries and the results derived from the present study, it can be concluded that studying at gifted and talented schools could be effective in passing entrance exam and entering Medicine field at university but it cannot improve critical and creative thinking among students which is recommended to other researchers to work on.

**Keywords:** Success; Gifted students; Entrance exam; Medical

## Introduction

Gifted and talented students receiving extra educational services, up to date advanced curriculum, additional short and long-term courses due to their educational needs, better instructors, and more challenging educational environments than non-gifted students at regular education programs and schools [1]. Gifted and tal

ented students need educational programs different from the conventional programs which have been presented to them at regular schools. Thus, they need providing educational programs which fulfill their educational needs, since they have abilities making them different from their peers in some cases [2]. The goal of educational

programs is to enable GTS turning into autonomous, creative, and productive learners in the society as future professionals [3]. The educational programs need to be enriched with several qualities for GTS, for instance they should be flexible, so it can be applied every now and then, to develop each affective aspect of students to develop leadership skills, and to provide them with educational experiences [4]. Since extra educational programs have been provided to GTS, it has presented educational issues suiting students' capabilities and interests which lead more families to such schools. It should also broaden students' horizon of vision by providing opportunities to learn more along with providing enough space to practice critical thinking about any researches they may think about. The justification for continuing GTS educational programs at special schools is that the regular schools attend programs which are sometimes incapable to satisfy today's students' needs; therefore, they need special short and long-term educational programs. It is also necessary to develop a good quality of education by designing special enrichment programs in order to develop personal, cognitive, and social aspects [5]. Enrichment programs are defined as activities, experiences, and issues which lead GTS beyond existing regular curriculum, challenging their capabilities by fulfilling their curiosity and time expenditure on useful subject matters. The mentioned approaches also help learners achieving their creativity in the cognitive processes [6]. The enrichment programs could boost students' personal motivation, and polish their talents towards getting acquainted to what is needed as future professionals. In addition, enrichment programs have positive effects on self-efficacy and self-regulation developing which help students passing high quality exams such as entrance exams held for entering good universities and high standards fields of study [7]. The importance of university entrance exam (UEE) in Iran cannot be denied due to being an only criterion for entering higher education. There has been intensive work by the Ministry of Education (ME), Ministry of Science, as well as private organizations in large and smaller towns to inform the

high schools, pre-university institutions, instructors, students, parents, and the society in general about the importance of this test administration. This national exam covers most of the courses that students have learned during a period of four years of study at high school and pre-university institutions. This multiple-choice exam is being holding in five major groups of students depending on their fields of study at high school. If students gained appropriate scores, they would enter high quality fields at university such as Medicine [8]. The present study has been conducted under assess success rate of gifted and talented students in entrance exam of Medical School at Shiraz University of Medical Sciences.

## Methods

The present study is a mixed method study including two quantitative and qualitative sections respectively conducted at Medical School affiliated to Shiraz University of Medical Sciences, Shiraz, Iran. Target population consisted of medical students. At quantitative section, a researcher-made questionnaire was administered to medical students. The Questionnaire validity is considered 0.86 by alpha Cronbach's in a pilot study conducted on 20 medical students and its reliability is proved by experts of Medical Education. The mentioned questionnaire consisted of 7 questions. Totally 270 medical students studying Basic Sciences phase have been recruited to the study based on census. After all 255 questionnaires have been fulfilled and analyzed. The qualitative section was started respectively attending focus groups with Medical Education experts and structured interviews to ask their points of views about how gifted and talented schools could affect on success rate of entrance exam passing and entering medical schools. After data were gathered, they were entered to SPSS software version 16. Descriptive statistical methods were applied to analyze descriptive data and t-test was used to compare the difference existing between students studying at gifted and talented schools and regular ones. Qualitative data after being recorded were verbatim and presented to experts participating in study to ask their final opinions.

**Table 1.**

		Frequency	Percent	Valid Percent
medical students entered Medicine field at universities	studying at Gifted & Talented schools	182	0.71	0.71
	Governmental schools	73	0.29	0.29
	Total	255	100	100

## Results

This present study is mixed method consisting of two quantitative and qualitative sections. Results derived from both sections are as below: As it is demonstrated in (Table 1) medical students entered Medicine field at universities divided to 71% related to studying at Gifted & Talented schools and 29% at Governmental schools. Chi square test ( $p$  value<0.001) demonstrates the significant difference between two mentioned groups which means passing entrance exam and entering Medicine field at universities is more related to studying at Gifted & Talented schools. As it is demonstrat-

ed in (Table 2) medical students' opinions about Effect of private teaching at gifted & talented schools, Effect of private courses of High School degree, Effect on Decision Making, Effect on Creative Thinking, Effect on being Successful and Effect on Competitive spirit and hardworking were positive and significantly meaningful. There was no significantly meaningful relation between two items of Effect on nurturing creativity and Effect on nurturing Critical Thinking in studying at both kinds of schools. In another part of this study, we compared the number of variables among the students in two groups. We distributed a questionnaire consisting of 60 items

that evaluated 6 different domains between them. This questionnaire was acceptable by some of the relevant faculty members, and its reliability was confirmed by Cronbach's alpha (0.82). (In Table 3, we will describe and compare the variables in the two groups.

All tests were performed at a confidence level of 0.95. According to the table above, there is a significant difference between the two groups in all six measured variables.

**Table 2.**

Group Statistics			
variable	studying at Gifted & Talented schools		p value
	Mean	Governmental schools	
	SD	Mean	
Effect of private teaching at gifted & talented schools	4.02	2.11	0.000
	+ 1/48	+ 0/39	
Effect of private courses of High School degree	3.81	2.57	0.001
	+ 1/29	+ 0/07	
Effect on Decision Making	3.84	2.68	0.001
	+ 1/29	+ 0/07	
Effect on Creative Thinking	3.93	2.54	0
	+ 1/43	+ 0/04	
Effect on being Successful	3.77	3.09	0.001
	+ 1/27	+ 0/59	
Effect on Competitive spirit and hardworking	3.51	3.04	0.001
	+ 1/01	+ 0/54	
Effect on nurturing creativity	2.68	2.66	0.185
	+ 0/18	+ 0/16	
Effect on nurturing Critical Thinking	3.24	3.22	0.121
	+ 0/74	+ 0/72	

**Table 3.**

Significance level	studying at Gifted & Talented schools		Governmental schools		medical students entered Medicine field at universities
	mean	SD	mean	SD	
	Variables				
p					
0/001	40/16	13/51	31/24	Nov-60	EI
0/001	10.87	1.24	7.88	1.56	Self-concept
0/000	3.92	1.33	2.59	1.19	Happiness
0/000	38.14	7.08	29.15	7.25	Motivation for progress
0/001	43.12	10.61	35.48	11.25	Self-esteem
0/001	36.29	15.87	33.61	14.9	Metacognitive Skills
0/000	40.22	1.63	37.39	1.58	Self-Regulation Learning

**Discussion**

Students with brilliant talents are students who show a higher level of performance in a special or general field than their peers, so these students need different training and learning programs based on their talent [9]. Studies have also shown that gifted students use more metacognitive skills than normal students [10], and have better cognitive skills [11] and gifted students' memory ability is significantly better than ordinary students [12] Gifted students also

show higher scores than normal students in self-regulation learning strategies [13] There are not enough studies conducted under the present study goal due to differences in educational systems and cultures. In the study done by Craig et.al in 2010 explaining "Is Gifted Education a Bright Idea? Assessing the Impact of Gifted and Talented Programs on Achievement and Behavior", the results showed that studying at gifted and talented schools can both affect students' achievement and behavior which is in line with the results of the present study [9].

The results of Johnson's, Em-balleter and Pascal-Leone research showed that gifted learners used more self-encouraging strategies than their normal counterparts in dealing with boring assignments, and the results of Hug, Ping, and Rowel research, which confirmed that students Gifted in comparison with ordinary students, they are better off in terms of their inner worth, and their gifted people, in comparison with ordinary people, are trying to make their study curriculum interesting and enjoyable, even if it is a more difficult and time consuming task, and the existence of a difference Significant relationship between the motivational beliefs of gifted and normal students (Razavi et al, 2014) is consistent [14-16]. According to the results of the present study on the learning process, and the academic success and, eventually, the success of the job on the one hand and the training of the skills and habits of study on the other hand, it is recommended universities at the beginning of the entrance of students to the university, for guidance to new students. Provide effective educational programs for studying and updating study habits, and organize proper training classes and workshops for student awareness in this field, and intervening programs to enhance students' general skills and habits (Both normal and brilliant talent) by defa More counseling is offered at universities so that it is advisable to provide the necessary guidance and counseling services to students at the beginning of each semester. It is also suggested that professors teach lessons based on student learning skills and consider students' differences during their education. In another study conducted by Miraca et.al. [19] entitled "Exceptionally Gifted Children: Long-Term Outcomes of Academic Acceleration and Nonacceleration, demonstrated that children who study at gifted and talented schools can be more successful at universities in future which is in line with the results of the present study [10].

## Conclusion

By focusing on studies conducted in other countries and the results derived from the present study, it can be concluded that studying at gifted and talented schools could be effective in passing entrance exam and entering Medicine field at university but it cannot improve critical and creative thinking among students which is recommended to other researchers to work on [17-19].

## Limitation

The present study has been conducted in small group of participants and in one culture with special educational system which cannot be related to other populations and cultures.

## Recommendations

It is recommended to other researchers and stakeholders to do more researchers under the goal of present study.

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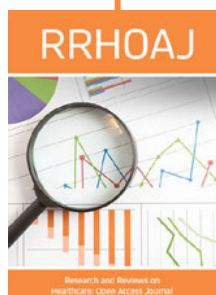
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