

## Scientific Authority in Health Sciences; Challenges and Solutions

## المرجعية العلمية، المشاكل والحلول في مجال الصحة

Maryam Eslami<sup>1,2,3</sup>; Seyed Hasan Moghadamneya<sup>4</sup>; Mohammad Reza Eslami<sup>4,5</sup>; Mohammad Hossein Ayati<sup>3,6,7</sup>; Mohammad Naser Shafiee Jafarabadi<sup>7</sup>

<sup>1</sup>Department of Genetics, Tehran Medical Sciences Branch, Islamic Azad University, Tehran, IRAN

<sup>2</sup>Applied Biotechnology Research Center, Tehran Medical Sciences Branch, Islamic Azad University, Tehran, IRAN

<sup>3</sup>Lifestyle Research Center, Tehran Medical Sciences Branch, Islamic Azad University, Tehran, IRAN

<sup>4</sup>Department of Civil Engineering, Islamic Azad University, Science and Research Branch, Tehran, IRAN

<sup>5</sup>Department of Civil Engineering, Michigan State University, East Lansing, USA

<sup>6</sup>School of Traditional Medicine, Tehran University of Medical Sciences, Tehran, IRAN

<sup>7</sup>English Department, Faculty of Medicine, Mashhad university of Medical Sciences, Mashhad, IRAN

\*No. 18-3, Hoor Alley Blvd Tehran, Iran

Tel: +98-21-66978187  
Fax: +98-21-66418404  
Email: mh-ayati@tums.ac.ir  
Received: August 1, 2015  
Accepted: November 12, 2015

**Background:** The perspective of scientific authority in Iran, by the year 1435, requires a growing strong generation with a sense of self-esteem, academic endeavor and responsible in today's competitive world. Strategic planning of human resources and education of youth with talent, commitment, vitality and hope requires a national will along with adequate resources.

The aim of this study was to gain a deep understanding of the challenges and solutions for achieving scientific authority in Iran by the next fifty years.

**Methods:** In this narrative review, the following items were surveyed: The strategies for scientific authority stated by our Supreme Leader (since Mordad 85 to 94), The study of governmental documents such as the perspective by the year 1404 (since 77 to 82.), a comprehensive scientific map for health system (since 89 to 93.), the general policy of "science and technology" (since 86 to 87), and the comments given by health authorities, faculty members and students.

**Results:** access to the scientific authority requires a national commitment and the development of human resources proportional to the aims. The pathology of health activities requires a good understanding of the strengths, weaknesses and threats to define priorities and establishing structures for our goals. In this study the challenges were investigated and the possible solutions have been proposed.

**Conclusions:** Spanning foresight in the field of health in Iran and the world demands the cooperation of our professors with the young innovative scientists. Standardization not only promotes the quality of research projects but also increases the exploitative activities.

**Keywords:** Authority; Science; Health; Research

**المقدمه:** إن تحقق أثر المرجعية العلمية في إيران حتى عام ١٤٣٥ هـ.ش يحتاج إلى تشيئة جيل قدير ونشط ولديه الشعور بالثقة في النفس والمجاهدة العلمية وعندة قدرة إرساء وحفظه في هذا الزمن التنافسي. إن الإدارة الاستراتيجية للثروة البشرية وتشيئة شباب نواستعداد وتعرض ونشاط وطني وأمل يستلزم عزم وطني وتلازم مؤلفات الطاقة. إن الهدف من هذه الدراسة هو المعرفة العميقة للمشاكل وتبيين الحلول في مجال نيل المرجعية العلمية في إيران في الخمسين سنة القادمة.

**الأسلوب:** في هذا الـ Narrative review تم الإستفادة من إرشادات قائد الأمة في مجال المرجعية العلمية (من شهر مرداد ٨٥ حتى ٩٤ هـ.ش). متابعة المستندات العليا للنظام من جملتهم سند رقيه إيران ١٤٠٤ (من عام ٧٧ حتى ٨٢ هـ.ش). الخريطة العلمية الجامعة لنظام الصحة (من عام ٨٩ حتى ٩٣ هـ.ش). السياسات العامة للعلم و إنتاج التقنية (من عام ٨٦ حتى ٨٧ هـ.ش). وإضا متابعة آراء و بيانات مسؤولين مجال الصحة .الاساتذة والطلاب.

**النتائج:** إن الحصول على المرجعية العلمية يحتاج إلى عزم وطني وتلازم مؤلفات الطاقة في تشيئة الثروة البشرية المتناسبة مع الهدف. إن معرفة عيوب مجال فعاليات الصحة يحتاج إلى معرفة دقيقة لأنواع الضعف والتبريدت واستقصاء نقاط القوة والفرص لاجل تبيين الأولويات وإيجاد هيكلية متناسبة مع الهدف. في هذا البحث قدمنا الحلول المتاحة من خلال متابعة المشاكل الموجودة.

**الاستنتاج:** إن رصد مستقبل العلم في مجال الصحة في إيران والعالم يحتاج إلى استاذة وتجربة وشباب زوهارف بعيدا عن الحركات الانفصالية والجزئية. جعل المعايير للفعاليات ترفع من مستوى الكيفية في البحوث. إن التعامل الفعال والبؤثر في مجال العلم وتوليد التقنية ومه التعامل والتبادل الدولي يساعدا في رفع مستوى القيادة والبحث في المنطقة والعالم من خلال توليد النظريات العلمية والسندرة.

**كلمات المفتاح:** المرجعية، العلم، الصحة، البحث.

## مرجعیت علمی، چالش‌ها و راهکارها در حوزه سلامت

## صحت عامه کے شعبے میں علمی مرکزیت، چیلنجز اور طریقہ ہائے کار۔

**مقدمه:** تحقق چشم انداز مرجعیت علمی در ایران تا سال ١٤٣٥ هجری شمسی نیازمند پرورش نسلی است توانمند و بالنده که با احساس خودباوری و مجاهدت علمی، پایه‌گذار و عهده‌دار حفظ آن در دنیای رقابتی امروز باشد. برنامه‌ریزی استراتژیک منابع انسانی و پرورش جوانان سرشار از استعداد، تعهد و نشاط با عرق ملی و امید نیازمند عزم ملی با هم‌راستایی مولفه‌های قدرت است. هدف از مطالعه ی حاضر شناخت عمیق چالش‌ها و تبیین راهکارهایی در خصوص نيل به مرجعیت علمی ایران تا پنجاه سال آینده می باشد. **روش:** در این Narrative review، از راهبردهای مرجعیت علمی بیانات مقام معظم رهبری (از مرداد ٨٥ تا ٩٤ هـ ش)، بررسی اسناد بالادستی نظام از جمله سند چشم انداز ایران ١٤٠٤ (از سال ٧٧ تا ٨٢ هـ ش)، نقشه جامع علمی نظام سلامت (از سال ٨٩ تا ٩٣ هـ ش)، سیاست‌های کلی "علم و فن آوری" (از سال ٨٦ تا ٨٧ هـ ش) و همچنین بررسی نظرات و بیانات مسئولین حوزه سلامت، اساتید و دانشجویان با توجه به منابع در دسترس صورت گرفته است.

**یافته‌ها:** دست‌یابی به مرجعیت علمی، نیازمند عزم ملی با هم‌راستایی مولفه‌های قدرت در پرورش منابع انسانی متناسب با هدف است. آسیب‌شناسی حوزه‌ی فعالیت‌های سلامت نیازمند شناخت دقیق ضعف‌ها و تهدیدها و یافتن قوت‌ها و فرصت‌ها به منظور تبیین اولویت‌ها و ایجاد ساختارهای متناسب با هدف می باشد. در این تحقیق با بررسی چالش‌های موجود، راهکارهای قابل دسترسی پیشنهاد گردیده است.

**نتیجه‌گیری:** رصد و پایش آینده‌نگاری علم در حوزه سلامت در ایران و جهان نیازمند برخورداری از استادان پیش‌کسوت و جوانان دانشمند و با انگیزه، با پرهیز از حرکت‌های بخشی و جزیره‌ای می‌باشد. استانداردسازی فعالیت‌ها موجب ارتقاء کیفیت طرح‌های تحقیقاتی و بهره‌گیری و حمایت از آنان می‌گردد. تعامل فعال و اثرگذار در حوزه‌ی علم و فناوری همراه با تعاملات و تبادلات بین‌المللی ما را قادر می‌سازد تا جایگاه هدایت و پژوهش خود را در منطقه و دنیا با تولید نظرات علمی و قابل استناد ارتقاء بخشیم.

**واژه های کلیدی:** مرجعیت، علم، سلامت، پژوهش

**بیک گراوند:** دوزآر چپین تک صحت عامه کے شعبے میں علمی مرکزیت حاصل کرنے کے لئے توانا اور ترقی یافتہ نسل کی پرورش کرنی ہوگی جو اپنی خود اعتمادی اور علمی جہاد سے علمی مرکزیت کی بانی اور اسکو برقرار رکھنے والی ہو۔ انسانی وسائل میں استراتیجیک منصوبہ بندی اور باصلاحیت، ذمہ دار دین دار اور قومی جذبات کے حامل جوانوں کی ٹریننگ کے لئے قومی عزم اور حکومت کی حمایت کی ضرورت ہے۔

اس تحقیق کا هدف چیلنجوں کو گہرائی سے سمجھنا، اور انہیں حل کرنے کے لئے طریقہ ہائے کار پیش کرنا ہے تا کہ اگلے پچاس برسوں میں علمی مرکزیت حاصل کی جاسکے۔

**روش:** اس نرٹیو ریویو میں علمی مرکزیت کے حصول کے بارے میں رہبرانقلاب اسلامی کے بیانات، ایران کے ترقیاتی منصوبوں منجملہ بیس سالہ ترقیاتی منصوبے، صحت عامہ کے جامع نقشہ راہ اور سائنس و تکنالوجی کی طویل مدت پالیسیوں کا جائزہ لیا گیا ہے اور اسکے علاوہ اس ضمن میں صحت عامہ کے شعبے کے عہدیداروں، اساتذہ اور طلباء کے نظریات کو بھی مد نظر رکھا گیا ہے۔

**نتیجے:** علمی مرکزیت حاصل کرنے کے لئے قومی عزم اور حکومت کی حمایت کی ضرورت ہے۔ صحت عامہ کے شعبے میں مسائل اور چیلنجوں کو سمجھنے کے لئے کمزوریوں، خطروں اور مثبت نقاط کو سمجھنے کی ضرورت ہے۔ اسکے علاوہ ترجیحات کومعین کرنے اور اہداف کے تناسب سے انفراسٹرکچر بنانے کی ضرورت ہے۔ اس تحقیق میں موجودہ چیلنجوں کا جائزہ لے کر ممکنہ طریقہ ہائے کار پیش کئے گئے ہیں۔

**سفاارش:** ایران اور عالمی سطح پر صحت عامہ کے شعبے میں سائنس کے مستقبل کے لئے منصوبہ بندی کرنے کی غرض سے تجزیہ کار اساتذہ اور دانشور جوانوں کی ضرورت ہے۔ چھوٹی سطح پر منصوبہ بندی سے پرہیز کرنا چاہیے۔ سائنسی سرگرمیوں کا معیار معین کرکے تحقیقاتی منصوبوں کو اعلیٰ پائے کا بنایا جاسکتا ہے۔

**کلیدی الفاظ:** علمی مرکزیت، صحت عامہ، تحقیقات.

## INTRODUCTION

Access to the scientific authority in the field of health by the year 1435 based on the outlook of scientific authority stated by our Supreme Leader requires the development of human resources. Besides, our scientists should be familiar with science and technology, utilize the Islamic teachings with a spirit of scientific endeavor, and rely on their rich talent. Of course, careful strategic planning with a national will is also necessary.

The exact pathology of health will enable us to identify strengths and weaknesses. By knowing the weaknesses and threats in the field of education, research, planning, implementation and monitoring of strengths, we can improve our knowledge. We can make a good use of our human resources and be productive on the international stages.

Appreciating and utilizing the "knowledge and expertise" of our innovative professors with accepted international articles can create opportunities for the young scientists to become familiar with modern medical sciences. Innovation in scientific authority provides an opportunity for our scientists to be the pioneer of health in the world.

### History

A survey on the Supreme Leader's statements indicates that he, more than others, wants to prepare a comprehensive scientific map and also stresses on its necessity in Iran.

Our great Leader, in Mordad 1385, emphasized on providing a comprehensive scientific map in his speech for the university presidents. To achieve the objectives of the 20-year perspective, operational strategies and scheduled planning are needed (1).

It is stated that, by 1404, Iran will be an authority and pioneer on the stage of science and technology. This can be obtained by believing in God's wishes, reviving Islamic-Iranian culture, improving justice and employing the scientists who are pious, specialist, creative and innovative (2).

Our supreme leader, in his speech to the elite on 12/06/86, said:

After fifty years, our country should be at the highest level of science and technology and become an authority so that anyone who wishes to know the sciences has to learn Persian (3).

In Shahrivar 89, our supreme leader emphasized on an administrative plan, updating comprehensive scientific map, adjusting the five-year development plan and supervising exactly the performance (4). At a meeting with young elites on 14 / 7/89 he stated:

"Before, we had some progresses and investment based on a specific person or group, but now we need to promote our sciences for which all the people should take part. We must distribute an endless chain of all disciplines (5).

Considering our comprehensive scientific map of health, our knowledge should be responsive to different social health problems.

Our scientists should be innovative and participate in international meetings (6).

In health perspective of 1404, influential participation on international stages has been greatly emphasized. This can be

accomplished by standardizing our scientific activities, promoting quality and achieving the goals. We should have international cooperation while keeping our honor and Islamic thoughts.

To be an authority, we must promote our medical knowledge to the highest level. Then, we can offer reliable services in the fields of health and medicine (7).

Our supreme Leader, on 29/6/93, stated that Iran is going to become the center of scientific articles (8).

To reach the peak of science in the field of health, the pathology of existing conditions as well as identifying the strengths and weaknesses should be performed so that we can eliminate the weaknesses and support the strengths.

## METHODS

In this narrative review, the strategies for scientific authority stated by our Supreme Leader are investigated through literature review and note taking from the library references (since Mordad 85 to 94), The governmental documents such as the perspective by the year 1404 (since 77 to 82.), a comprehensive scientific map for health system (since 89 to 93.), the general policy of "science and technology" (since 86 to 87), and the comments given by health authorities, faculty members and students have been surveyed.

## RESULTS

After surveying the governmental documents and the perspective of scientific comprehensive map for health and also studying the different articles, the following items can be considered:

### Challenges

- 1) Progresses to some degree in certain sections and fields
- 2) Progresses based on individuals comparing with the accelerated growth of science
- 3) Submitting repeated subjects in theses and articles
- 4) Unfinished research projects without priority and lack of monitoring in scientific products
- 5) Poor quality of researches
- 6) Lack of full time specialists in research and educational centers
- 7) Lack of access to needed technologies in the field of health care systems in health centers and universities
- 8) Financial problems in gaining the governmental approved resources for researches
- 9) Lack of reliable data in the fields of health and statistics
- 10) Lack of scientific diplomacy and cooperation with developed countries
- 11) Difficult access to the latest resources and information in the field of health
- 12) The economic problems for researches and professors so that they have to work in different sections to earn money
- 13) Lack of team-work spirit, creativity, innovation and exploitation
- 14) Lack of close relationship between researchers and population in the field of health
- 15) Lack of employing the youth for executive management positions

- 16) Weakness of the rules and administrative procedures as well as difficulties in their practice
- 17) Lack of cooperation with cultural centers, universities, high schools and Islamic centers
- 18) Bureaucracy obstacles in educational, research and academic management
- 19) Lack of coordination between basic sciences and clinical Practices
- 20) Lack of promoting Islamic-Iranian culture in the field of health
- 21) Lack of systematic education and training of human resources in the field of health in order to train Iranian Islamic style in nutrition, health and disease prevention
- 22) Obstacles in employing the elites and prevention of brain drain
- 23) Bureaucracy obstacles for employing the young elites
- 24) Lack of investment, especially in education, clinical aspects, and research and health promotion
- 16) Informing the community on the addiction and how to deal with it
- 17) Food safety
- 18) Giving priority to the sciences and technology responsive to the needs of public health
- 19) Effective participation in international stages with dignity and interest
- 20) Evolving the innovation cycle
- 21) Emphasis on science and its reproduction
- 22) Appreciating the development, research and theories
- 23) Designing and developing Islamic-Iranian model of health and trying to create Islamic lifestyle in the field of health
- 24) Utilization of the latest data in the field of medicine
- 25) Effective use of national specialized capacities
- 26) Giant strides for standardization of activities and qualification of scientific products
- 27) Offering innovative health services and the creating wealth through exporting health products

#### Solutions

Establishing scheduled and regular programs during the 50-year perspective for appropriate development with adequate credits for scientific authority demands:

- 1) Determining the exact current situation and the ideal situation with a horizon of long-term, medium-term and short-term goals for higher education
- 2) Exact information about the needs for international collaboration and addressing the priorities
- 3) Supporting the discussions belonging to theoretical education and research
- 4) Reviewing the structures and enhancing the efficiency and effectiveness of the scientific institutions, research and technology
- 5) Establishing opportunities in the fields of stem cells ,molecular medicine, medicinal plants, Nanobiotechnology and new sciences
- 6) Developing human resources and increasing their productivity
- 7) Effective integration of education, training and skills with health researches
- 8) Conducting and supporting non-state investment in education, research and treatment
- 9) Directing and employing the elite in different sections by facilitating the rules
- 10) Relying on capabilities and benefits of our country in accord with the geographical locations
- 11) The importance of disease prevention in our researches and education with detailed knowledge of local conditions and problems
- 12) Paying attention to new drugs, information management, traditional medicine, medical equipment, cellular and molecular medicine, gene therapy, biological and technological products
- 13) Relationship between basic sciences with clinical practices
- 14) Determining the exact current situation and the ideal situation with a horizon of long-term, medium-term and short-term goals
- 15) Considering the interdisciplinary sciences between basic sciences and clinical sciences
- 28) Active participation in education and research in Islamic world and other developed countries.
- 29) Utilizing full-time faculties regarding their welfare and living conditions
- 30) Organizing governmental and non-governmental scientific data and accessibility to them
- 31) Focusing on the research in post- graduate programs and supporting the scientific publications
- 32) Considering the self-esteem, team work, creativity and quality promotion in educational settings based on Islamic teachings (10).
- 33) Holding specialized and advanced courses in short-term programs
- 34) Developing research structures and employing the interested students in this field.
- 35) Allocating of funds to the fields with priority (11).
- 36) Creating new schools for new disciplines and healthy lifestyle by using Islamic teachings
- 37) Increasing the number of research networks, particularly in the field of Medical Sciences
- 38) Increasing the quality of products, scientific and theoretical studies
- 39) Considering the number of medical researchers per million in community based on gender, governmental and nongovernmental
- 40) Approving new disciplines based on health priorities
- 41) Utilizing and supporting the completed research projects
- 42) Great emphasis on innovation
- 43) Avoiding isolated activities in research and educational centers
- 44) Balanced development in all the fields with priority allowing the regional conditions and increasing the scientific products
- 45) Emphasis on appropriate administrative programs, regular monitoring with careful supervision
- 46) Observing, monitoring and anticipating the health conditions not only in Iran but also all over the world
- 47) Directing the activities in the field of education, research, technology and innovation toward the path

which leads to solving problems and finally reach the authority of sciences

- 48) Educating and empowering human sources with emphasis on training pious, self-esteem, creative, innovative, capable and motivated scientists whose thoughts are based on Islamic values and people's needs
- 49) Employing young elites specialized in the fields of health, education and management as well as utilizing the advices of experienced professors
- 50) Active collaboration with other countries, particularly countries in the region and the Islamic world .to promote science diplomacy
- 51) Emphasis on empowering the private sector in health systems
- 52) Emphasis on organizing research management system
- 53) Gaining the experiences of developed countries
- 54) Obtaining the scientific authority in postgraduate courses
- 55) Regular efforts in conducting research activities in the region

## DISCUSSION

As we know the mission of ministry of health is concerned with prevention, treatment, education and researches in order to achieve its objectives by 1404. Also, this ministry is expected to gain a high rank in international medical sciences. Our country should not only be creative and productive in different sciences but should also be an authority in medical education.

The priorities, challenges, and problems should be considered in accord with the local obligations. Furthermore, for a healthy Islamic lifestyle, scheduled programs, pious scientists, governmental documents and standpoints for comprehensive scientific map of health are essential. We should plan to promote health education in the fields of nutrition and disease prevention and learn the teachings taken from the Holy Quran as well as determine the weaknesses and strengths in order to offer a proper model of Islamic and healthy lifestyle.

The communicable diseases should be prevented and to have a healthy community, necessary measures should be done in preventive medicine and food safety.

Up-to-date researches are necessary for the treatment of acutely-ill patients in clinical settings and consequently our community will gain health and relief. We can be a representative of health education and improve the tourism medicine. Academic educations have to be used in health systems and precise planning should be designed for establishing new courses with priority.

The professors familiar with Islamic healthy lifestyle can help us in the above procedures. New sciences, modern technology and interdisciplinary sciences are the cornerstones for both medical education and medical students. This will result in having specialists in different fields. We can satisfy the needs of our country and the other countries through applying skills and creating innovations.

The research activities and international collaborations should be appreciated in order to attract foreign students. By eliminating the bureaucracy obstacles, health systems can employ the young elites and support them. In addition, social facilities should be provided for faculty members to do their best in research activities. Unjustified claims and unethical actions should not be used in our scientific articles. In order to gain the authority of sciences, we should improve the human-based point of view because human resources are the cornerstones for innovation, technology and research development.

In order to satisfy the needs of social health and understand the priorities in health systems, the following items are important:

- \* Developing and equipping the research and technology institutions
- \* Being effectively Present in international stages
- \* Continuing the innovation processes
- \* Developing the sources and being clear and responsive
- \* Revolutionizing the health education system and facilitating the bureaucracy regulations
- \* Regarding universities as bases of sciences
- \* Converting the scientific discourse into the social dominant one
- \* Making policy for health economics
- \* Promoting health and its infrastructures
- \* Paying attention to basic sciences and investing in the fields of drug production, medical equipment, traditional medicine, molecular medicine, stem cells and nanotechnology
- \* Offering health services with emphasis on the teamwork and family physician
- \* Paying attention to the elites and managing the human resources

God will help us to gain the authority of sciences and, of course, faithful human resources and proper planning are needed. Research institutions, lab equipment and management systems should be improved. The medium and long-term programs must be administered and monitored. Also, permanent and continuous efforts of our scientists will orient our country to the rank of scientific authority in the field of health.

## REFERENCES

1. The supreme leader's speech in meeting with the heads of universities in July 2005. Available from: URL; <http://farsi.khamenei.ir/news-content?id=4630#a2> [In Persian].
2. Scientific vision of Iran in 1404 Persian year. 14 Nov 2003. [In Persian].
3. The supreme leader's speech in meeting with the elites. 3 Sep 2006. Available from: URL; <http://www.nahadrey.ir/index.aspx?siteid=36&fkeyid=&siteid=36&pageid=7589> [In Persian].
4. The supreme leader's speech in Sep 2010. Available from: URL; <http://farsi.khamenei.ir/speech-content?id=10129> [In Persian].
5. The supreme leader's meeting with the elites. 6 Oct 2010. Available from: URL; <http://farsi.khamenei.ir/speech-content?id=10233> [In Persian].
6. Comprehensive Scientific Plan of Health (approved by Professional Committee of Comprehensive Scientific Plan. Date: 18 Dec 2007). February 2011. [In Persian].
7. General policies of science and technology by Supreme Leader 19 May 2014. Available from: URL; <http://farsi.khamenei.ir/news-content?id=27599> [In Persian].

8. Einollahi B. Scientific referee. Available from: URL; <http://www.tasnimnews.com/Home/Single/778471> [In Persian].
9. Ghomi H, Zadegan A, Alizadeh V, Khodayari MT, Hemati MA. Assessment of availability factors to scientific referee among Tabriz staffs of Tabriz University of Medical Sciences. Center of documents of Iranian Islamic Revolution. October 2014. [In Persian].
10. Ghazizadeh Hashemi H. The second conference of scientific referee in Baghiatollah University, 28 May 2015. Available from: URL; <http://www.bmsu.ac.ir/Services/News/View.aspx?Old=5343> [In Persian].
11. Rastegarfar M. The approaches of scientific referee in Imam Khamenei word. Center of documents of Iranian Islamic Revolution. October 2014, Tehran. Available from: URL; <http://www.irdc.ir/fa/content/50840/default.aspx> [In Persian].
12. Larijani B. The second conference of scientific referee in Baghiatollah University, 28 May 2015. Available from: URL; <http://farsnews.com/newstext.php?nn=13940307000499> [In Persian].
13. Azizi F. The second conference of scientific referee in Baghiatollah University, 28 May 2015, Tehran. Available from: URL; <http://farsnews.com/newstext.php?nn=13940307000499> [In Persian].
14. Quran Majid. Makarem Shirazi explanation. The second volume. [In Persian].
15. Mohammad Moein Dictionary. 6 volumes. Tehran: Amir Kabir publication, 2011. [In Persian].
16. Dehkoda Dictionary. 16 volumes. Tehran: Tehran University publication.
17. Wikipedia. Available from: URL; <https://fa.wikipedia.org/wiki/%D8%B9%D9%84%D9%85>