Original Study

STUDY OF RESEARCH ACTIVITIES AND VIEWS OF MEDICAL STUDENTS AND DENTAL STUDENTS OF ZAHEDAN UNIVERSITY OF MEDICAL SCIENCES TOWARDS RESEARCH IN 2012

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ABSTRACT

Aim: Due to the importance of research and lack of sufficient research on the obstacles to research and its causes, this study examines the research activities and attitudes of students in Zahedan University of Medical Sciences toward research and investigation.

Materials & Method: This descriptive-analytic cross-sectional study was conducted on 272 dental students of Zahedan in the academic year 2012-2013 using a questionnaire whose validity and reliability were confirmed previously. Data were analyzed by SPSS software version 17 and chi-square test at a significant level of $p < 0.05$.

Results: 62.5% of the subjects did not participate in any research projects and 70.6% of the students were willing to participate in the research project. There was a significant correlation between the frequency of research activities with academic qualifications and demographic characteristics ($p < 0.05$). In studying the views of students, the familiarity with the research method (55.9%), the persuasion of students by professors (54.8%) and the impact of research on improving the educational system (53.3%) were effective in research activities. The average score of the students' viewpoints was 38.31 ± 5.45 out of a total of 50 points, and the highest percentage of distribution was related to the average view (59.6%). Also, there was a significant relationship between students' viewpoints and field of study, parent's literacy ($p < 0.05$).

Conclusion: Despite the great interest, the majority of students did not participate in any research project. From their point of view, the most important characteristics of desirable research projects were prioritizing, having scientific value, having financial interests for the researcher, and being useful to the community.

Key words: Attitude, Research, Medical Students and Dentistry

Introduction

Today, the importance and necessity of the research is clear to anyone; research is the basis for the comprehensive development, the construction and independence of each country. The main gap between developed and backward countries is rooted in their research subdivisions.[1] Production of knowledge and insight is created only through research and investigation, and only knowledge-based development is accounted for a sustainable development. Science production increases knowledge and this is the basis of technology and, consequently, the generation of employment and wealth, and ultimately enhances social security and comfort.[2] Just a few years ago, clinical information was only possible through the retelling of the experience of doctors and specialists. With the advent of science, it became clear that the clinical observations of specialists alone did not suffice. The increase in information on the one hand, and the extent of the subjects studied, on the other hand, determine the necessity of conducting research in medical sciences.[3] Students as active forces and scholars of future play a significant role in the progress of the country. The achievement of any society in the field of superior science and research depends on the fact that the educated people there, especially the students, are aware of the importance and impact of research, and at the same time they have the spirit and motivation necessary for research. In other words, the basis for the development and advancement of each society is based on the research effort. In this regard, students and, in general, universities play a major role in achieving the goals. Of course, in developing countries, unlike advanced countries, there is not enough funding and facilities, and most importantly, few research results are being carried out to meet the needs of the community. In our country, the tendency to research is low[4] for many reasons, including lack of financial well-being and sufficient incentive to investigate, as well as lack of equipment and budget. Recent studies on the viewpoint of scientific research in our academic system show that short-term presence (about 6 months) in the university environment is enough to discern the difference between the perceptions of new students and the realities of this system. Reduced student's willingness to attend research activities and the difference in the student's perception of the research done by the faculty is a sign of this claim. One of the goals of the research is to promote the culture of the scholar of research in the universities and centers of research and reform of the general, secondary and higher education system of the country based on research culture and investigation.[5]

Despite the awareness of all the problems mentioned above in the field of research and investigation, especially among medical students, there is not enough research on the obstacles to research and evaluation and to identify the causes of this issue. Therefore, this study was designed to investigate the amount of research activities, characteristics of a desirable research project and the views of students of Zahedan University of Medical Sciences toward research and investigation.

Materials & Method

Study conducted on 300 medical and dental students who were randomly assigned to the study. The instrument for collecting information in this study was a structured

questionnaire containing 30 questions. Its content validity was presented in a similar study in Birjand University of Medical Sciences. The questionnaire consists of four sections:

A) Demographic and academic profile of students
B) Student research and investigation activities
C) The views of students on research and research using the Liker scale ranked 1 to 5, I strongly disagree with 5, I disagree, I have no idea, agree, and agree very much, , and at the end of the score less than 12, as a weak view , 12-25 points were considered as a moderate view and scores higher than 26 were considered as good views.
D) Students' views on the characteristics of desirable research projects identified as Priority 1 to 3.

Finally, the questionnaire was distributed among the students who wished to participate in the study and signed the informed consent form, and all information remained confidential. Data were analyzed by SPSS software version 17 and chi-square test at a significant level of p <0.05. Findings: In this study, 300 distributed questionnaires completed by 272 students, of which 161 (59.2%) were medical students and 111 (40.8%) were dental students. The mean age of the subjects was 23.8 ± 1.89 years and the highest frequency was in the age group of 22-24 years old (40.1%). 50% (136 people) were male and 23.5% (64 people) were married and 44.4% (121 people) were native.

The highest percentage of the level of academic parent's literacy rate was 64.7% and 47.4%, respectively. The average number of units passed by the subjects was 152.59 ± 5.34 and the highest percentage of the units was 100-200 units (61.4%).

The mean of the average of the units passed was 15/70 ± 1/6, and the highest percentage of the frequency of the average units was 15-17% (59.9%).

In Tables 1 and 2, the frequency distribution of the students studied is based on the type and number of research activities.

Research activity	Yes		No	
	N	%	N	%
Member of the Student Research Committee	75	27.6	197	72.4
Participating in familiarity workshops with the principles and methodology of research	96	35.3	176	64.7
Desire to participate in the workshop familiarizing with the research method	177	65.1	95	34.9
The desire to study lessons as a compulsory course	97	35.7	175	64.3
History of conducting a research project as a principal or executor	170	37.5	170	62.5
Willingness to participate or participate in research projects	192	70.6	80	29.4
History of participation in congresses and student seminars	131	48.2	141	51.8

Table 1: Frequency distribution of the studied students according to the type of research activity.

Number of Research Activities	Number	Percent
Zero	168	61.8
One	59	21.7
Two	29	10.7
Three and more	16	5.9
Total	**272**	**100**

Table 2: *Frequency distribution of the subjects studied in terms of the number of research activities*

History of the Research Project		Yes (%)		No (%)		Total (%)		Result of the Statistical test
		N	%	N	%	N	%	
Field of Study	Medical	69	49.2	92	50.8	161	100	X^2=831/4 df=1 p=0/028
	Dentistry	33	29.7	78	70.3	111	100	
	Total	102	37.5	170	62.5	72	100	
Units Passed	Less than 100	13	26.5	36	73.5	49	100	X^2=9/023 df=2 p=0/011
	100-200	59	35.3	108	64.7	167	100	
	More than 200	30	53.6	26	46.4	56	100	
Average	Less than 15	38	43.7	49	56.3	87	100	X^2=2/165 df=2 p=0/339
	15-17	57	35	106	65	163	100	
	More than17	7	31.8	15	62.8	22	100	
	Total	102	37.5	170	62.5	272	100	
Gender	Male	58	42.6	78	57.4	136	100	X^2=3/075 df=1 p=0/08
	Female	44	32.4	92	67.6	136	100	
	Total	102	37.5	170	62.5	272	100	
Age groups	Less than22	34	32.7	70	67.3	104	100	X^2=9/008 df=2 p=0/011
	22-24	36	33	73	67	109	100	
	More than 24	32	54.2	27	45.8	59	100	
	Total	102	37.5	170	62.5	272	100	
Marital status	Single	79	38	129	63	208	100	X^2=0/087 df=1 p=0/768
	Married	23	35.9	41	64.1	64	100	
	Total	102	37.5	170	62.5	272	100	
Residence	Native habitat	45	37.2	76	62.8	121	100	X^2=0/009 df=1 p=0/925
	Non-native	57	37.7	94	62.3	151	100	
	Total	102	37.5	170	62.5	272	100	
Father's level of Education	Illiterate	3	37.5	9	62.5	8	100	X^2=16/348 df=1 p=0/001
	Elementary and guidance school	0	0	23	100	23	100	
	High school	23	35.4	42	46.6	65	100	
	University	76	43.2	100	56.8	176	100	
	Total	102	37.5	170	62.5	272	100	
Mother's level of Education	Illiterate	1	7.7	12	92.3	13	100	X^2=8/144 df=3 p=0/086
	Elementary and guidance school	16	34	31	66	47	100	
	High school	28	33.7	55	66.3	83	100	
	University	57	44.2	72	55.8	129	100	
	Total	102	37.5	170	62.5	272	100	

Table 3: Comparison of the frequency distribution of the history of the research project of the subjects studied in terms of demographic and educational characteristics

The average score of the students' viewpoints was 38.51 ± 5.45 out of a total of 50 points. The highest percentage of frequency distribution was related to the average view (59.6%) and the lowest was related to poor level (6.2%).

	View	Poor		Intermediate		Good		Total		Result of Statistical Test
		N	%	N	%	N	%	N	%	
Field of Study	Medical	14	7.8	100	62.1	47	29.2	161	100	X^2=7/09 df=2 p=0/029
	Dentistry	3	2.7	62	55.9	46	41.4	111	100	
	Total	17	6.2	162	59.6	93	34.2	272	100	
Units Passed	100 Less than	2	4.1	28	57.1	19	38.8	49	100	X^2=3/248 df=4 p=0/517
	100-200	9	5.4	100	59.9	58	34.7	167	100	
	More than 200	6	10.7	34	60.7	16	28.6	56	100	
	Total	17	6.2	162	59.6	93	34.2	272	100	
Average	15 Less than	7	8	52	59.8	28	32.2	87	100	X^2=0/995 df=4 p=0/911
	15-17	9	5.5	96	58.6	58	35.6	163	100	
	17 More than	1	4.5	14	63.7	7	31.8	22	100	
	Total	17	6.2	162	59.6	93	34.2	272	100	
Gender	Male	9	6.6	80	58.8	47	34.6	136	100	X^2=4/487 df=4 p=0/344
	Female	8	5.9	82	60.3	46	33.8	136	100	
	Total	17	6.2	162	58.2	93	34.2	272	100	
Age Groups	22 Less than	7	6.7	55	52.9	42	40.4	104	100	X^2=4/487 df=4 p=0/344
	22-24	8	7.3	67	61.5	47	29.2	109	100	
	24 More than	2	3.4	40	67.8	46	41.4	59	100	
	Total	17	6.2	162	59.6	93	34.2	272	100	
Marital Status	Single	11	5.3	123	59.1	74	35.6	208	100	X^2=1/831 df=2 p=0/14
	Married	6	9.4	39	60.9	19	29.7	64	100	
	Total	17	6.2	162	59.6	93	34.2	272	100	
Residence	Native	7	5.8	81	66.9	33	27.3	121	100	X^2=5/122 df=2 p=0/077
	Non-native	10	6.6	81	51.6	60	39.7	151	100	
	Total	17	6.2	162	59.6	93	34.2	272	100	
Level of Father's Education	Illiterate	1	12.5	1	12.5	6	75	8	100	X^2=13/558 df=6 p=0/03
	Elementary and guidance school	3	13	13	56.5	7	30.5	23	100	
	High School	3	4.6	34	52.3	28	43.1	65	100	
	University	10	5.7	114	64.8	52	29.5	176	100	
	Total	17	6.2	162	59.6	93	34.2	272	100	
Level of Mother's Education	Illiterate	2	15.4	6	46.2	5	38.4	13	100	X^2=16/301 df=6 p=0/038
	Elementary and guidance school	6	12.6	32	68	9	19.4	47	100	
	High School	3	3.6	42	56	38	40.4	183	100	
	University	6	4.7	82	63.5	41	31.8	129	100	
	Total	17	6.2	162	59.6	93	34.2	272	100	

Table 4: Comparison of Frequency Distribution of the Viewpoints of Individuals Investigated according to Demographic and Educational Specifications

Characteristics of the desirable research plan	Abundance (%)
Has a scientific value	184 (67.6)
Financially beneficial for the researcher	97 (35.6)
Useful for the community	96 (35.3)
Can be presented at congresses and seminars	93 (34)
Articles can be printed	77 (28.3)
Not time consuming	75 (27.1)
Low-cost	54 (18.5)
Will be of interest to the community	49 (18.2)
Quickly getting at a result	47 (18)
Should be considered by the authorities	44 (17.4)

Table 5: Distribution of the characteristics of a desirable research project in terms of students' view Each student has selected 3 options.

Discussion

Based on the findings of this study, 62.5% of the subjects did not participate in any research project, 70.6% of the students were willing to conduct or participate in the research project. In checking the students perspectives with familiarity with the research methodology (55.9%), students' persuasion by professors (54.8%), and the impact of research on improving educational system (53.3%) were involved in research activities and resources Library references met students' need for research, respectively. Also, 27.6% of them were members of the Student Research Committee and 53.3% participated in the familiarity workshops with the research method and 65.1% were willing to participate in the familiarity workshop with the research methodology. On the other hand, there was a significant relationship between the frequency of their research activities with academic qualifications (field, number of completed units...) and demographic characteristics (age groups and father's level of education) ($p<0.05$). The mean score of the students' viewpoints was 38.51 ± 5.45 out of a total of 50 points. The highest percentage of frequency distribution was related to the intermediate view (%) and the lowest was related to poor level (6.3%). Also There was a significant relationship between the viewpoint of the students studied and the study- based field of study, parents' literacy ($p<0/05$). In examining the viewpoints of the students studied, most of them (82.7%) considered research to improve the educational system. Today, one of the major issues in higher education is the theme of "research-based education". In order to bridge the gap between the field of education and research, research in the field of education should be involved. Without familiarizing students with research in their educational activities, developing their creative talents in science production and participation in the development of the country would be impossible.[6]

The present study shows that the students' diminished role (37.5%) in the importance of research and knowledge production is consistent with the time of study.[7] On the other hand, in the present study, it can be seen that 76.6% of these students tended to participate or participated in the research project, and about half (48.2%) had a history of participating in congresses and student seminars. The reason students have not been involved in the research project, despite their great interest is of noticeable importance. The study of Hashemian Nezhad,[8] Pariad *et al*.[9] mentioned access to information sources as one of the factors contributing to the participation of individuals in research activities. In the present study, the viewpoint of the majority of the people referred to the existence of a positive role of the Internet and computer center, the resources available in the library, and the existence of laboratories and research centers in student research activities. In addition, the results of Pariad *et al*.[9] confirmed the role of cumbersome financial regulation and the administrative system that governed it on the participation of individuals in scientific and research activities.

In this study, from the viewpoint of the majority of respondents (83.1%) familiarity with the research method increased their research activities. Few studies have shown that having a training course on research skills has succeeded in gaining knowledge or positive results. In addition, it has been shown that research and research education has a great influence on the professional performance of individuals and has a positive relationship with their research performance in the future.[10] Therefore, by conducting appropriate workshops and familiarity with the research method, students are expected to participate in these workshops and should pay more attention to the extent of the students' participation in the research.

From the viewpoint of 84.9% of respondents, teachers play a role in encouraging students to research, which is in line with current study and colleagues.[11] According to the current study,[11] professors play a motivating role in the research activities of students and by enhancing their academic ability, they also strengthen the spirit of research and investigation of students, which, of course, depends on their own knowledge and insight teachers consistent to the students 'knowledge and skills requirements and develop their interactive skills, and also use the suitable teaching method to create students' beliefs and motives for conducting research activities, and to collaborate with these individuals, in particular teachers with students.

The most important characteristics of research projects in terms of students in this research were in priority, having scientific value (67.6%), usefulness for society (25.4%) the article being publishable and printable (28.3%). With regard to the scientific value of the research project, it is clear that the progress of each country depends more on the research of that country than anything else. A look at the world production statistics shows that seven of the world's first industrial nations are the first seven producing countries in science.[2] With regard to the financial benefits of the plan, it is possible to improve research activities by boosting financial support from researchers. It is also possible to involve dynamics and mobility in the scientific competition by involving the private sector and separation from the purely dependent on the university for the payment of fees, and the researcher being convinced that the results of his studies will be used and will lead to revenue to studying and carry out research.

Another feature of a desirable research project from a student's point of view is that it is useful for the community. By identifying the needs of the community, research priorities must be set up to prevent the loss of facilities, budget, time, human resources, and so on.

Comparing this study with the similar study carried out by Ramezani *et al* in Birjand, the most important characteristics of research projects in their viewpoint were in terms of their scientific value (57.7%), usefulness for society (36.7%) and congressional presentation Seminars and workshops that are in line with our study.[5]

In this study, 62.5% of the subjects did not participate in any research projects. In the study of Ramezani[5] in Birjand, this value was 71%, in the study of Doroudi[12] in Tabriz, 81.6%, Javadian[13] in Qazvin 77% and Panjeh Shahin[14] in Shiraz were 73.4%. Therefore, considering the findings of the research and the high inclination of students to participate in research projects and participate in familiarity workshops with the principles and methods of research, as well as the willingness to study the method of research as a compulsory course of studying the use of modern educational methods and holding familiarity workshops with the principles and methods of research are required.

Conclusion

Regarding the results of this study, despite the great interest of the studied students, the majority of them did not participate in any research project. Therefore, a study to identify the factors affecting the research activities of this prestigious and educated cortex, which is the future of the country, is considered necessary in order to identify these factors and to strengthen the positive factors and to remove or mitigate the negative factors and lead to the promotion of research activities that contribute to scientific progress and, hence, to the country's political-economic progress. Other results of this study were the viewpoints of the students studied about the most important characteristics of the research projects that were considered to be priorities, having scientific value, having financial interests for the researcher and usefulness for the society. It is recommended that cherished scholars, with much knowledge and obsession, take on issues that, in addition to high scientific value, which can increase the scientific status of Iran internationally, can also open a knot of the problems of society.

Regarding the impact of students' viewpoints on their participation, it is recommended that the status and value of student research be identified in the country, and student research at all levels of the country should be encouraged and supported, as well as by setting explicit criteria for research and identifying references, personal actions to make a decision to approve research projects should be prevented. In addition, in order to strengthen the scientific base of professors, it is recommended that retraining courses (holding seminars, congresses, scientific conferences, workshops, etc.) and organizing in-service training to strengthen the faculty members scientific base provide and facilitating the use of study opportunities and participating in international conferences and having scientific contacts with abroad, as well as the proportion between academic and research activities of universities in terms of time and hours of teaching is required because if students are well advised and coordinated with well-coordinated programs, they can work well and have applicable research.

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