

Barriers to research activities of faculty members in Islamic Azad University

Neshaneh Pakdaman^{1*}, Mohammad Ali Ahmadi², Rakhshaneh Pakdaman³, Narges Malih³

¹ Assistant Professor of Knowledge and Information Science, Islamic Azad University, North Tehran Branch, Tehran, Iran

² Knowledge and Information Science, Islamic Azad University, Science and Research Branch, Tehran, Iran

³ Social Determinants of Health Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Corresponding author and reprints: Assistant Professor of Knowledge and Information Sciences, Islamic Azad University, North Tehran Branch, Tehran, Iran.

Email: n_pakdaman@iau-tnb.ac.ir

Accepted for publication: 22 May 2016

Abstract

Background: The present study was conducted to determine the inhibiting factors of research activities among the faculty members of Islamic Azad University.

Methods: In the present cross-sectional study, conducted between 2009-2013, 300 faculty members of Islamic Azad University, Science and Research Branch, Tehran, were selected following stratified random sampling method. Data collection instrument was a questionnaire comprising 20 questions about their research activities and 22 questions about their unwillingness to perform research activities.

Results: A total of 254 faculty members participated in the present study. About 15% of the participants were female. The findings of the current study showed that a) lack of physical space for work, study, and research, b) unfamiliarity with the searching methods on the Internet, and c) lack of sufficient familiarity with research methods and Statistics were the most important obstacles for the participant to carry out research projects.

Conclusion: Supporting the researcher financially and spiritually, considering the priorities and research needs, honoring the social status of faculty members, creating a calm and active environment for them, and removing encumbering administrative rules and regulations can help faculty members become eager to join in scientific research projects.

Keywords: Faculty; Inhabiting Factors; Iran; Research; Universities

Cite this article as: Pakdaman N, Ahmadi MA, Pakdaman R, Malih N. Barriers to research activities of faculty members in Islamic Azad University. *SDH*. 2016;2(2):76-83.

Introduction

The quality and quantity of scientific production is one of indices of scientific development for every country. As a result, the scientific development of communities is one of the influencing factors of the Human Development Index (1). Iran's expenditure on research and development was 0.49% with a minimum of 0.28% in 2010 and a maximum of 0.67% of Gross domestic product (GDP) in 2008 in the period between 2001-2012 (2). In

terms of research and scientific structures, similar to other developing countries, Iran faces challenges such as a severe lack of independent scientific centers, dependency on the governmental sector and lack of support for all the research centers, and most importantly, weakness of the decision-making in knowledge management in the scientific and research institutions. These have made Iran's scientific production involved in a significant recession,

making us fall behind in terms of qualitative and quantitative research with international standards. Officials, intellectuals and academics believe that progress depends on scientific, research development and researchers complain about research poverty in Iran (3).

Recent studies have shown financial problems as the most important research barrier. Other barriers, too, are as follows: external-organization barriers, low research funding, inequality of research and education hours, lack of interest for research results among national managers and policy makers, lack of professionalism, incompatibility of research priorities and need assessments, long duration for approval of research proposals, poor knowledge on research skills, heavy workload (4–7), and not having enough English writing skills (8, 9).

Bearing all these in mind, the present study aimed to examine the inhibiting factors of research activities among the faculty members of Islamic Azad University, Science and Research Branch, in Tehran.

Methods

The present cross-sectional study was conducted among the faculty members teaching in Islamic Azad University, Science and Research Branch, in Tehran between 2009-2013.

All the faculty members holding a minimum of Master's Degree working in Science and Research branch of Islamic Azad University were eligible to take part in the study. Out of 763 faculty members, 300 were selected using stratified random sampling method.

Data collection instrument was a questionnaire consisting of demographic variables, 20 questions on participants' research activities, and 22 questions on their unwillingness to perform research activities using a five-point Likert scale ranging from 1=very low to 5=very high. Five experts in the field checked the validity of the instrument and reliability of the instrument

was examined using Cronbach's alpha to be 0.87.

The sample size was calculated using Cochran formula where $\alpha=0.05$, $z_{1-\alpha/2}=1.96$, and $d=0.05$. We needed at least 227 participants but, to get better results, 300 faculty members were invited to take part in the study.

Data was analyzed using SPSS software 16 (SPSS Inc., Chicago, IL, USA). Descriptive statistics was used for data analysis. P values lower than 0.05 were considered as statistically significant.

Results

Out of 254 faculty members who participated in the present study (response rate=84%), 36 (14.4%) were female and 218 (85.6%) male. Also, 15 (6%) participants were graduated from universities abroad. Academic ranks of the participants were as follows: 46 (18.4%) professors, 58 (23.2%) associate professors, 132 (52.8%) assistant professors, 8 (3.2%) lecturers, and 6 (2.4%) were during their training scholarships. *Personal and social inhibiting factors*

Table 1 shows the views of faculty members about socio-personal inhibiting factors. Regarding the livelihood issues, out of the total number of respondents, 102 (40.2%) believed that this factor has very highly and highly inhibited their scientific and research activities.

Regarding the reluctance toward research activities, the results showed that out of 254 respondents, 89 (35%) selected very high and high alternatives. In terms of cooperation between faculty members to conduct group research activities, the results showed that out of 254 respondents, 106 (41.7%) believed that this factor had a very high and high influence on their unwillingness to carry out research activities. Lack of incentives, motivations and moral support for research activities were other deterrents that were questioned. The results showed that 114 (44.9%) participants believed that the deterrent effect of this factor was very high and high.

As for the ambiguous place of the research and researcher in the value system of the society, as shown in Table 1, 105 of the participants (41.3%) considered its impact on scientific activities very high and high. Regarding the failure to use research findings in different parts of society as an inhibiting factor, the results showed that from among 254 respondents, 99 (39%) believed that this factor influenced their research activities very high and high.

As shown in the Table 1, according to the respondents' views, out of the six personal and social inhibiting factors, livelihood issues and unwillingness of applying research findings have the highest percentages. Also, indistinguishable place of research and researcher and absence of research incentives and motivations had the lowest percentages on performing research activities from the faculty members' perspective.

Table 1. Frequency for the socio-personal inhibiting factors

Respondents	Very High N (%)	High N (%)	Medium N (%)	Low N (%)	Very Low N (%)
Livelihood Issues	21 (8.3)	81 (31.9)	65 (25.6)	69 (27.2)	18 (7.1)
Reluctance in Research Activities	17 (6.7)	72 (28.3)	88 (34.6)	59 (23.2)	18 (7.1)
Reluctance in Cooperation	26 (10.2)	80 (31.5)	76 (29.9)	59 (23.2)	13 (5.1)
Lack of Research Motivation and Incentives	38 (15)	76 (29.9)	76 (29.9)	51 (20.1)	13 (5.1)
Indistinguishable Place of Research and Researcher	27 (10.6)	78 (30.7)	85 (33.5)	56 (22)	8 (3.1)
Failure to Apply Research Finding	30 (11.8)	69 (27.2)	90 (35.4)	52 (20.5)	13 (5.1)

Table 2. Frequency of the financial-economic inhibiting factors

Respondents	Very High N (%)	High N (%)	Medium N (%)	Low N (%)	Very Low N (%)
Poor Distribution of Research Funding	34 (13.4)	77 (30.3)	82 (32.3)	51 (20.1)	10 (3.9)
Lack of Research Funding	37 (14.6)	84 (33.1)	78 (30.7)	38 (15)	17 (6.7)
Low Research Funding	39 (15.4)	90 (35.4)	64 (25.2)	45 (17.7)	16 (6.3)

Economic-financial inhibiting factors

Table 2 shows the views of faculty members regarding economic-financial inhibiting factors. With respect to the effect of poor allocation of budget to research, it was observed that out of the total number of 254 respondents, 111 (43.7%) believed that this factor very highly and highly influenced their research activities.

Regarding the shortage of research funding as an inhibiting factor, the results showed that out of the total number of 254 respondents, 121 (47.7%) believed that this factor influenced their research activities. With regard to the low research funding, 129 of the participants (50.8%) defined the effect as very high.

Organizational-administrative inhibiting factors

The organizational-administrative inhibiting factors were questioned in three categories. The first factor was prolonged procedure of verification of subjects and the results of research projects. The results showed that out of 254 respondents, 117 (46%) believed that the effect of this factor on scientific research activities was high and very high.

With regard to the second inhibiting factor, the intervention of non-eligible people in approving the subjects of researches and the final results of the research plans, the results showed that 95 of the 254 respondents (37.4) believed that this factor influenced their research activities very high and highly.

It was also found that 88 participants (34.6%) believed that the effect of this factor on scientific research activities was high and very high (Table 3).

Equipment-facility inhibiting factors

Table 4 shows the opinion of the faculty members about five facilities-equipment

factors. As shown in this Table, as for the first factor that is the lack of printed and electronic information sources, 81 participants (31.9%) believed it to have high and very high effects.

Regarding the lack of proper physical space for work, studying and research, from among 254 of the respondents, 67 (26.4%) selected high and very high options.

In terms of lack of research services, including the statistical help, research assistant, and others, as given in the Table 4, from among 254 of the respondents, 75 (29.5%) selected high and very high options.

In terms of the different problems and obstacles in using studying opportunities, as can be seen in the Table 4, from among 254 of the respondents, 84 (33.1%) selected high and very high options.

As for different problems for attending the national and international conferences, as shown in the Table 4, 86 (33.9%) respondents selected high and very high options.

Table 3. Frequency of the organizational-administrative inhibiting factors

Respondents	Very High N (%)	High N (%)	Medium N (%)	Low N (%)	Very Low N (%)
Lengthy Approval Procedures and Verification of Results of Research Projects	29 (11.4)	88 (34.6)	87 (34.3)	36 (14.2)	14 (5.5)
Intervention of non-Eligible Persons	22 (8.7)	73 (28.7)	84 (33.1)	54 (21.3)	21 (8.3)
Lack of Clear Regulations on Research Activities	26 (10.2)	62 (24.4)	81 (31.9)	65 (25.6)	20 (7.9)

Table 4. Frequency of the equipment-facility inhibiting factors

Respondents	Mean (SD)	Very High N (%)	High N (%)	Medium N (%)	Low N (%)	Very Low N (%)
Lack of Information Resources	3.03 (1.099)	23 (9.1)	58 (22.8)	82 (32.3)	70 (27.6)	21 (8.3)
Lack of Physical Space for Work, Study, and Research	3.22 (1.131)	19 (7.5)	48 (18.9)	81 (31.9)	72 (28.3)	34 (13.4)
Shortage of Research Services Personnel	3.12 (1.180)	28 (11)	47 (18.5)	73 (28.7)	77 (30.3)	29 (11.4)
Various Obstacles and Difficulties in the Enjoyment of Sabbatical	3.07 (1.147)	21 (8.3)	63 (24.8)	79 (31.1)	60 (23.6)	31 (12.2)
Obstacles to Participate in the Conferences	3.04 (1.130)	22 (8.7)	64 (25.2)	72 (28.3)	72 (28.3)	24 (9.4)

Specialized professional inhibiting factors
 Out of the five inhibiting factors related to research facilities and equipment, as Table 5 shows, the respondents considered staff shortages and lack of physical space as the two factors with the highest priority barrier and lack of resources in research services and various obstacles for attending the national and international conferences as the factors having the least priority.

Table 5 provided the faculty members' opinions about the five specialized professional inhibiting factors. Based on this Table, regarding the first factor, too much involvement in administrative activities, out of 254 participants, 93 (36.6%) believed that it had high and very high effect. Regarding lack of proper information about searching the Internet and information databases, of the total number of 254 respondents, 72 (28.4%) selected high and very high options.

In terms of lack of information in research, statistics, and paper writing methods, as can be seen in the Table 5, out of 254 participants, 77 (30.4%) selected high and very high options.

Considering the lack of knowledge regarding foreign languages, as can be understood from the Table 5, 78 (30.7%) participants selected high and very high options.

Moreover, with regard to the last inhibiting factor, which is the problems and barriers for publishing the research results, out of 254 respondents, 90 (35.4%) selected high and very high options.

Prioritization of research activities using general inhibiting factors

In this section, all 22 factors hindering scientific-research activities of the faculty members have been arranged based on the average scores. As can be seen in Table 6, three factors pertaining to lack of proper physical space for work, study, and research, lack of enough familiarity with the methods of searching on the Internet, and lack of sufficient familiarity with research methods and statistics had the highest effect and two factors including lack of research funding and improper distribution of research funding had the least impact on scientific and research activities, from the respondents' perspective.

Prioritizing the sets of factors

Table 7 provides five sets of factors inhibiting the scientific activities according to their means (above average).

Table 5. Frequency of the specialized professional inhibiting factors

Respondents	Very High N (%)	High N (%)	Medium N (%)	Low N (%)	Very Low N (%)
Excessive Engagement in Administrative Activities	19 (7.5)	74 (29.1)	95 (37.4)	47 (18.5)	19 (7.5)
Lack of Sufficient Familiarity with Internet Search Methods	21 (8.3)	51 (20.1)	75 (29.5)	77 (30.3)	30 (11.8)
Lack of Sufficient Familiarity with Research Methods and Statistics	23 (9.1)	54 (21.3)	68 (26.8)	76 (29.9)	33 (13)
Lack of Sufficient Proficiency In Foreign Languages	28 (11)	50 (19.7)	73 (28.7)	73 (28.7)	30 (11.8)
Obstacles and Problems for Publication	24 (9.4)	66 (26)	78 (30.7)	65 (25.6)	21 (8.3)

Table 6. Prioritization of research activities according to the means

No.	Inhibiting factors	Mean	Standard deviation
1	Lack of physical space for work, study, and research	3.22	1.131
2	Not familiar enough with the search methods on the Internet	3.17	1.136
3	Lack of sufficient familiarity with research methods and statistics	3.16	1.176
4	Shortage of research services personnel	3.12	1.180
5	Lack of sufficient proficiency in foreign languages for use	3.10	1.187
6	Obstacles in the utilization of sabbatical	3.07	1.147
7	Obstacles to attend conferences	3.04	1.130
8	Lack of resources	3.03	1.099
9	There are various barriers to publishing	2.98	1.109
10	Lack of interest in research activities	2.96	1.03
11	The lack of clear regulations on research activities	2.96	1.113
12	Problems of living	2.9	1.10
13	Unprovoked and unrelated persons involved in the approval of the issue and support the results	2.92	1.089
14	Employment excessive administrative activities	2.89	1.038
15	Lack of spirit of cooperation	2.82	1.06
16	Lack of Research Findings	2.80	1.06
17	The uncertainty Place of the research and the researcher	2.7	1.01
18	Lack of incentives Research	2.71	1.112
19	Inspection lower right	2.70	1.133
20	The length of the approval process subject of the research plan	2.68	1.038
21	The lack of research funding	2.66	1.112
22	Improper distribution of research funding	2.64	1.061

Table 7. The effect of five sets of factors in order of priority (above average)

No.	Sets	Mean	Standard deviation
1	Equipment-facilities	3.096	0.7243
2	Specialized professional	3.063	0.6937
3	Organizational-administrative	2.853	0.7975
4	Personal - Social	2.828	0.6930
5	Economic - financial	2.66	0.877

Discussion

Findings of the current study showed that lack of physical space for work, study, and research, unfamiliarity with the searching methods on the Internet, and lack of sufficient familiarity with research methods and statistics were the most prioritized barriers for research activities. In a study by Mahjoob et al., inadequate English language skills was the most important barrier for the faculty members, the long period between submission and publishing of Persian manuscripts, and the busy schedule with teaching, and treatment were the following important research barriers (8). Ghaffarzadeh et al. reported obstacles to research activities as follows: low research funds, inequality of teaching and research

hours, ineffectiveness of research findings on national level managers and policy makers, lack of professional research activities, not applying the research findings, lack of needs assessment for research purposes, and the long period for accepting research proposals (10). In two other studies, lack of time, not having research assistants, lack of funds for research, and being busy with teaching, not enough training in research methods, institutional review board hurdles, and community distrust of research were indicated as research barriers (11, 12). In addition, in a study conducted at Shiraz University of Medical Sciences, about 90% of the study participants identified financial obstacles as a research barrier (13). In a study by Noba-

har et al., a weakness in management was the most important obstacle for doing research (14). Differences in the results obtained could be due to different academic fields of the participants (medical vs. basic sciences).

In term of sets of barriers, Karimi et al. found that the most important research obstacles were organizational-administrative, equipment-facilities, and personal-social, respectively (15). In another study carried out in Tabriz, three most important research obstacles were found to be social-cultural, economic, and institutional barriers (4). Also, other studies reported lack of access to information resources as the most important research obstacle (9,16). Moreover, in another study, it was reported that external-organization barriers were the most effective research barrier (5). However, in the present study, equipment-facilities and specialized professional and organizational-administrative barriers were the most important sets of factors for the faculty members affecting their research activities. Our findings are in line with that reported by Alamdari et al, who reported lack of facilities and equipment as the most important barrier (17).

Supporting authors financially and spiritually, considering the priorities and research needs, honoring the social status of faculty members along with creating a calm and active environment for them as well as removing encumbering administrative rules and regulations can make faculty members eager to join in scientific research projects.

Conflict of interest

Authors declare no conflict of interests.

References

1. Asefzade S, Jahandideh S, Arefeh M. Relationship between human development index and the number of scientific articles of countries. JQUMS. 2013.
2. Iran: R&D (research and development) expenditure. Available from: http://www.theglobaleconomy.com/Iran/Research_and_development/
3. Hadavand S. Existing barriers to scientific development and elite immigration. Tadbir. 2004;154:26–32.
4. Hoseiny SA, Jahed H. The Viewpoint of faculty members on research obstacles at Tabriz University. Journal Of Science and Technology Policy; 2012;4(4):50-95.
5. Safavi Z. Barriers to research from the perspective of faculty members of knowledge and information science: a case study of Public Universities in Tehran. Collnet J Sci Inf Manag. Taylor & Francis; 2014;8(2):281–91.
6. Nobahar N, Nobahar M, Hamidi M. Investigation of Research Barriers and Challenges in University from the Perspective of Faculty Members of Kermanshah City. Int J Soc Sci. 2014;14(5):153–64.
7. Shariatmadari M, Mahdi S. Barriers to research productivity in Islamic Azad University: exploring faculty members perception. Indian J Sci Technol. 2012;5(5):2765–9.
8. Mahjub H, Kooraki M, Sheikh N. A Comparative Study of Factors Affecting Reluctance to Scientific Writing from The Viewpoints of Basic and Clinical Sciences Faculty Members in Hamedan University of Medical Sciences in 2006. Iran J Med Educ. 1998;8(1):158-163.
9. Sereshti M, Kazemian A, Daris F. Research barriers from the viewpoint of faculty members and employees of Shahrekord University of Medical Sciences. Educ Strateg Med Sci. 2010;3(2):51–7.
10. Ghaffarzadeh SH, Nazari H, Motazakker M. Obstacles To Research Activities: A Survey of Faculty Member's View at Urmia University of Medical Sciences in 2010. J Urmia Nurs Midwifery Fac. 2013;10(6).
11. Alghanim SA, Alhamali RM. Research productivity among faculty members at medical and health schools in Saudi Arabia. Prevalence, obstacles, and associated factors. Saudi Med J. 2011;32(12):1297–303. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/22159387>
12. Bakken S, Lantigua R a, Busacca L V, Bigger JT. Barriers, enablers, and incentives for research participation: a report from the Ambulatory Care Research Network (ACRN). J Am Board Fam Med. 2009;22(4):436–45. Available from: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2744643&tool=pmcentrez&rendertype=abstract>
13. Karimian Z, Sabbaghian Z, Salehi A, Sedghpour S. B. Obstacles to undertaking research and their effect on research output: a survey of faculty members' views at Shiraz University of Medical Sciences. East Mediterr Heal J. 2012;18(11):1143–50. Available from: <http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2012596864&lang=es&site=ehost-live>

14. Noubahar N, Ziaei S. Investigation of Research Barriers and Challenges in University from the Perspective of Faculty Members of Kermanshah City. *International Journal of Social Sciences*. 2016;4(2):135-42.
15. Karimi A, Mehdipour Y, Mohammadpour A, Pirozfar S. Barriers to Research: the Viewpoint of Faculty Members of Zahedan University of Medical Sciences. *Heal Inf Manag*. 2011;7(4):474.
16. Nejatizadeh A, Sarnayzadeh M, Kahnouji K, Ghasemi R, Nakhodaei N. Constraining Factors of Research among faculty members at Hormozgan University of Medical Sciences. *Electron physician*. Iran; 2016;8(5):2405-9.
17. Alamdari AK, Afshoun E. The view point of faculty members on research barriers at Yasuj Universities. *Armaghan Danesh*; 2003.