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STUDENTS PARTICIPATION IN RESEARCH ACTIVITIES AND ITS RELATED FACTORS AT MAZANDARAN UNIVERSITY OF MEDICAL SCIENCES

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ABSTRACT

Background and Purpose: Research is a detailed and organized effort in finding the truth. The main mission of the universities of medical sciences is creating suitable circumstances for the production of knowledge in order to solve problems thereby improve public health. The purpose of this study is to determine condition of participation of students in research activities and its relevant factors at Mazandaran University of Medical Sciences in 2014-2015. **Materials and methods**: in this descriptive and cross-sectional study, the study subjects were all of students at the Faculty of Allied of Medical Sciences, Mazandaran University of Medical Sciences. Stratified random sampling method was used for required data, and the 5-point Likert Scale Questionnaire designated (Very high, high, medium, low and very low) with scores of 1 to 5, respectively. Questionnaire included demographic information and information about the effecting factors on student participation in the research activities. **Results**: Respondents were 73.8% female and 26.2 % male. The Highest score of effective factors in student participation in research activities in terms of usefulness of acquiring research skills in later life with the mean and SD 3.75± 1.08 (coefficient of variation of .28) and with the lowest are administrative tedious official work, score of 2.52 ± 1.21 (coefficient of variation .44). **Discussion**: The proposal writing workshops, introduction to the English and Persian resources, practical application of scientific methods in statistics and research methods, as well as attending the lesson research methodology workshop, and coordinating education and research affairs, can help students actively participate in research activities.

KEYWORDS: attitude, research, students.

1. INTRODUCTION

Research is an organized effort in obtaining the truth and the main mission of the research at the medical universities is creating a suitable condition for production of science and applying it in solving problems to improve the health status of the society.[1] Research in universities, lead to differentiation of the universities from the other educational centers such as the high schools.[2]

The educational system emphasizes on the intellectual and cognitive efficiency rather paying attention to the innovation and expanding of scientific methods. Research is not so important among the faculty members and students. Qualitative and quantitative comparisons of the studies done in Iran ,the developed and the developing countries, show significant difference from the view points of the research indexes (number of the researchers, budget, the number of the published books and journals).[3]

According to the published data in 2003, Iran ranked 42 among the 150 countries in production of science.[4] While, in 1993 ranked 55, the survey of 2004, on the ratio of the indexed papers ranked first in the world.[5] First step in managing the research of a society is the prompt knowledge on the efficiency, the available facilities and knowing the potency and inefficiencies of the research plan.[6,7] Studies indicate that researches done by the university students is helpful in obtaining the necessary experiences[8] improving the group work, improving their abilities in evaluating studies and also obtaining necessary skills in determining the relationship

between the scientific data at different health systems.[9,10]

The higher education system as the organization for production and expanding of the sciences plays very important role in the growth and development of researches in the country. Researchers at the universities are fundamental, but unfortunately practically face restriction and barriers.[11] Knowing restrictions of research variables could help in implementing proper strategies for research development.[12]

In some researches on the view points of the students, they stated low interest to the research activities, lack of conducting proper research method workshop, the universities being education directed rather research directed, lack of reference on the special topic, lack of the clear regulation for evaluating the students research activities, no expert guides, and consultant, lack of financial support of the student research program, low interest in team work as the main restrictions on the students research activities.[3]

One study stating the financial problem, improper distribution of finance and lack of trained research guides the main researches barrier in the developing countries.[13,14]

As a solution in order to improve the research capability of the faculty members and the students the following could be pointed out : conducting of the research work shop at the universities, consulting by the faculty member, introducing the students to the research methodology and paper writing ,development of the library facilities , using the internet and informatics networks.[15]

Encouragement and creating motivation for the research activities in the students could cover to certain extent the researchers' problems and help perform proper researches in the health field in the developing countries.[16]

The recent studies about the attitudes to research at the universities show that 6-month period presence at the university is sufficient to understand the difference of the new comer students' view point with the realities available at the universities, decline of the students willing to attend the research activities.

A report stated that the authorities by proper planning establish attractive linkage between the class and executive system and by proper surveillance direct the students towards the research.[18]

Increase of information clears more than before the extent of the research performance, but the research in our country still have not found its position.[19]

Study of Sani and Keramati in 2012 showed that. Also the demographic variable of faculty members such as sex, education subjects, academic position the history of teaching, research mean time spending per week, mean of teaching period per week number of papers and proposals were considered as controlling variables. Also 23.5% could fore see the teaching quality variables.[3]

Study of Shariatmadari (2011) showed that the individual factor, information, education, and socio- economic condition are effective in improving research motivation in faculty members. The individual and the social factors in improving the research interest in the male and female faculty members showed significant difference and the effect of the other factors in improving the research interest did not show significant difference from the viewpoints of male and female study subjects.

Also the results of the test indicated that the effect of individual factor in improving the research interest showed significant difference from the view points of the faculty members with years of experiences. The effect of the other factors in improving the research interest showed significant difference from the view points of the faculty number with different experiences.[2] Therefore, the correct investigation of the relevant restrictions at the universities and performing proper interferences in order to overcome these restrictions is one of the effective strategies in improving the quality of research at the medical universities.[20,21]

All of these researches are the witness of this major fact that, in the present era, those societies that could be in line with the sciences development, can establish the research directed culture at their universities and apply researches as the main factor in the students education.[22,23] In this study by considering the main role of students researches at the universities, tried to identify the effective factors on the research participation in the research activities.

It is hoped that the obtained data help the authorities in research planning and improving students' knowledge in the research activities.

The data obtained by Hossein pour (2011) showed that the lack of research facilities, management weakness and research administrations ,presence of the problems in improving the faculty members efficacy, the official tedious regulation, personal problem, the socio-economic problems are the research restrictions.

Also, amongst the different study groups by considering the sex, level of education, scientific position, the university as working place and the years of the experience of arts faculty member of Ahvaz University insignificant difference was observed.[6]

Fely et al. (2006) showed that there is significant relationship between the research participation and the

viewpoints variables related to student researches, exchange of science between the students' access to the research facilities, view point about the financial research condition and the faculty members efficiency. The results obtained from the step by step regression showed that, variables of faculty members' ability and access to the research facilities explain 58.2% of the students' research activities.[4]

The study of Qaforyan et al (2005) showed that the interest of students to the research despite attending the workshop is low (40.5%),[17]

The data obtained by Alaei and Azami (2001) ,revealed that 59.3% of the students did not attend the research methodology workshop, and also, there was significant relationship between gender variable and attitude towards the executive restriction, the team work research and the position of the researcher in the society. Also investigating the relationship between the education subject variable and attitude towards the executive barriers, the scientific efficiency and the effect of educational planning in the research, reference, the other necessities availability and the position of researcher in the society, found significant relationship.[11]

The study of Alaei and Azami (2001) revealed 59.3% of the students not attending the research workshop and significant relationship between the gender variable and attitude towards the research team work and the position of the researcher in the society.

It was found that there is significant relationship between the education subject variable and attitude to the executive barriers, the scientific efficiencies ,the effect of research educational planning, the library facilities the references and the researcher position in the society.

2. MATERIAL AND METHODS

In this descriptive- cross sectional study, the subjects under study were all of the students (the number of 1013 in 2014) at the paramedical faculty of Mazandaran University of Medical Sciences.

We selected 285 students by referring to the Morgan Table Selection. For the data collection the randomized simple classification and the questionnaire prepared by the researcher of the present study was used, designed in Likret 5-scale (very much, much, moderate, low and very low) rated 5 to 1, respectively.

The questionnaire comprised two sections demographic and the data related to the effective factors on the participation of the students in the research activities. The first section on the sex, age, field of education, the studying term and the education level. The data were analyzed by SPSS software.

3. RESULTS

The study subjects were 73.8% female and 26.2% male, of them, 21.9% student of medical laboratory sciences, 19.8% operative room, 17.7% student of anesthesiology, 13.9% radiology, 13.1% health information technology, 5.5% medical documentation, 91.6% and 7.2% 2-year and 4-year period bachelor degree students, respectively.

Their income situation was as follow:
1.3% postgraduate, 87.8% with no income, 2.1% with 33 dollar per month income, 0.8% between 33 to 99 dollar/ month, and 9.3% with higher than 99 dollar/ month. Their age range was as follow: 89.7% at the age range of 18-22 yr.; 6.5%, 23-27 yr.; 1.7% 28-32 yr.; 0.9%, 33-37 yr., and 1.3% at the age range of 38-43 yr.

Table 1- The demographic features of the study subjects

Variable	Number (%)	Variable	Number (%)
Gender		Age range (year)	
Female	175 (73.8)	18-22	208 (7.89)
Male	62 (26.2)	23-27	15 (6.5)
Education subject		28-32	4 (1.7)
Health information	31 (13.1)	33-37	
Anesthesiology	42 (17.7)	33-48	
Medical laboratory sciences	52 (21.9)	Level education	
Radiology	33 (13.9)	Continued	217 (91.6)
Operative room	47 (19.8)	Non continued	17 (7.2)
Medical documentation	13 (5.5)		
Occupational therapy	12 (5.1)		
Emergency	4 (1.7)	No income	
Medical history	3 (1.3)		

The factors effective on the students' participation in the research activities were designed with 17 questions (table- 7).

Table: 2 Frequency distribution and the partial frequency percentage effective on the participation of the students in the research activities

Effective factors	Very low	Low	Medium	Much	Very much	
Interest in doing research	16	19	56	64	82	1.20±3.75
Attending in the proposal preparation workshop	23	24	74	80	35	1.14±3.34
Attending the research methodology workshop	19	31	68	83	36	1.13±3.36
Attending the statistics training workshop	26	59	77	50	24	1.14±2.94
Attending the internet training classes	21	18	41	79	78	1.24±3.74
Skills in translating English text to Persian	20	33	70	47	67	1.26±3.46
Interest of the students' family to the research	12	33	79	59	53	1.13±3.46
Spending for the research activities	13	36	72	69	45	1.12±3.41
Encouraging the students to the study in the classes	12	33	81	70	40	0.08±3.39
In reach of the library facilities	12	24	68	78	55	1.10±3.59
Presence of office tedious regulation	23	38	80	51	45	1.21±2.75
Determining the research priorities of the faculty	10	33	93	69	32	1.01±3.34
Application of the research results in decision making	13	27	89	75	32	
Financial support from the university	26	36	36	52	87	1.39±3.58
The main role of the research directed thinking	10	27	88	60	52	0.08±3.49
Relevance of the research topic to the educational subject	9	24	74	72	58	0.07±3.62
Advantage of the acquiring research skills in the future life	9	23	54	84	67	1.08±3.75
The mean and standard deviation of whole score	0.66±3.46					

Based on the above table, the highest scores of the effective factor in participation of the students to the research activities were as follow: beneficial of acquiring research skills in the future life with the mean and standard deviation of 3.75±1.08 (with the coefficient changes of 0.28), relevance of research to the education subject with the mean and standard deviation of 3.62±1.07 (coefficient changes of 0.29).

Access to the facilities and the library equipment, determining the research priorities, application of research data in decision making and the main role of research through in the daily life with the coefficient changes of 0.30.

Also, the lowest score of the effective factors in the students participation in the research activities in the context of office tedious regulation was with the mean and standard deviation of 2.75±1.21 (with coefficient changes of 0.44).

Using the statistical calculated of t=10.07 and the significance level of sig=0, it is concluded that there is significance difference between the given answers by the study subjects and obtained viewpoints. The higher amount (3.43) of mean of the effective factors on the students participation in the research activities from the degree of testing subjects (3) indicate that majority of the study subjects had the grade with answering domain much and very much.

In studying the factors effective in the students participation in the research activities, differentiating gender, we found t=2.7, and significance level=0, indicating presence of statistically significance difference between the effective factors on the students participation in the research activities in the male and female study subjects.

On the other words, the mean of effective factors in the female students' participation is greater than male.

In studying the effective factors on the students participation in the research activities, differentiating the study subjects, the Fisher Statistical Test in the variance analysis was 5.28 and its significance level=0, indicating significance difference between the means of effective factors of the students participation in the research activities, differentiating the study subjects. That is, there is significant difference between the mean of effective factors in the research activities of the students' participation educating in the health information technology, anesthesiology, and medical laboratory technology. Highest mean of effective factor in the students' participation in the research activities was found in the medical laboratory science and information technology.

In studying the effective factors in the students' participation in the research activities differentiating the income, the analysis of variance and significance level were sig= 1.17 and 0.32, respectively which indicates the insignificance relationship the research activities.

4. DISCUSSION

In this study, it has been tried to investigate the view points of the students towards the rate of effective factors influence on the research activities and the situation of

the students' participation. The obtained data showed the highest score of the effective factors on the students participation in the research activities from their points of view, orderly as follow: beneficial of acquiring research skills in the future life, relevance of the research to the university education, access to the library facilities, determining the research priorities of the faculty, counting the research results in the decision making and the main role of research directed thought in the daily life. Also, with the lowest score of effective factors in the participation of students in research activities is about the presence of official tedious regulation.

In the present, study the score mean of research financial support from the university was 3.58%, while in a similar study the obtained data suggested 36.3%.[17] While a study performed in Qazvin city in Iran 65% of the students believed that the universities do not pay attention to the research activities[12], which does not agree with the present study. They expressed the reason mainly due to the wrong educational and management system, lack of research fund, no motivation, lack of facilities and educational tools to apply for research.

In a study, the mean of encouragement of the students to the study from the view points of the study subjects was 3.39% but in a similar study in Qazvin, 73% of the students believed that the faculty members could have main role in encouraging the students to research activities ,through 27% of the study subjects counted the role faculty member low, but in our study, 23% of them expressed unawareness.

The score mean of access to the library facility and availability from the view points of the study subjects in that study was 3.59% which corresponds with the finding of our study.[12]

In a study in Ilam (Iran) more than 50% of the study subjects expressed weak the library electronic facilities and book references.[11]

In the present study the score mean of willing in attending internet training classes was 3.74%. While in a similar study in Isfahan (Iran), 48% of the study subjects agreed with the necessity of attending the information technology classes.[17]

In the present study, the mean of expressing the main role of research directed thought in the daily life was 3.49%, in a similar study in Isfahan 23.5% of the study subjects agreed on the role of research in improving the quality of services given, 25.4% of them on the effect in improving the quality of students learning, and 74% believed that the research plays important role in improvement of the educational system. Also in this study the mean score of the tedious regulation is 2.75% and in a study in Ilam 12% of the study subjects believed no restriction in the research activities (11), but in the study of Fazlollahi about the view points of the study subjects the poor interest to the research activities, lack of conducting the suitable research workshop, the education directed policy rather research directed policy at the universities, lack of journal, and clear regulation for evaluation of research activities in the students, lack of expert faculty members at the universities for research guidance to the students, lack of financial support to the students, low interest to the team work research were the main effective restriction in the research activities in the students, respectively.[1]

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REFERENCES

1. Feyzollahi, S. Restrictive Factors Affecting Student Research Islām va Pazhūheshhāye Tarbīyatī, 2012; 4(1):165-184. (Persian).
2. Mahdi Sh. Pathology Barriers to Implementing Research Among Faculty Members and Provide Practical Approaches. Journal of Educational Management. 2011; 1(9): 45-60. (Persian).
3. Hossein Jafari San, Kerrammati V. Attitudes of Faculty about the Relationship Between their Research and Training Activities. Research and Planning in Higher Education, 2012; 64: 1-17. (Persian).
4. Fely S, Pezeshky Rad Gh, Chizari M.: Factors Affecting Student Participation in Research Activities and Knowledge Production. Journal of Research and Planning in Higher Education, 2006; 42: 93-107. (Persian).
5. Mosavi Mf. The Ranking of Scientific Production on the fifty first Countries. Rahyaft, 2004; 32: 37-57. (Persian).
6. Hosseinpour M. A study of debilitating factors of research from the viewpoint of faculty members in human sciences. New Findings in psychological, 2011; 6(19): 79-95. (Persian).
7. Kolahi A, Sohrabi MR, Abdollahi M., Suri H. Research Priority in Shahid Beheshti University of Medical Sciences: Methods, Problems and Limitations. Magazine Educational Shahid Beheshti University of Medical Sciences, 2010; 4(76): 143-151. (Persian).
8. Frishman WH. Student Research Projects and Theses: Should they be A Requirement for Medical School Graduation. Heart Dis., 2001; 3(3): 140-4.
9. Burazeri G, Civljak M, Ilakovac V, Jankovic S, Majica-Kovacevic T, Nedera O, Et Al. Survey of Attitudes and Knowledge about Science in Medical Students in Southeast Europe. Bmj, 2005; 331(7510): 195-6.
10. Segal S, Lloyd T, Houts P, Stillman P, Jungas R, Greer 3rd R. The Association between Students' Research Involvement in Medical School and their

Postgraduate Medical Activities. Academic Medicine, 1990; 65(8): 530-530.
11. Alaei M, Azime Azami. Students' Attitudes towards the Study of Ilam University of Medical Sciences, 2001. Magazine Ilam University of Medical Sciences, 2004; 42-43: 39-44. (Persian).
12. Javadiyan A. Review the Reasons for Lack of Effective Research in Universities of Medical Sciences [Thesis] Tehran University of Medical Sciences, 1999; 2-4.
13. Burgoyne LN, Oflynn S, Boylan GB. Undergraduate Medical Research: The Student Perspective. Med Educ, 2010; 15: 26-29.
14. Khan H, Khawaja MR, Waheed A, Rauf MA, Fatmi Z. Knowledge and Attitudes about Health Research amongst a Group of Pakistani Medical Students. BMC Med Edu, 2006; 6: 54.
15. Rezaeian M, MOLLA Abbasi M H, Haghighi M, Sharifirad GH, Hadavi M. Knowledge, Attitude and Practice of Medicine and Dentistry, Rafsanjan University of Medical Sciences on Research. Journal of Health System, 1388; 6: 727.
16. Fallah M, Hooshmand B, Joneidi J, Shamsaei F, Basharian S. Knowledge, Attitude and Research Capability of Professional Medical and Dental Ph. D. Graduates of Hamedan University of Medical Sciences. Iranian Journal of Medical Education, 2005; 5(2): 129-37.
17. Ghafornya M, Motamedi SH, Yosefian E. Knowledge and Attitudes of Dental Students about Research. Journal of Isfahan Dental School, 2005; 1(3‹4): 31-34.
18. Alaei M, Azami O. Attitude of Students to Prevent Interruption in Ilam University of Medical Sciences In 2001. Ilam University of Medical Science, 2004; 12(1-2): 39-44.
19. Azizi, F. Learning Methods and Research in Medical Sciences. Tehran: Nashr-E Javan, 1992; 74-158.
20. Kajermo KN, Bostrom AM, Thompson DS, Hutchinson AM, Estabrooks CA, Wallin L. The Barriers Scale –the arriers to Research Utilization Scale: A Systematic Review. J Implementation Science, 2010; 5: 32.
21. Lloyd T, Phillips BR, Aber RC. Factors that influence doctors' participation in clinical research. Med Edu, 2004; 38(8): 848-51.
22. Sereshti M, Kazemian A, Adrees A. [The views Faculty & Students About barriers Research in Sharkord University of Medical Science in 2006]. Proceeding of the 9th National Conference on Medical Education, March, 2008, 4-6. Yazd: Yazd Universities of Medical Sciences, 2008; 32. [Persian].
23. Griffin M, Hindocha S. Publication practices of medical students at British medical schools: experience, attitudes and barriers to publish. Medical teacher, 2011; 33(1): 1-8.