

Study on Research Anxiety Among Faculty Members of Isfahan University of Medical Sciences

Hasan Ashrafi-rizi¹, Fateme Zarmehr², Susan Bahrami³, Zahra Ghazavi-Khorasgani¹, Zahra Kazempour⁴, Leila Shahrzadi¹

Medical Library and Information Science Department, Health Information Technology Research Center, Isfahan University of Medical Sciences, Isfahan, Iran¹

Library and Information Science Department, Isfahan University, Isfahan, Iran²

Isfahan University of Medical Sciences, Isfahan, Iran³

Library and Information Science Department, Faculty of Media, Payame Noor University, Tehran, Iran⁴

Corresponding author: Leila Shahrzadi, Medical Library and Information Science Department, Health Information Technology Research Center, Isfahan University of Medical Sciences, Isfahan, Iran. Shahrzadi@mng.mui.ac.ir

ABSTRACT

Introduction: One of the most common anxieties in higher education is research anxiety. The purpose of this study was to determine the research anxiety level among the faculty members of Isfahan University of Medical Sciences (IUMS). **Methods:** this was survey- analytical study. The stratified random sampling method was used and a sample of 212 people was selected. For data collection was used a questionnaire. Data were analyzed with descriptive and analytical (T Test, ANOVA and LSD) statistics. **Findings:** The average anxiety research in IUMS was about 3.27 ± 0.536 . Among factors, highest scores in descending order are related to lack of timely payment of fees (3.97 ± 0.961), the long approval process of proposals and research project reporting (3.86 ± 0.99) and lack of research efficiency on the part of faculty (3.70 ± 1.00). The lowest scores were related to having insufficient funds to conduct research (2.67 ± 1.08), another's understanding of inability for researching (2.84 ± 1.192), and unfriendly behavior from journals and research center staffs (2.89 ± 0.802). **Conclusion:** The mean level of research anxiety among faculty members of IUMS was found higher than average. So it's essential that authorities pay greater attention to the factors that cause research anxiety.

Key words: Research Anxiety, Faculty Members, Isfahan University of Medical Sciences (IUMS).

1. INTRODUCTION

Organizations may not achieve high levels of innovation unless they engage in research activities. One way to prevent organizational deterioration and exhaustion involves development in research (1).

Universities have the responsibility towards production, transmission of knowledge and the delivery services to society. In order to perform these three duties, must conduct scientific research. Staffs working in research centers have the most important role in this field, and without their detailed assessment, review of research in this respect is not possible (2).

Though Staff, faculty members, and students assume responsibility for these three duties within higher education systems, faculty members play a vital role in this process because in addition to carrying out educational activities, they supervise student theses, complete research projects, and carry out independent research (3).

Recognition of research barriers can improve communication between researchers and users of research, facilitate the process of problem-solving, and contribute to the practical use

of research findings. Lack of attention to these issues may cause delays in research schedules and irreparable losses, reducing the success of research projects (2). Heretofore, considerable research has focused on research obstacles and difficulties from the perspective of faculty members. Research by Mehrdad, Salsali and Kazemzad (4), Zohoor and Fekri (5), Kamali (6), Sharifi (7), Salem-safi et al. (8), Sereshti, Kazemiyn and Edris (9), Karimian, Sabaghiyan and Sedghpour (10), Zare-Ahmad-Abadi, Mansouri and Taheri (11), Shavoon and Jahed (12), Caroll et al. (13), Fink, Thompson and Bonnes (14), Closs et al. (15), Carrion, Woods and Norman (16), Hayens and Haines (17) have investigated barriers with respect to five areas (social-cultural, economic, organizational, educational and personal barriers). These researches have shown that personal barriers have been one of the most important in faculty member experiences with the research process, and anxiety surrounding research was shown to be one the most influential personal barriers. Research anxiety is defined as feelings of fear and uncertainty associated with authentic scientific research and production (18). In other words, research anxiety includes any feeling of fear and distress during

the process of science production, select subject to publishing in scientific society and either after it, feedback from scientific society. Research anxiety can affect the quality and quantity of scientific production, influence researcher job satisfaction, personal life and physical or emotional health, contribute to burnout, and may cause high levels of anxiety and long-term physical, physiological and behavioral problems(19). Research is not a mechanical process that simply involves reaching the desired result using specific instructions. Research is instead a complicated process that is heavily influenced by mental and emotional challenges, and most personal factors influencing research are related to the researcher while social and cultural factors can also affect the research process. Research anxiety that impedes researchers during the research process should be taken into serious consideration, and efforts should be made towards its identification, prevention and treatment (20).

Relatively little research has been published in the field of anxiety that some of them are mentioned.

Onwuegbuzie found that teachers with high levels of anxiety tend to develop non-formal education classes and materials (21). Kracker and Wang found that the research process, confirmed Kuhlthau pattern and the affective and cognitive aspects in the study may influence (22). Higgins and Kotrlík did research entitled "Factors Affecting Anxiety research faculty". Results showed that personal factors, organizational factors and research skills play an essential role in anxiety research of faculty members (23).

Erfanmanesh and Didgah did research entitled "Anxiety Research and its Causes in researchers and university faculty; review of the literature". The results showed that factors such as personal characteristics of researchers and faculty members, their research skills and scientific and academic atmosphere can affect their research anxiety. On the other hand factors such as skills in research, skills in mathematics and statistics, computer, internet and library literacy, financial and organizational supports, skills of control anxiety and time management can decrease amount of research anxiety and increase quality and quantity of scientific production (18).

IUMS possesses a large number of research centers, faculty members, and researchers and holds an excellent ranking among universities in the field of science production. The university has provided appropriate grounds for research, but these strengths can sometimes instill pressure and research anxiety among faculty members. The present research will help to identify and prevent possible risk factors that lead to anxiety. Although many studies have been conducted on job-related stress, less focus has been placed on stress-induced production of science and research among faculty members. With increasing emphasis on the scientific production of faculty members, it is important to recognize and examine the causes of research anxiety, how this anxiety increases over the course of scientific and professional activity and how researchers may control these symptoms. Of course, it helps researchers, universities, and scientific policy makers to eliminate or reduce this problem and increase the scientific capacities of their countries. Accordingly, the aim of this study is to determine research anxiety levels among faculty members of IUMS in 2013 to identify the main sources of this problem and find strategies for reducing anxiety. Given that research in this area has not yet been carried out in Iran, this work may reveal avenues for further research.

2. METHODS

Research method was survey- analytical and practical. The population was all faculty members of IUMS (700 cases). The stratified random sampling method was used and a sample of 212 people was selected. In this survey a questionnaire was used for data collection. Validity of questionnaire was verified by librarian experts and Educational management professionals and reliability was achieved by using Cronbach's alpha and it was 0.922. The questionnaire consisted of 63 questions in 6 Dimensions (laws and policies, facilities, knowledge and skills of research methodology, feeling comfort about research center and special magazines, information literacy and emotional factors). Items are rated on a 5-point Likert-type scale ranging from (very low to very high). Data were analyzed with SPSS16 software using descriptive and analytical (T test, ANOVA and LSD) statistics.

3. RESULTS

The aim of this study is to determine level of research anxiety among faculty members of IUMS. 212 people responded to the questionnaire. Results showed that 56.1% of faculty members were women and 34.9% were men. Most of the faculty members were of assistant rank (42%) and a small number were associate professors and professors (12.3%). The most common form of employment within the sample was formal (34.4%), and smaller number occupying other forms of employment (12.3%). Most faculty members were employed by the Medical School (21.2%) and minimal number were related to the Dentistry School (7.1%).

Index Dimensions	Mean and Standard Deviation (SD)	Significant level	T
Laws and Policies	0.603±3.35	0.000	8.645
Facilities	0.662±3.47	0.000	10.428
Knowledge and research methodology skills	0.817±3.47	0.000	8.448
Feeling comfort about research center and scientific magazine	0.656±3.24	0.000	5.452
Information literacy(Library knowledge and skills)	0.989±3.31	0.000	4.569
Emotional factors	0.634±2.95	0.254	1.143
Total(research anxiety)	0.536±3.27	0.000	8.056

Table1. Mean and standard deviation of research anxiety of faculty members in IUMS in terms of dimensions

Excluding emotional factors, the results show that the level of T in all dimensions including laws and policies, facilities, knowledge of and skills in research methodology, feeling comfort about research centers and scientific magazines, and information literacy is greater than critical values of the table with a 0.05 error level. Hence means of all dimensions (such as laws and policies, facilities, knowledge of and skills in research methodology, feeling comfort about research centers and scientific magazines, and information literacy) are at higher than a moderate levels, and faculty members exhibited high research anxiety in these dimensions. On the other hand, emotional factors are smaller than critical values in the table with an error level of 0.05. Thus, emotional factors are below average and faculty members show less anxiety in this dimension. In total, the results in relation to the total mean research anxiety show

that T is more than the critical value of the table at the 0.05 error level. The level of research anxiety among faculty members is therefore higher than moderate.

The average anxiety research in IUMS was about 3.27 ± 0.536 . The findings show that sources of research anxiety generating the highest scores in descending order are related to lack of timely payment of fees (3.97 ± 0.961), the long approval process of proposals and research project reporting (3.86 ± 0.99) and lack of research efficiency on the part of faculty (3.70 ± 1.00). The lowest scores were related to having insufficient funds to conduct research (2.67 ± 1.08), another's understanding of inability for researching (2.84 ± 1.192), and unfriendly behavior from journals and research center staffs (2.89 ± 0.802). Furthermore, the results show that the mean anxiety towards all of the research areas (laws and policies, facilities, knowledge of and skills in research methodology, feeling comfort about research centers and specialized magazines, information literacy, and emotional factors) indicates no significant difference across demographic characteristics (gender, type of employment, and individual ability to do one's job). However, there are significant differences in terms of academic rank mean and facilities. LSD post hoc tests presented in Table 2 show the differences between groups.

Scientific rank	Differences in Mean	Significant Level
Lecturer → Associate professor	0.625	0.008
Lecturer → Full Professor	0.594	0.001
Assistant → Associate professor	0.329	0.001
Assistant → Full Professor	0.285	0.001
Associate professor → Full Professor	0.118	0.001

Table 2. Paired test scores mean in terms of academic rank's mean and facilities

The results listed in Table 2 show significant differences between the mean research anxiety levels of faculty members and associate professors, between assistant professors and lecturer rank, between full professors and lecturer rank, and between assistant professors and assistant associate rank.

4. DISCUSSION

In this study, researchers referenced texts related to barriers during research activity, library anxiety, anxiety, and limited number of materials directly focused on research anxiety. The study considered the opinions of experts around the world as well as focusing on domestic Iranian issues. The reliability and validity of the tool has been confirmed by librarian experts and educational management professionals.

However, the main limitation of this study was the lack of existing resources on this topic. Hence, the aim of this study was to determine the level of research anxiety among faculty members of IUMS. The findings show that more than half of the faculty members were women. Most of the faculty members were of assistant rank and a small number were associate professors and professors. The most common form of employment within the sample was formal, with a smaller number occupying other forms of employment. Most faculty members were employed by the Medical School and minimal number were related to the Dentistry School. Findings on the level of research anxiety among faculty members showed that the mean level is above average. The highest mean levels in descending order are the

lack of timely payment of fees, the lengthy process of proposal approval and final reporting of research projects, and lacking efficiency of research carried out by faculty members. These results are partially aligned with the work of Anbari, Jamshidi fard and Setare (24), Yaghoobi (25). The research is also perfectly aligned with the work of Higgins and Kotrlik (23) and Kawakami (26) these researchers considered that factors as one of the institutional factors contributing to research anxiety.

The factors demonstrating lowest averages respectively were related to insufficient financial resources to conduct research, another's understand of inability for researching, and the unfriendly manner of magazine and research center staffs, results that are partially aligned with Closs (15) and Solomon (27). The mean research anxiety found with regards to the studied aspects showed that the means of facilities and knowledge of and skill in research methodology have been higher than other aspects (laws and policies, feeling comfort about the research center and specialist magazine, information literacy and emotional factors) and these findings are aligned with the research of Carrion, Woods and Norman (16), Caroll et al. (12) and Closs et al. (15). In addition, the lowest mean value of research anxiety was related to the emotional factor, and Kracker and Wang stated that emotional factors are very influential (22). However, it seems that faculty members of IUMS experience lower levels of unhealthy competition, feelings of inadequacy surrounding research, biases in judgment, and mistrust in the validity of others' judgments and rather demonstrate an interest in doing research. Furthermore, the results show that the mean level of research anxiety aspects (laws and policies, facilities, knowledge of and skills in research methodology, feeling comfort about research centers and specialized magazines, information literacy, and emotional factors) shows no significant variation across the studied demographic characteristics (gender, type of employment, and faculty of employment). However, there are significant differences between the views of faculty members across academic ranks. There are significant differences between the research anxiety mean values of faculty members with associate professor rank and lecturer rank, between professors of assistant and lecturer rank and between assistant and associate professors. On the other hand, faculty members of higher ranking demonstrate less research anxiety about facilities. Perhaps the main reason for this result is that faculty members among the lower academic ranks have less access to facilities, which would lead to research anxiety.

5. CONCLUSION

Nowadays, faculty members of universities encounter a variety stresses around conducting research and these pressures can cause research anxiety. This anxiety can affect an individual's job performance and even family responsibilities. It especially affects the quality and quantity of scientific literature, can cause disruptions to teaching, burnout and disability and may even damage health. In this study, the mean level of research anxiety among faculty members of IUMS was found to be higher than average, and this can cause negative effects on the faculty members' performance in a number of dimensions. It is essential that authorities pay greater attention to the factors that cause research anxiety (in this study, external factors play greater role).

CONFLICT OF INTEREST: NONE DECLARED.

REFERENCES

1. Tasdighi M A. Barriers to research and research culture in higher education. *Cultural Engineering magazine*. 2009; 4(35: 36): 37-47.
2. Alamdari AK, Afshoon E. Obstacles to conducting research activities from the viewpoint of faculty members in Yasuj. *Armaghan Danesh magazine*. 2010; 8(29): 27-34.
3. Alayi M, Azami A. Study of Attitudes about research in Ilam medical university. *Scientific magazine of Ilam Medical University*. 2004; 12(42-43): 39-44.
4. Mehrdad N, Salsali M, Kazemnejad A. Barriers and facilitator's factors to using research in clinical practice. *Scientific magazine of Gorgan Medical University*. 2007; 9(1): 63-72.
5. Zohoor A, Fekri A. Research barriers from the perspective of faculty members of Iran Medical University. *Payesh Journal*. 2002; 2(2): 113-120.
6. Kamali M. Participatory research: approaches, experiences and suggestions. *Progress and village magazine*. 2006; 9(4): 217-247.
7. Sharifi S. Attitudes toward research and the barriers that nurses working in Kerman hospitals, *Irna Nurses Magazine*. 2010; 22(59): 51-59.
8. Salem-safi R, Ashraf-Rezayi N, Saadatiyan R, Moshiri Z, Sheikhi N, Baniadam A. study of faculty members view about research barriers in Oromiye Medical University 2009; 7(3): 142-151.
9. Sereshti M, Kazemiyan A, Edris F. Barriers of research form perspective of professors and Shahrekord Medical university staff. *Research Strategy Magazine*. 2010; 3(2): 51- 57.
10. Karimian Z, Sabaghiyan Z, SedghPour S. Barriers and challenges of research and knowledge production in universities of medical sciences. *Association of higher education magazine*. 2011; 3(4): 35-63.
11. Zare-Ahmad-abadi H, Mansouri H, Taheri M. Study of research barriers in universities and research centers by using TOPSIS Technique. *Management in Islamic University*. 2009; 13(4): 113-138.
12. Shavoon A, Jahed H. Identifying Barriers to research activities in terms of faculty members of Tabriz. *Science and Technology Policy*. 2012; 4(4): 49-64.
13. Carroll DL, Greenwood R, Lynch KE, Sullivan JK, Ready CH, Fitzmaurice JB. Barriers and facilitators to the utilization of nursing research. *Clinical Nurse Specialist*. 1997; 11(5): 207-212.
14. Fink R, Thompson CJ, Bonnes D. Overcoming barriers and promoting the use of research in practice. *Journal of nursing administration*. 2005; 35(3): 121-129.
15. Closs S, Baum G, Bryar R, Griffiths J, Knight S. Barriers to research implementation in two Yorkshire hospitals. *Clinical Effectiveness in Nursing*. 2000; 4(1): 3-10.
16. Carrion M, Woods P, Norman I. Barriers to research utilisation among forensic mental health nurses. *International Journal of Nursing Studies*. 2004; 41(6): 613-619.
17. Haynes B, Haines A. Barriers and bridges to evidence based clinical practice. *BMJ*. 1998; 317(7153): 273-276.
18. Erfanmanesh M, Didgah f. Anxiety Research and its Causes in researchers and faculty members: A review of the literature. *National Library research and organized information*. 2009; 23(89): 58-72.
19. Davis-Roberts G. Sources of Stress, Levels of Stress, and Coping Strategies of Faculty and Staff at Northern Caribbean University: Andrews University, School of Education, 2006.
20. Mansouriyani Y. Is research a mechanical process?. *Lisna news base*. 2012; 84. Available at : <http://www.lisna.ir/Note/9170-%D8%A2%DB%8C%D8%A7->
21. Onwuegbuzie AJ. The teacher as researcher: The relationship between research anxiety and learning style in a research methodology course. *College Student Journal*. 1997; 31(4): 496-506.
22. Kracker J, Wang P. Research anxiety and students' perceptions of research: An experiment. Part II. Content analysis of their writings on two experiences. *Journal of the American Society for Information Science and Technology*. 2002; 53(4): 295-307.
23. Higgins CC, Kotrlik Joe W. Factors Associated with Research Anxiety of University Human Resource Education Faculty. *Career and Technical Education Research*. 2006; 31(3): 175-199.
24. Anbari Z, Jamshidi fard A, Setare M. Perspective of Arak faculty members about problems in carrying out research activities. *Education in Iran Magazine*. 2005; 5(2): 196-199.
25. Yaghoobi T. Study of barriers and difficulties in doing research from the perspective of faculty members of Mazandaran. *Mazandaran University of Medical Sciences*. 2000: 186.
26. Kawakami, R. Source of stress among faculty of higher education [dissertation]. California: San Jose State University, 2006.
27. Solomon SS, Tom SC, Pichert J, Wasserman D, Powers AC. Impact of medical student research in the development of physician-scientists. *Journal of investigative medicine: the official publication of the American Federation for Clinical Research*. 2003; 51(3): 149-156.