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Students' Attitudes Towards Research at Mazandaran University of Medical Sciences in 2015

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ABSTRACT
Background: In today's world, one of the criteria of progress in a country is research. In our country instead of paying to the research and study, attention is given to the training of human resources. Therefore, this study aimed to investigate Students' Attitudes towards Research at Mazandaran University of Medical Sciences in 2015. **Methods:** In this cross-sectional study the data tool was questionnaire given to the study subjects. The study population were all the paramedical college students at Mazandaran University of Medical Sciences selected. Cochrane methodology was used to determine the sample size, the t test used to know the attitudes and the ANOVA test to assess differences between the groups. **Results:** The mean age of the students was 20 years (age range of 17 to 32 years), of them, 99 (61%) were female and 63 (39%) male, 100% undergraduate and 73% on their first semester. Their attitudes toward the usefulness of search for jobs and careers, anxiety, relationship with everyday life and Research problem was positive. Belief in research problem with the highest average and relation with everyday life with the lowest average, ranked the highest and lowest scores respectively. The findings also showed that there was insignificant difference between the variables of age, gender and level of education and the attitude of students towards research. **Conclusion:** The subjects under study had Positive attitude to research and in case of availability of research facilities, students would be more interested in performing research.
Keywords: attitude, students, research, University of Medical Sciences , Sari, Iran.

1. INTRODUCTION

There has been a documented decline in the number of physician- scientists in medical practice (1). In today's world, one of the reasons of development in different countries is to know the role of research and giving it as a priority. The central role of clinical research in medical sciences in Iran, have not been considered, therefore lack of attention to the importance of research in the country, plunged us into backwardness research (2). In the USA, also documented reduction in the number of researcher physicians sparked wide concern in 2001 (2). Research in Iran educational system is a new issue for growth needs prosperity a trying to strengthen for better outcome. Education system needs to train human

resources to resolve this shortcoming and if sufficient efforts are not exerted, never research in the educational system will be considered as an endogenous activity (3). Knowing the unwilling of faculty members and students in doing research, no investigation is carried out to determine the cause of this problem (4). One of the main reasons for giving no priority to study in our country is that results of the studies are not applied by the administrators and the papers are kept in the archive of the library (5).

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 Discussion and conclusion (6). Achieve to maximum progress and improvement, just depends on addressing targeted research investment and investment of researchers and students (7). Research in universities, lead to differentiation of the universities from the other educational centers such as the high schools (6, 8). The workforce of 'physician - scientists' is ageing and decreasing in numbers. The responsibility to combat this trend rests on future generations of healthcare professionals and it is therefore valuable to evaluate medical students' attitudes towards research (9). An observed decrease of physician scientists in medical practice has generated much recent interest in increasing the exposure of research programs in medical school (10). The significance of this study is to investigate further the views in using the training programs, teaching orientation, and modifying of teaching strategies. To what extent respondents' assessment of previous research and classes and rewards that influence the research and teaching (11). Academic researchers to address only clinical studies, considering, health research and related services for the everyday health care system, even the non-essential things and accessories that only have formal aspects and lead to the weakness of health systems research and inefficiency of the investigation. In developed countries, investment in research is of great importance, in a way that, 1 to 3% of gross domestic product spent on research. While in Iran it is 0.5% in 2001 (5, 12).

Mohammadi et al. (2016) in their study entitled: "Students Participation in Research Activities and its Related Factors at Mazandaran University of Medical Sciences" concluded that: 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 (6).

Davari, Danesh Kazemi, Aghili, and Mozafari (2015) in their research entitled: "The Evaluation of Relationship between Self-efficacy in Research and Research Performance of Dental Student, of Yazd Dental College in 2014" concluded that The overall mean of self-efficacy in research was 159.79 ± 27.69. And the mean of research performance was 11.02 ± 16.37. The results showed that there was a significant and positive relationship between the overall scale of self-efficacy and research (p-value=0.004, r= .03). Based on the age, there was no significant difference in the mean score of self-efficacy in research in all aspects but in the areas of skills and expertise (p>0.05). There was a significant difference in the mean score of research performance in terms of the age(p-value=0.023). There was no statistical significant between the overall mean score and the score of seven parts of self-efficacy in research and research performance in the terms of sex (P>0.05. Regarding the association of self-efficacy in

research with research performance of dental students, it can be stated that awareness of the level of self-efficacy in research can lead to better planning for improving the research performance (7).

Shirbagi (2011) in his research entitle: "A Survey of Kurdistan University Postgraduate Students' Attitudes to Research and Its Relationship with their Research Self-Efficacy "concluded that female students are less concerned about the difficulties of research than their male counterparts. Moreover, the most positive attitudes towards research belonged to the faculty of technical and engineering's students. In contrast, faculty of Humanities' students had higher degree of anxiety concerning doing researches. Generally, students believed in high levels of usefulness and benefits of research activities in their future occupations and indicated low degree of anxiety concerning conducting researches. Male students were more convinced than female students that they possess self-efficacy skills. According to analysis students in the Faculty of Humanities appeared at the lowest category of confidence regarding their research self-efficacy skills compared with other faculties' students while faculty of technical and engineering's students had the highest level of that. The most important skills from the student's point of view were respectively: "research computer and analyzing skill" and "writing and presenting skills". In contrast, "application of ethical issues and research procedure" and "research designing skills" had the lowest level of self-confidence and self-efficacy from their viewpoint (13).

Zarifian and Mohammadi (2009) in their study entitle: "Measurement of attitudes of students toward research and influencing factors: (Case study of students of Faculty of Agriculture throughout 2008-2009) "found that there is significant correlation between the tendency of students to study and the use of information resources, access to appropriate facilities for research, faculty member's attitudes to research, academic performance, attitude, discipline, curiosity and family (12).

Siamian, Hosseini, and Ghorbani (2008) in their study entitle: "Evaluation of information literacy and information seeking of medical records students at Mazandaran University of Medical Sciences" concluded that" undergraduate medical records student at Mazandaran University of Medical Sciences showed that 71%, 4% and 25% of the study subjects had library, field, and the both types of experience respectively. Also, 71% of students had problem in getting information and 37.5%with difficulties in evaluating. Even, 84% referred to the faculty member of the medical record and biostatistics and 16% referred to the relevant faculty members. Data show that referring of the students to the information resources, such as the Internet, Medline and library is weak (14).

Ghafournia, Motamedi, and Yousefian (2006) in their research entitled: "Isfahan Dental Students' Knowledge and Attitude about Research "concluded that the mean mark of students' knowledge was 2.09±1.92 out of 10. Which would be increased with increasing level of training and education. Ninety-four present of students would absolutely agree with necessity of participation in research activity during their study period, 23.5 percent by increasing quality of services to the patient, 25.4 percent by increasing quality of study

skills, 46.3 percent were in agreement with university support for research activity and only 15.1 percent of students believed that participating in research activity is waste of the time. Student's research knowledge is very low in spite of their attendance in research methodology workshops (40.5 percent). Because of their desire and positive attitude toward research activity, faculty officials should plan in more disciplined way, to improve the students' skills and knowledge (2).

Alaei and Azami (2004) in their study at the Ilam University of Medical Sciences showed that 59.3 %of the students did not participate in the research workshop and there was a significant relationship between gender and attitudes to administrative barriers, collective action research and researcher's position base in the community. And also there was a significant relationship between discipline and attitude to administrative, scientific capabilities and impact of educational programs on the research, resources and library facilities and research position in society (3).

Javadian (2002) in a study entitled: "Medical students' attitudes towards the importance of research" among 200 students at Babol University of Medical Sciences, concluded that 33% of study cases presented paper related to their thesis work and 42% of the them believed in the thesis as complement to their educational. Main research problems were orderly as follow: The educational system and inadequate management, lack of funds and motivation and lack of research facilities. Also 69% of the study cases mentioned decline of reading and research, low scientific knowledge of the country, inefficiency of the educational system and management shortage of the research facilities. Therefore, using of new educational methodology, allocating research fund and training of the researchers is necessary (4).

Review of the literatures indicate that in Iran instead of paying attention to the research among the educated individuals they are given to the training of human resources. Specialized training should be parallel to the further research as the primary means of learning. Given the role of research in the era of information technology and the need for efficient utilization of research data in decision-making, the need for theoretical and practical training of the research to the students of different level is necessary.

2. MATERIALS AND METHODS

In this descriptive-survey research the library and field methods, as inseparable components of scientific research have been operated. The study subjects consisted all (n=280) of the Paramedical college students at Mazandaran University of Medical Sciences. Cochran formula was used to determine the sample size. Knowing N=280, and taking Z=1.95, and p=0.5 the sample size was 162 persons. The data collection tool is a questionnaire adapted from the "Attitudes towards Research" Scale (ATR) (15) of 32 questions of self-report items scored on a seven-point Likert scale (1 completely disagree, 7 completely agree). The items of 1, 7, 10, 11, 16, 18, 23, 25, 26, 28 and 32 will be calculated on opposite direction. This questionnaire assesses 5 useful factors of anxiety, positive feelings about the relationship between research and everyday life, students' problems on research. Cronbach's alpha coefficient formula was used to evaluate

the reliability of the questionnaire. Calculated Alpha coefficient through SPSS software for the questionnaire was 0.85, which it is an acceptable reliability. Overall, in this study, to increase the Content validity of the questionnaire, the following methods were used: Benefiting from the viewpoints of the experienced faculty members. Initially, 30 questionnaires were distributed to the study subjects for resolving the ambiguities, and finally after clearing and ambiguities, the final questionnaire was prepared and distributed was. In this study, t- test was used to assess attitudes and the ANOVA test was used to assess differences between the groups.

3. RESULTS

The mean age of students was 20 years (17 to 32 years). Of the total respondents, 99 (61%) were female, 63 (39%) male; 43% of students of clinical laboratory sciences, 25% the IT, 14% in radiology, 11% operating rooms and 7% of medical records; 100% of undergraduate students and 73% in their first semester (Table 1).

Demographic variables	Indices	Number	%
Gender	Female	99	61
	Male	63	39
Age	15-20	59	36
	21-25	66	41
	26-30	24	15
	31-35	13	8
Semester	Semester 1	118	73
	Semester 2	14	9
	Semester 3	17	11
	Semester 5	12	7

Table 1. Distribution of semester, age, gender and level of students in the sample under study.

The significance level of (sig = 0.000) show that there is insignificance difference between any of the factors presented with attitude of the study subjects with research, and all of the students confirmed all factors. By studying the obtained mean data, it could be said that, from the view point of the students, research problems had the highest effect and relation with the life had the lowest impact (Table 2).

The confidence level of 95% indicated that the attitude to research variables (usefulness of research for the profession, anxiety and stress, positive attitude about research, relation with daily life the problems and the research problem))

Factors	Mean	SD	T	Df	Level of significance
Beneficial of the research in profession	4.39	0.86	64.868	161	0.000
Stress and anxiety	4.34	0.75	73.617	161	0.000
Positive attitude to research	4.43	0.82	86.392	161	0.000
Relation with the daily life	4.19	0.94	56.526	161	0.000
Research problems	4.82	1.04	58.544	161	0.000

Table 2. The T test results to evaluate the attitude the study subjects to research

considering the study semester had insignificant difference different according (Table 3).

Variable	Analysis of variance F	Df	Level of significance P
Beneficial of research for the profession	1.486	3	0.222
stress an d anxiety	1.037	3	0.363
Positive attitude to research	0.702	3	0.552
Relation with the daily life	0.674	3	0.569
Research problem	1.523	3	0.137

Table 3. The ANOVA test results to study the differences of the attitude to research based on the semester of education (n=162)

The confidence level of 95% showed that the attitudes of study subjects did not have significance difference with the different ages to the research (usefulness of research for the profession, anxiety, positive attitude about research, related with everyday life and Research problem) (Table 4).

Variables	Analysis of variance F	Df	Level of confidence P
Beneficial of research for the profession	1.010	10	0.438
Stress and anxiety	1.525	10	0.136
Positive attitude to research	0.950	10	0.489
Relation with the daily life	1.495	10	0.147
Research problem	1.481	10	0.152

Table 4. ANOVA test results to study the differences in terms of age, study attitude (N = 162)

The confidence level of 95% showed a different attitude to gender (the usefulness of research for the profession, anxiety, positive attitude about research, associated with everyday life and research trouble) did not have significant difference (Table 5).

Variables	Analysis of variance F	Df	Level of significance P
Beneficial of research for the profession	1.53	1	0.218
Stress and anxiety	0.750	1	0.388
Positive attitude to research	0.893	1	0.346
Relation with the daily life	3.105	1	0.080
Research problem	0.250	1	0.618

Table 5. The results of ANOVA to study the attitude difference in the study subjects based on gender, (Table=162)

4. DISCUSSION

Significance of research and its essential role in the growth and development of country is necessary and clear, hence, recognizing the obstacles and research performance in order to improve the quality and quantity of research is of particular importance. It should be noted that one of the main tasks of the educational institutions is research mission and it requires extensive and in-depth review and analysis of the factors, barriers and attitudes of the research. Findings of the studies show that lack of the professional's statistical education to the young students made the students face problems in performing research. Lack of experienced faculty member as guide to answer research questions make confusion and less desire in the students, which corresponds with the data given by Shirbaygi (9). The obtained data in-

dicate that the students are interested to the research and find it necessary and in case of providing the requirement could do the research more efficiently.

Javadian (2001), Ghafourian (2006) and Siamian et al. (2008) found similar results (2, 4, 14) (1, 6, 10). Our data agree with the finding reported by Alaei (2013), indicating the technical difficulties and barriers in implementing research (3). The results reveal that the "attitude to research, considering the gender of the student has in significant difference, which is consistent with the data of Yousefi and Salehi (2012), The findings also show that, education level, gender and age of the students and in all, the general underlying factors of the respondents to the questionnaire had insignificant effect on their attitude to research. It could be concluded that, attitude of the students towards research is partial, therefore, gender, age and education level have no effect on the attitude of the students to research (16, 17). In other words, attitudes towards research is influenced by the other variables (5, 12, 18,-20).

We can conclude that there are environmental or personal barriers for the student doing research at Mazandaran University of Medical Sciences, and it could be corrected and controlled by the faculty members, faculty and university officials. The availability of sufficient consulting staff, counseling, to provide the facilities and motivation of faculty members and administrators' towards research can somewhat reduce barriers against the student's research and have positive impact in attitudes to research. It also seems that, the practical training that actually engage the students in the research process, could have significant impact on the approach of the students towards research. In conjunction with the "anxiety" and "stress" in doing research. It could be noted that in many ways could have a negative impact on the performance of students. Therefore, it may reduce the quantity and quality of research in the students, as well as problems in education and learning, cause burnout and dissatisfaction followed by negative impact on their lives or even threaten students' health. Findings of this study is in consistent with the results of Erfanmanesh (2009), which examined the causes of anxiety in the students while doing research (21). In connection with the "positive attitude to research " which is one of the effective variables of the present study corresponds with the Mehrdad, et al. (2007) findings, studied on the facilitators and barriers of research in nurses' clinical practice, they found consistent (22). It could be said that, the students know the impact of research in their professional activities. Vali Zadeh and colleagues (2002) in their study found that, the study subjects have positive attitude the research (23). Our findings correspond with the data of Jolley's study at a Medical Center of Gynecology, Nottingham on the attitude nurses to research (24).

Execution recommended:
- Students' familiarity with library systems, features and how to use scientific sites in the research.
- The method to form a single unit providing optional for students that can help improve attitudes and enhance their knowledge.
- Training workshops Planning Research Projects also will create a positive impact on students' attitudes.
- Review and assessment more accurate on the disserta-

tion research as one of the most important criteria to measure academic ability Department, Supervisors and students.

- Student Research Committee can also create a perfect backdrop for material and moral support of scientific and research activities Help improve the relationship between students and academic and research professors and students, promote and enhance skills and provide research culture among students.

Authors' contributions: Authors considered and aimed the study and drafted the final manuscript. At the time of the survey, Fatemeh Habibi was a Health Information Technology student at Mazandaran University of Medical Sciences, conceived of the study, participated in disseminating and collecting the survey. R Mahmoudi helped in analyzing statistical affairs is a medical statistician at Mazandaran University of Medical Sciences. Hasan Siamian as a guide participated in development, dissemination and collection of the survey and helped in drafting the English manuscript is an assistant professor medical student at Mazandaran University of Medical Sciences and. Masoumeh Latifi read article and has written final discussion. All authors' read and approved of the final manuscript.

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