

## Brief Communication

# Barriers and Challenges of Performing Research Activities from the Perspective of Students of Kermanshah University of Medical Sciences

Shokouh Sadeghi M.Sc.<sup>1</sup>, Sahel Heydarheydari M.Sc.<sup>2\*</sup>, Shima Moradi M.Sc.<sup>3</sup>, Narges Golchinnia B.Sc.<sup>4</sup>

1. Dept. of Radiology, School of Paramedicine, Kermanshah University of Medical Sciences, Kermanshah, Iran

2. Student Research Committee, School of Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran

3. Student Research Committee, School of Health, Kermanshah University of Medical sciences, Kermanshah, Iran

4. Student Research Committee, School of Engineering, Kermanshah Razi University, Kermanshah, Iran

\*Address for Correspondence, Student Research Committee, School of Medicine, Parastar Blvd., Kermanshah, Iran, Zip-code: 67346-67149, Tel. +989187355751, Email. sheydari7@gmail.com

(Received: 26 Sep 2015 Accepted: 1 Feb 2016)

## Abstract

Increasing research activities in each country provides the opportunities for development and progress. The current study was conducted to analyze the perspective of students of Kermanshah University of Medical Sciences about the barriers of performing research activities. In this descriptive, cross-sectional study, a total of 364 students at Kermanshah University of Medical Sciences were selected through cluster random sampling in the academic year 2013-2014. A researcher-made questionnaire designed according to Likert scale, was used to collect the required data. The obtained data were analyzed using SPSS-16 software. Among the factors affecting research activities, the highest rank was reported for personal factors and the lowest rank was found for research factors. Moreover, personal factors were shown to have the maximum effect on doing research and organizational and research factors were reported as barriers to research activities. Therefore, reinforcement of research skills through workshops on promotion of research capabilities and provision of material and spiritual incentives can be efficient.

**Keywords:** Research barriers, Personal factors, Students

Citation: Sadeghi Sh, Heydarheydari S, Moradi Sh, Golchinnia N. Barriers and challenges of performing research activities from the perspective of students of Kermanshah University of Medical Sciences. *Educ Res Med Sci.* 2016; 5(1): 48-51.

## Introduction

Attention to research and increasing research activities in every country bring about developments (1). Evidently, research is the only way to achieve triumph and avoid retardation (2). In developed countries, the human resource employed and the budget spent on research are trivial (3). The studies are indicative of the fact that there are numerous barriers to performing research, including lack of proper credit, lack of accurate data, rapid changes of management and rules, shortage of professional researchers, selection of poor research topics, poor management and lack of planning (4). Understanding and identifying barriers to

research can help solve the problem and provide a ground for the use of research findings (5). Certainly, recognizing the restrictions of sciences and technology in the country can be an effective step to take in order to come up with strategies aimed at endogenous technological advancement (6, 7).

An education that is merely based on memorization of the materials presented in textbooks and journals cannot, undoubtedly, be sufficient in solving the problems of developing countries. Students and graduates should proceed to carry out appropriate research projects to solve

their problems. The first steps to take to organize research activities in society are achieving a proper understanding of capabilities and available facilities and finding the deficiencies, weaknesses and strengths of research programs. Thus, this study was performed to evaluate the barriers of doing research activities from the viewpoint of students of Kermanshah University of Medical Sciences

## Methods

The study population of this descriptive, cross-sectional study comprised of the students studying at Kermanshah University of Medical Sciences, 2013-2014. The study sample was calculated to be 351 students according to Krejcie and Morgan table. However, 364 students were selected through cluster random sampling to increase the reliability of data.

The instrument for data collection included a researcher-made questionnaire, which was designed in two sections based on Likert scale. The first section contained students' demographic characteristics and second section included 32 items, comprising the main questions of the study. The barriers to research were analyzed in three sections of research factors, organizational factors and personal factors. The responses were ranked based on five-point Likert scale, from very little to very much, each item with a score from 1 to 5. The given questionnaire was designed using similar domestic studies (8). The face and content validity of the questionnaire was evaluated and confirmed using the views of ten faculty members and experts in the domain of health education and research. The reliability of the questionnaire, however, was calculated to be 0.75 by Cronbach's alpha, which indicated an acceptable index.

The questionnaires were completed via self-report by the participants who had at least a history of cooperation in an approved research or a research under investigation for approval at university.

The obtained data were analyzed by SPSS-16 software using descriptive statistics as well as inferential statistics, including Chi-square and Spearman correlation coefficient.  $P < 0.05$  was considered significant.

## Results

Based on the obtained results, the mean age of the participants was  $21.28 \pm 2.81$  (minimum age 18 years and maximum age 45 years). Of participants, 70.6% were female and the rest were male. Also, 56.3% of students were undergraduate, 39.3% were postgraduate and 4.4%

were associate students. A total of 92% of the study sample were unemployed and only 8% were employed.

The findings of the study showed that 74.5% of students had no history of article translation and 90.1% had no record of article publication. Also, 88.1% were reported not to be the executive producer of a research project. The research factors were considered as one variable and its correlation with academic levels and personal factors was evaluated. Spearman correlation coefficient showed no significant correlation between research factors and academic level ( $P=0.12$ ). On the other hand, Spearman coefficient indicated a significant correlation between research factors and personal factors ( $P=0.01$ ).

Moreover, the results demonstrated that 72.5% of students were inclined to cooperate with the research committee, but only 21.9% had adequate skill in performing research activities. From among the participants, 45.1% contended there existed restrictive bureaucracy in performing research, 65.9% reported the income of research activities was trivial compared with other activities and 60.2% considered the research budget inadequate. Of students, 62.3% believed the results of studies were used quantitatively.

The results of Spearman correlation coefficient showed a significant correlation between organizational factors and academic level ( $P=0.0005$ ). Furthermore, organizational factors and research factors were significantly correlated ( $P=0.000$ ), but Spearman correlation coefficient showed no significant relationship between gender and organizational factors ( $P=0.671$ ).

In addition, the findings regarding the role of personal factors in performing research activities revealed that 44.5% of students believed class attendance and apprenticeship prevented them from doing research. From among the study participants, 53% considered students' dissatisfaction and 40.4% regarded inapplicability of research findings as barriers to performing research activities. Also, 67.5% of study samples believed lack of research spirit to be an obstacle to research activities. The results of Spearman coefficient showed a significant correlation between research factors and personal factors ( $P=0.01$ ). Further, Chi-square indicated no significant correlation between students' education place (school) and research factors ( $P=0.78$ ), organizational factors ( $P=0.81$ ) and personal factors ( $P=0.64$ ).

Furthermore, the results showed that among the three factors affecting research activities, personal factors, with the mean of 264, were reported to be the most significant factors and organizational factors the second most

influential factor in performing research activities from the perspective of the participants ( $M=252.6$ ).

Also, the least important factor was found for research factors ( $M=205.3$ ) (Table 1).

**Table 1. Comparison of barriers (personal, organizational, research) to performing research activities from the perspective of students**

Barriers to performing research	Frequency		
	Little or no effect Number (%)	Moderate Number (%)	Very much Number (%)
Research factors	117(32.1)	242(66.5)	5(1.4)
Organizational factors	32(8.8)	270(74.2)	62(17)
Personal factors	24(6.6)	252(69.2)	88(24.2)
Sum (%)	173(15.84)	764(69.97)	155(14.19)
Total (%)			1092(100)

## Discussion

The findings indicated personal, organizational and research factors to gain the first, second and third ranks in barriers to research activities, respectively. Similar studies such as those of Sereshty et al. (9, 10) and Lloyd et al. and Neilson (11, 12) showed personal factors like lack of time, workload and restrictive administrative regulations to be barriers to performing research. The studies by Siemens et al. and Bahadori et al. also reported personal problems as barriers to article authorship (13, 14). Further, Daraei et al. demonstrated such personal factors as lack of sufficient motivation and poor personal skills as the obstacles to carrying out research activities (15).

However, some studies have evaluated the effect of organizational factors on doing research to be higher than that of personal factors (16) and some other studies have considered the presence of organizational factors along with personal factors as significant barriers to performing research activities (15, 16).

Moreover, Daraei et al. and Bahadori et al. contended that administrative rules and lack of budget were important barriers to doing research (14, 15). Mazloomi Mahmodabad et al. also reported organizational factors to be the most significant barrier to carrying out research activities from the viewpoint of students (17); however, they found lack of adequate incentive from the part of researchers to be the most important organizational barrier to doing research, which seems to be a personal factor by itself. Since the participants of the present research showed less participation in doing research activities and going through administrative processes of getting the research proposal approved, compared to the similar studies, they were found to have less confrontation with organizational barriers; therefore, organizational factors were not found to be the most significant barrier to performing research. In addition, in line with the results of the current study, the study carried out by Ghasemi and

Khami reported four factors of poor English editing skills, lack of motivation, absence of desirable conditions for writing and lack of academic writing skills as the barriers to doing research, which are considered personal factors (18). Furthermore, Mirkheshti et al. mentioned students' unwillingness as an obstacle to doing research (19).

The research conducted by Anbari and Jadidi indicated organizational factor to be a major barrier to performing research during students' involvement in the process of research. They reported this class of students to be researcher, but for the students with no research activity (non-researcher), they included the priority of not doing research activities in the personal domain (20). It should be pointed out that lack of correct response and incomplete responses to the questions by the students were the limitations of this study; however, the large sample size employed in this study could compensate for the given limitations.

## Conclusion

The findings of the current study showed personal factors to be the most influential barrier, followed by organizational and research factors, to performing research activities. Hence, reinforcing research skills by holding workshops on promoting research capabilities as well as eliminating and minimizing the burdensome administrative regulations of the process of getting research projects approved and providing material and spiritual incentives can be helpful in this regard.

## Acknowledgments

This article was taken from a research proposal (no: 92176) approved by the student research committee, deputy of research and technology at Kermanshah University of Medical Sciences. The authors would like to extend their gratitude to all respected authorities of deputy of research and technology and students who participated in this research.

## References

1. Anbari Z, Jamshidifar A, Setareh M. The viewpoints of faculty members about research activities problems in Arak University of Medical Sciences. *Iranian Journal of Medical Education*. 2005; 5(2): 196-198. [Persian]
2. Ramezani AA, Faraji A, Ali Abadi A, Nour Mohammadian O. Birjand University of Medical Sciences students' perspective about the factors affecting research. *Iranian Journal of Medical Education*. 2011; 11(5): 453-454. [Persian]
3. Alamdari Ak, Afshoon E. The view point of faculty members on research barriers at Yasuj University. *Armaghan-Danesh*. 2003; 8(29): 27-34. [Persian]
4. Solomon SS, Tom SC, Pichert J, Wasserman D, Powers AC. Impact of medical student research in the development of physician-scientists. *J Investig Med*. 2003; 51(3): 149-56.
5. Lahsaei Zade A. Research barriers of the social sciences in Iran. *Rahyaft Journal*. 1996; 14: 97-104. [Persian]
6. Halid D, Darrell RI. Determinant of research productivity in higher education. *Res High Educ*. 1998; 39(6): 607-631.
7. Hefferin EA, Horsley JA, Ventura MR. Promoting research-based nursing: The nurse administrator's role. *J Nurs Adm*. 1982; 12(5): 34-43.
8. Sadeghi S, Tohidnia MR, Heydarheydari S, Golchinnia N, Sohrabi N. A survey on barriers in performing research activities from the perspective of faculty members of Kermanshah University of Medical Sciences, 2011. *J Clin Res Paramed Sci*. 2014; 2(4): 243-250. [Persian]
9. Sereshty M, Kazemian A, Daris F. Research barriers from the viewpoint of faculty members and employees of Shahrekord University of Medical Sciences. *Iranian Journal of Educational Strategies*. 2010; 3(2): 51-57. [Persian]
10. Sereshty M, Parvin N, Bozorgzad M, Imani R. Barriers of research performances in the view of nurses. *Ilam University of Medical Sciences Journal*. 2007; 15(2): 7-13. [Persian]
11. Lloyd T, Phillips BR, Aber RC. Factors that influence doctors' participation in clinical research. *Med Educ*. 2004; 38(8): 848-851.
12. Neilson EG. The role of medical school admissions committees in the decline of physician-scientists. *J Clin Invest*. 2003; 111: 765-767.
13. Siemens DR, Punnen S, Wong J, Kanji N. A survey on the attitudes towards research in medical school. *BMC med educ*. 2010; 10: 4.
14. Bahadori M, Momeni K, Ravangard R, Yaghoubi M, Alimohammadzadeh K, Teymourzadeh E, et al. Challenges of the health research system in a medical research institute in Iran: A Qualitative Content Analysis. *Glob J Health Sci*. 2015; 7(1): 69-78.
15. Daraei SH, Kouhpaei A, Yousefi MH, Komeili Movahhed T, Ahmari Tehran H, Rahmani M. The study of the magnitude of the research problems before and after the administrative and management interventions from the faculty members and researchers' viewpoint at Qom University of Medical Sciences, Qom, Iran, during 2004-2008. *Qom University of Medical Sciences Journal*. 2009; 3(3): 37-44. [Persian]
16. Salem Safi R, Ashraf Rezaei N, Saadatian R, Moshiri Z, Sheikhi N, Bani Adam A. [A survey of the viewpoints of faculty members about the research barriers in Orumieh University of Medical Sciences]. *Journal of Urmia Nursing and Midwifery Faculty*. 2009; 7(3): 142-151. [Persian]
17. Mazloomi Mahmoodabad SS, Hosseini SP, Abbasi Shuvazi M, Mirzaei Alavijeh M, Rezaei F. A survey of Shahid Sadoughi University of Medical Sciences students' opinions about research barriers during university training. *Journal of Medical Education Development*. 2013; 6(10): 63-70. [Persian]
18. Ghasemi H, Khami MR. Barriers to the production of scientific dental articles in dental schools in Iran; the view of postgraduate students. *Journal of Dental Medicine - Tehran University of Medical Sciences*. 2012; 25(1): 48-55. [Persian]
19. Mirkheshti N, Hadadgar A, Hosseini N, Khaluei MM. Medical students' attitude towards research at the completion of basic science courses. *Iranian Journal of Medical Education*. 2014; 14(4): 342-349. [Persian]
20. Anbari Z, Jadidi RA. Comparing of barriers to research activities among students of Arak University of Medical Sciences, and appropriate strategies for student research management. *Iranian Journal of Medical Education*. 2013; 13(5): 399-412. [Persian]