ORIGINAL ARTICLE

Explaining the achievement of scientific authority in Birjand University of Medical Sciences

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Background: Advancement in science and technology is one of the axioms of the general policies stated by the Supreme Leader of the Islamic Republic of Iran. Along with the Development and Innovation Program in Medical Education, Birjand University of Medical Sciences, as one of the country's higher education institutes in healthcare, has identified its peculiar potentials for the position of scientific authority in the 9th macro-region.

Methods: This descriptive study was based on the scientific hegemony model to collect data. The scientific activity of the faculty members was determined based on the number of published articles, citations, and the faculties' H-index. Subsequently, the faculty members of Birjand University of Medical Sciences with an H-index of 10 or higher in their respective specialty were compared with their counterparts on both national and macro-regional scales in terms of the H-index. The source of data extraction was the Ministry of Health scientometrics system available on the website isid.research.ac.ir.

Results: At the macro regional level, Birjand University of Medical Sciences has attained the highest H-index in the five specialties of clinical toxicology, infectious diseases, molecular medicine, epidemiology, and parasitology. On the national scale, the university is ranked among the 8 to 9-percent top universities in the fields of clinical toxicology and poisoning, infectious diseases, and molecular medicine.

Conclusion: In Birjand University of Medical Sciences, there is potential to assume scientific authority in clinical toxicology and poisoning, infectious diseases, and molecular medicine at the person level. The potential avails at the institutional level in case of support from officials. Given less than ten years of tenure of the faculties and the currently desirable recruitment policies, the university is capable of turning into a scientific pole in one or more of these specialties in case that the scientific staff are empowered further and organized into teams.

Keywords: Scientific authority, Institutional authority, H-index, Scopus, Scientific hegemony, Birjand University of Medical Sciences

شرح إنجاز السلطة العلمية في جامعة بيرجند للعلوم الطبية

الخلفية: يعد التقدم في العلوم و التكنولوجيا أحد البديهيات في السياسات العامة التي ذكرها المرشد الأعلى لجمهورية إيران الإسلامية. جنبا إلى جنب مع برنامج التطوير و الابتكار في التعليم الطبي،حددت جامعة بيرجند للعلوم الطبية باعتبارها واحدة من مؤسسات التعليم العالي في البلاد في مجال الرعاية الصحية ، إمكاناتها الخاصة في منصب السلطة العلمية في المنطقة الكلية التاسعة.

الطرق: بنيت هذه الدراسة الوصفية على نموذج الهيمنة العلمية لجمع البيانات. تم تحديد النشاط العلمي لأعضاء هيئة التدريس على أساس عدد المقالات المنشورة و الاقتباسات المستلمة و مؤشر H الخاص بالكليات. في وقت لاحق ، تمت مقارنة أعضاء هيئة التدريس في جامعة بيرجند للعلوم الطبية مع مؤشر H>=10 في تخصصهم مع نظرائهم على حد سواء فى الجامعات الوطني و الإقليمي من حيث مؤشر -H. كان مصدر استخراج البيانات هو نظام علم القياس التابع لوزارة الصحة المتاح على الموقع الإلكتروني .isid.research.ac.ir

النتائج: على المستوى الإقليمي، حصلت جامعة بيرجند للعلوم الطبية على أعلى مؤشر H في التخصصات الخمسة لعلم السموم الإكلينيكي و الأمراض المعدية و الطب الجزيئي و علم الأوبئة و الطفيليات. على المستوى الوطني ، تُصنّف الجامعة بين أفضل ٨ إلى ٩ بالمائة من الجامعات في مجالات علم السموم و التسمم الإكلينيكي و الأمراض المعدية و الطب الجزيئي.

خاتمة: في جامعة بيرجند للعلوم الطبية ، هناك إمكانية لتولي السلطة العلمية في علم السموم و التسمم الإكلينيكي ، و الأمراض المعدية ، و الطب الجزيئي على مستوى الشخص. على المستوى المؤسسي في حالة الدعم من المسؤولين و سياسات التوظيف المرغوبة حاليًا ، يمكن للجامعة أن تتحول إلى قطب علمي في واحد أو أكثر من هذه التخصصات.

الكلمات المفتاحية: السلطة العلمية ، السلطة المؤسسية ،الهيمنة العلمية ، جامعة بيرجند للعلوم الطبية

بیرجند کی میڈیکل یونیورسٹی کس طرح سے سائنٹفیک لیڈر شپ حاصل کرسکتی

بیک گراونڈ: رہبر انقلاب اسلامی نے نظام اسلامی کی کلی پالیسیاں پیش کرتے ہوئے سائنس اور ٹکنالوجی کے میدانوں میں پیشرفت پر بھی تاکید فرمائي ہے۔ بیرجند یونیورسٹی آف میڈیکل سائنسس نے میڈیکل تعلیم بنیادی تبدیلیاں اور نئے پیشرفتہ تعلیمی پروگراموں پر عمل درآمد کے سلسلے میں نویں میکرو علاقے میں اپنی علمی اور سائنٹفیک توانائیوں کا جائزہ لیا ہے۔

روش: اس تحقیق میں سائنٹفیک برتری سے کام لیا گیا ہے۔سب سے پہلے اکیڈمیک کونسل کے اراکین کی علمی صلاحیت کو ان کے علمی مقالات اور ان کے ریفرینسس اور H انڈ کس کے معیار کے مطابق جانچا گیا۔ بیرجند یونیورسٹی آف میڈیکل سائنسس کی اکیڈمیک کونسل نے Hانڈکس سے اوپر یا پھر دس نمبروں کے مساوی یا پھر اس سے اوپر کے معیار پر پورے ملک اور میکرو ریجنل اسکیل سے اپنا موازنہ کیا ۔ ڈیٹا وزارت صحت کی ویب سائیٹ isid.reasearch.ac.ir سے حاصل کیا گیا ۔

نتیجے: میکرو ریجنل سطح پر پانچ شعبوں میں یعنی کلینیکل ٹاکسی کا لوجی ، متعدی امراض، مالی کیولار میڈیسن، اپیڈیمیالوجی اور پیراسیٹالوجی میں Hانڈکس کے مطابق اعلی کارکردگي دکھائي دیتی ہے۔ قومی سطح پر بیرجند یونیورسٹی آف میڈیکل سائنسس آٹھویں یا نویں نمبر پر آتي ہے۔

سفارش: بیرجند یونیورسٹی آف میڈیکل سائنسس نے پانچ شعبوں کلینیکل ٹاکسی کا لوجی ، متعدی امراض، مالی کیولار میڈیسن، اپیڈیمیالوجی اور پیراسیٹالوجی میں اتنی ترقی کرلی ہے کہ اس کی تحقیقات کو ریفرینس کے طور پر کام میں لایا جاسکتا ہے۔

آئندہ ٹرمز کے لئے علمی لحاظ سے میرٹ پر اترنے والے افراد کا داخلہ لے کر انہیں سائنس دانوں میں تبدیل کیا جاسکتا ہے اور یونیورسٹی کو سائنٹفیک لحاظ سے مزید آگے بڑھایا جا سکتا ہے۔

کلیدی الفاظ: ریفرینس، سائنٹفیک ، بیرجند ۔

تبیین نیل به مرجعیت علمی در دانشگاه علوم پزشکی بیرجند

زمینه و هدف: پیشتازی در عرصه علم و فناوری یکی از محورهای سیاست های کلی ابلاغی مقام معظم رهبری می باشد. دانشگاه علوم پزشکی بیرجند در راستای برنامه تحول و نوآوری در آموزش پزشکی، اقدام به شناسایی توانمندی های ویژه خود بعنوان پتانسیل های مرجعیت در کلان منطقه نه آمایشی نموده است.

روش: در این مطالعه ی توصیفی از مدل تمایز علمی (Scientific Hegemony) استفاده شد. ابتدا فعالیت علمی اعضای هیأت علمی بر اساس میزان انتشار مقالات و استنادات و شاخص H تعیین شد. اعضای هیأت علمی دانشگاه علوم پزشکی بیرجند با شاخص H بالاتر یا مساوی ۱۰ در رشته تحصیلی مربوط به خودشان با کل کشور و با دانشگاه های منطقه از نظر شاخص H مقایسه شدند. منبع استخراج اطلاعات سامانه علم سنجی وزارت بهداشت به آدرس isid.research.ac.ir بود.

یافته ها: در سطح منطقه، در پنج رشته شامل رشته های سم شناسی بالینی، بیماری های عفونی، پزشکی مولکولی، اپیدمیولوژی و انگل شناسی بالاترین شاخص H مربوط به دانشگاه علوم پزشکی بیرجند می باشد. در مقایسه با کل کشور، در ۹-۸ درصد اول کشور در رشته خود قرار دارند.

نتیجه گیری: در دانشگاه علوم پزشکی بیرجند، در رشته های سم شناسی بالینی و مسمومیت ها، بیماری های عفونی و پزشکی مولکولی قابلیت مرجعیت علمی وجود دارد. با توجه به سیاست های درست جذب نیرو در آینده می توان با تقویت این افراد و تبدیل شدن به تیم، در صورت حمایت مدیران ارشد دانشگاه در زمینه قطب علمی آموزشی حداقل در هر سه یا یکی از رشته های فوق گام برداشت.

واژه های کلیدی: مرجعیت مؤسسه ای، تمایز علمی، دانشگاه علوم پزشکی بیرجند، سرآمدی

INTRODUCTION

Literally, scientific authority denotes the site of reference and the place of return. Technically speaking, it designates the frequent referral of others to a specific individual or institution because of the capabilities and potentials of that individual or institution (1). One with the position of authority in science answers to questions and solves the problems. These questions can be the ones raised today or tomorrow, yet reached by the scientific authority with foresight. The quality and the strength of the scientific response, convenience and speed of response provision, as well as timeliness and multitude of responses are attributes of authority; all of them constitute the livelihood of a scientific environment. Moreover, scientific authority produces questions and theories based on intellectual grounds and generates problems with desirable results. We may approach scientific authority by pursuing the major issues of science. Both (i.e., production of answers and solutions, and generation of questions and problems) leads to scientific orientation and the flow of science. Scientific authority moves the frontiers of knowledge. An entity with authority in science breaks the molds and develops the frontiers of knowledge with an innovation motivated by scientific strength and courage. It is the development of the frontiers of knowledge that draws others' attention to the authority, winning their fame in a scientific field. Authority in science denotes some form of pioneering, superiority, and excellence in science, which encourages knowledge seekers to pursue the position of scientific authority (1). Authority in science means the global reference to scientific resources produced by scientists and experts and their identification as the creators of scientific theories and styles.

Officially, the concept of scientific authority in the Iranian context was first introduced on Eid al-Ghadir in 2005 by the supreme leader in a meeting conference with the faculties and students of Imam Sadegh University of Tehran, thereby initiating the formation of a new discourse in the field of science and knowledge of the country (2,3). According to the supreme leader, the scientific authority is a novel term of which one has a specific meaning in mind as implied by statements such as "establishing an independent construction of science using the materials from scientific, cultural and religious heritage", "the world using our views", "searching for a scientific subject and finding it at our universities, rather than simply ranking better than one or another university".

From a macro perspective, scientific authority means a disconnected dependence of science from Western civilization and seeks a scientific leap to perfection. Therefore, scientific authority can apply scientific independence from other countries, transform the country into one of the sources and poles of science production on a global scale, and make the Persian language one of the world's leading scientific languages in the next fifty years (4). After the discourse was introduced, the country's high-level documents directed considerable attention to it, since one of the strategic goals of the health science and technology landscape until 2025 is to gain scientific authority at a world-class level in postgraduate programs in the middle-eastern region. At a higher level than the institutional, subject, or personal authority, the question of the scientific scholarship is raised, i.e., the question of how to advance and influence the scientific development of human society. It seems that authority in a subject is a prerequisite for a scientific scholarship.

To assume scientific authority, futuristic thinking followed by planning and purposeful implementation is obligatory. To this end, strategic geographical location, regional resources, and economic conditions should be considered as the ground and infrastructure for feasibility. Alongside, the discovery of scientific abilities becomes a significant determinant. Also, it seems necessary to locate the differentiation between universities and measure the scientific advantage of each university. By definition, institutional authority means to lead academic centers on a global scale, so that the institution can be recognized in global rankings and introduced as a credible academic center – a position that requires at least a decade of consistent and purposeful work. In this kind of authority, research centers, universities, and even religious centers can plan purposefully and work toward excellence to gain a higher academic status. The resources and capabilities of any scientific institution are limited, impeding it to be distinguished in all fields. Hence, it would be essential to focus on one particular science or branch within a certain scientific area and even specific subject matters. University superiority sometimes happens in one discipline, and even one particular subject or a branch of a specialty. On the other hand, futuristic thinking and planning which accordingly acquire scientific authority are crucial for studying the status of higher education within the country and the world.

As the knowledge of measuring and analyzing science, scientometrics measures the scientific output of researchers, universities, and countries in the form of quantitative variables. Scientometric indices include quantitative and qualitative assessment indicators of researchers' scientific outputs, which can serve as the basis for the evaluation, ranking, and promotion of faculty members for research policy-making, designing the development roadmap, and approaching scientific authority. The Iranian Scientometric Information Database (ISID) was developed in 2015 by the Center for Development and Coordination of Scientific Information and Publications affiliated with the Deputy of Research and Technology of the Ministry of Health to extract and update the scientific indices of faculty members of Iranian universities of medical sciences. The information related to all faculty members affiliated with the Ministry of Health, Care and Medical Education is available in the system and accessible by all users. Therefore, Birjand University of Medical Sciences (BUMS) has taken a preliminary step of futuristic research by assessing research superiorities of the university, so that it can approach the position of scientific authority at personal and institutional levels.

METHODS

This descriptive study was built on the scientific hegemony model (5) (Fig. 1). First, the current departments in the

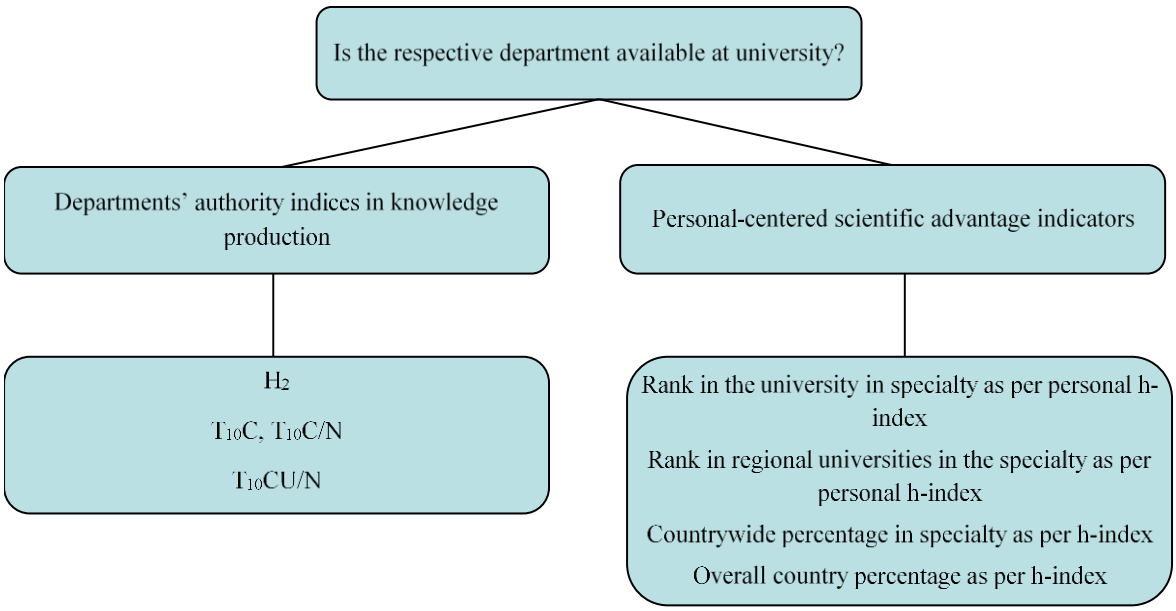

Figure 1. Schematic model of authority indices in knowledge production in universities

H_2 (Group H): This index denotes the largest number of people in the group (N) who all have an *h* equal to or greater than N. For example, if *h* of a department is 8, it means that 8 members of the department have an *h* greater than or equal to 8.
$T_{10}C$ (Total Group Citations in the University): To calculate this index, individuals in the group are ranked as per *h* from larger numbers to smaller ones; this index is calculated from the total citations of the top 10 members in the group.
$T_{10}C/N$ (Ratio of Group Citations in University to Top Country Group): To calculate this index, the sum of the top 10 people in the university is divided by the sum of the top 10 people in the country.
$T_{10}CU/N$ (University Share of Countrywide Citations): To calculate this index, the sum of citations from the top 10 faculty members of the university who are among the top ten researchers of the country is divided by the total number of citations of the top 10 country researchers.

faculties(medicine, dentistry, nursing and midwifery, allied medicine, and health) were enlisted, and the number of faculty members was specified. From a quantitative perspective, the scientific productivity of the departments was determined based on the number of articles published and citations received. The h-index was introduced in 2005 by a University of California physicist, George Hirsch. If a researcher has *h* number of a scientific work such as articles, books, etc., each of which has been referred to at least *h* times, the index of this researcher is equal to *h*. The h-index both shows a researcher's productivity and his/her scientific influence point in quantity. In other words, this index represents the proportion between the number of documents published and the number of citations per document.

Alongside, BUMS departments were compared with countrywide departments in terms of articles and citations. The source of information extraction was the Ministry of Health Science scientometrics system available at isid.research.ac.ir. The basis for calculating the scientometric indices in this system is the data of each faculty member recently extracted from the Scopus database and based on the number his/her articles and citations. This information is automatically updated at least every 20 days on the Scopus database.

In this study, a major challenge was concerned with the small number of faculty members in educational departments of BUMS and, in cases, the non-registration of some of the BUMS departments in the scientometrics system. Thus, the department variable was ignored, and instead, the faculty members were included. Accordingly, the analysis was performed on a personal level and compared with the region and the whole country based on the number of articles, citations, and h-index. Since no educational department in BUMS comprised ten faculty members and as some departments were not registered in the scientometrics system, it was not possible to calculate the authority indices of departments. Therefore, the scientific superiority indicators were used with a personal approach rather than the department-based approach. Alongside, BUMS faculty members with an h-index=10 or higher in their respective specialties were compared with their counterparts on macro-regional and national scales in terms of the h-index.

RESULTS

Approximately, 1.40% of the faculty members affiliated with the Ministry of Health are recruited in BUMS. Of the 280 faculty members affiliated with BUMS, 10 are among the top ten percent healthcare-related faculty members in the country. The number of their articles indexed in the Scopus database amounts to 44.3 on average. The results showed that at the macro-regional level, BUMS gained the highest h-index in the five fields of clinical toxicology, infectious diseases, molecular medicine, epidemiology, and parasitology.

The university ranked the third position in the region in clinical biochemistry. Compared to the whole country, the university is among the top 8 to 9 percent of the Iranian universities in the fields of clinical toxicology and poisoning, infectious diseases, and molecular medicine (Table 1).

DISCUSSION

Scientific authority can be an accessible peak for any scientific institution. To utilize the capabilities of universities, there is a good opportunity for development of the region and the country (6). In Goodarzi and Roudi's study, which aimed to explain the scientific authority of the country's educational institutions using the fundamental conceptualization approach, it is mentioned as the first category that scientific authority describes the status of being pioneering, superior, and foremost in science. Focusing on the scientific field, the scientific authority seeks to exploit opportunities by employing its capabilities to turn its relative advantage into a competitive advantage, so that the scientific institution does not suffer the costs associated with opportunity loss (7). The success of a scientific institution in achieving scientific authority and attaining world-class status is a product of the degree of overlap between its members' mental images. The smaller the overlap and the more heterogeneous the opinions and views on this phenomenon are, the more varying the actions will be. Sometimes the actions will be parallel to each other and sometimes destructive to one another; hence, they result in an output that is smaller than the sum of efforts or they equal zero (7).

In our country, due to the general acceptance of university education, the universities' position as an education authority has been widely accepted by the general public, since the main burden in managing the country is diffused with university graduates. However, despite significant advances in inclusiveness and the quantitative growth of university education courses at various levels, especially in the master's and doctoral programs, as statistics indicate, the country's universities are not scientifically qualified in terms of educational authority. In the last two decades, although there has been a shortage of facilities and bottlenecks, the academic community has reached a considerable growth in the number of research papers. Nevertheless, in terms of quality in research, the performance of the academic community does not fulfill the requirements of authority in science.

The key to achieving scientific authority in the field of medical sciences in the Islamic Republic of Iran is the harmonious distinction and focus on the scientific activities of researchers, departments, universities, and strategic regions in the form of scientific poles. Therefore, in view of the critical mission of achieving institutional scientific authority and proper management of these areas for the purpose of scientific distinction, the followings are recommended: 1) institutional development at the university including the structure, organization, and institutes (departments, research centers, wards, clinics, hospitals, and knowledge management centers); 2) university infrastructure development including physical space, laboratories, equipment, and the associated facilities; 3) university funding development, i.e., the production, accumulation, and allocation of financial resources; 4) recruitment, empowerment, deployment, and human resources management, including both the scientific and executive staff; and 5) connection with industry and development of knowledge-based centers.

Moreover, measures such as the followings can help substantially to achieve this big goal: purpose-based recruitment of students; allocation of scholarship to students; research prioritization; (national and international) environmental monitoring; support and assistance to the relevant national policy-making; producing and publishing journals, books, and related educational contents; holding relevant meetings and conferences; developing appropriate disciplines and programs; amending, modifying, or

Table 1. Scientific hegemony of Birjand University of Medical Sciences according to the Ministry of Health scientometrics website (last update, March 2018)

	Field	Rank	No. of articles published	H-index	Rank in region	Rank in country	Total No. in country	In field %	Countrywide rank	Country %
1	Clinical Toxicology and Poisoning	Associate professor	93	19	1	2	21	9.5	472	2.4
2	Pharmacological Toxicology	Assistant professor	65	16	4	20	107	18.7	832	4.2
3	Molecular Medicine	Assistant professor	55	13	1	4	77	5.1	1751	8.9
4	Environmental Health Engineering	Assistant professor	47	13	3	61	319	19.1	1500	7.6
5	Clinical Biochemistry	Associate professor	29	11	5	55	341	16.1	1691	8.6
6	Clinical Biochemistry	Associate professor	25	11	6	58	341	17.0	1736	8.8
7	Master of Epidemiology	Assistant professor	50	11	1	73	213	34.3	1766	8.9
8	Infectious diseases	Associate professor	22	11	1	25	259	9.6	1810	9.2
9	Environmental Health Engineering	Associate professor	35	11	6	71	319	22.3	1818	9.2
10	Medical Parasitology	Associate professor	22	10	1	46	227	20.3	2044	10.3

improving the curricula of other disciplines; and designing extracurricular activities. Different levels of authority can, of course, be considered in the context of scientific authority. For example, the most comprehensive level of scientific authority is scientific scholarship, where one is referred to not for a slight issue but for a wide array of issues irrespective of time and place. At this level, scientific advancement is not limited to one person, one center, and one subject, but rather, a collective network of educated people develop a scientific movement and civilization that will last for generations. As concerning subject authority, growth and development lie within the same arena where authority has a global scale. Therefore, it is necessary to set up a scientific authority roadmap that defines the ultimate goal of scientific authority for the coming decades and outlines the steps and the infrastructure to achieve that goal.

The Science Authority Access Program began in early 2015. The program seeks to lead the country to scientific authority in the regional and global scales through continuous identification of capable individuals and the provision of specific supports to them (7). Scientific authority and foresight constitute one of the eleven packages of the Transformation and Innovation Plan in Medical Education. One mentioned example is the index of citations or the number of citations given to an individual's articles. This index indicates the value and applicability of the article in a specific field or area. In other words, an increase in the number of citations indicates the strength of an author, a research center/university, a country, or a particular journal in that specific subject.

The h-index has, of course, received some criticisms. For example, scientists and researchers who, for whatever reason, have had few yet highly influential articles receive a low h-index. The h-index is also influenced by the variability of its value for researchers in different disciplines and its high fluctuation during the time of scientific activity of young and novice researchers. As the h-index value rises over time, one's h-index depends on his/her scientific period, i.e., years of publication. Therefore, the h-index would not be proper to compare young researchers with more experienced ones. Besides, differences in citation behavior and principles in different scientific fields are not included in the h-index. Citation as a whole is influenced by field-related factors, making it discredited to have inter-specialty comparisons or even intra-specialty for the different domains within one specific specialty. Moreover, the h-index does not account for the author's order in the authors' list, although this is of particular importance in some fields. To overcome these limitations, researchers have proposed solutions such as using the g-index, the m-parameter, the personal h-index, and the late h-index, among others.

The concurrent application of these indices and the most important citation tools available, such as Web of Science, Scopus, and Google Scholar, can be contributory for evaluating the quality of researchers' work. It stands to reason, of course, that the production of science in the form of increased citations is necessary for scientific authority, yet it is not sufficient (8). Not only the mere article production cannot serve as an excellent measure to assess scientific production, but these articles also need to be applied according to the needs of society and be organized in line with the requirements and problems of the country.

There have been few studies concerning institutional authority among medical universities in the country. In a study by Qomi et al. (2010), the most critical factors for achieving scientific authority from the viewpoints of faculties in Tabriz University of Medical Sciences were, in priority: Expanding the relationship between the university and the superior scientific circles worldwide; strengthening the spirit of criticism; acquiring advanced science and knowledge; boosting scientific journals; directing further attention to research projects and converting them into science and technology; allocating sufficient budgets to research projects; developing a culture of self-belief; creating scientific vitality; expanding applied and developmental research; expanding scientific, specialized services; upgrading the faculty's abilities; and strengthening the belief in the youth (9). A descriptive-exploratory study by Yahyapour et al. (2015) showed that Babol University of Medical Sciences has the potential to achieve scientific authority in the region in the fields of developmental knowledge of cancer, medicinal plants, family medicine, dentistry, pediatrics, genetic diagnostics, pediatric cardiac surgery and heart interventions, transplantation, and women and infertility interventions (10).

The mission of BUMS is to be the superior university of eastern Iran, as in a statement issued by the Ministry of Health for mission-orientedness in medical education. The present study showed that compared to the whole country, the fields of clinical toxicology and poisoning, infectious diseases, and molecular medicine in BUMS rank among the first 8-9% of the country, according to the Ministry of Health scientometrics website. Also, at BUMS, one should refer to a group of individuals rather than one single individual when it comes to speak of faculties' scientific ability in environmental health and clinical biology disciplines. It is because four members out of the eight percent top-ranking faculty members in these fields are affiliated with BUMS. Moreover, significant success has been attained in terms of knowledge-based products in biochemistry and the initiation of a master's program in the same discipline. These can be added to the scientific advantages of the university. Overall, this study provides university administrators with valuable insights into the capabilities and potentials of the university to enhance and reach excellence, so that the university can take them into account in making development policies. On the other hand, this can lead the university to be exemplary in certain fields or subjects and lay the foundations for scientific excellence.

BUMS holds the potential for scientific authority in the fields of clinical toxicology and poisoning, infectious diseases, and molecular medicine at both personal and institutional levels in case of managerial support. Given the faculties' tenure of fewer than 10 years and the proper recruitment policies (research-oriented Ph.D. student admission and continued admission of Ph.D. students in molecular medicine), BUMS can step toward being an educational-scientific pole in future by organizing the researchers as teams and empowering them. This relies on the support of senior university

executives, however.

Ethical considerations:

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

ACKNOWLEDGEMENT

The authors thank Dr. Shahram Yazdani for holding a workshop on introducing scientific hegemony.

participated in the study.

Financial Support:

This article was taken from a research project approved by Birjand University of Medical Sciences with the project code: 5125 and ethical approval code: IR.BUMS.REC.1398.164.

Conflict of Interest: we have no conflicts of interest.

REFERENCES

1. Taban M, Seyed Javadin SR, Allahpoor Ashraf y, Yasini A, Veiseh SM. Identifying the Components of Scientific Authority in Iranian Higher Education with the Foundation Data Approach. Quarterly epistemological studies at Islamic University 2016;20 (2):163-82. Persian.

2. Afshar M, Kalantari S, Sanagu A, Joybari L. Reviving the Scientific Authority's Approach in Iran: The Viewpoints of Graduate Students at Golestan University of Medical Sciences. J Qual Res in Health Sci. 2013;2(2): 125-33. Persian.

3. Latifi A. Extracting and Prioritizing the Strategies for Achieving Scientific Authority of Iran by Using Performance-Measurement Analysis (IPA). Strategy Quarterly. 2018;27(86):5-29. Persian.

4. Ghavamabadi MG, Mortazavinejad SM, Norouzi S, Javadi M, Naani S, Abdolhoseinzadeh M. Scientific authority pattern in Islamic Republic of Iran on the basis of Supreme Leader's statements. 2015; 18(68): 5-30. Persian.

5. Yazdani S. Scientific Authority in Medical Sciences One-day Congress. Birjand University of Medical Sciences. Summer, 2018. http://diglib.bums.ac.ir/parvan/resource/44952/.

6. Yahyapour Y, Moudi S, Sajjadi P, Aghatabar Rodbari J. explained the current situation and capabilities of Babol University of Medical Sciences in the areas of excellence and areas of scientific authority. Babol University of Medical Sciences. 2017; 9 (1) :71-67. Persian.

7. Goodarzi G, Roudi K. Interpretation of scientific authority for educational institutions by applying grounded theory. 2012; 2(4): 75-89. Persian.

8. Bagheri P, Abulqasim A, Kouhpayeh A, Homayounfar R, Farjam M, Avand F. Tips about Scientific Authority Looking at the Role of Students in Its Realization and Barriers.2017; 24 (1): 51-53. Persian.

9. Ohhah QH, Zadegan A, Alizadeh V, Khodayari MT. Evaluation of factors to achieve the scientific reference from the view point of the faculty of Tabriz University of Medical Sciences. 2011; 4 (3): 51-53. Persian.

10. Yahyapour Y, Aqatabar RJ, Nikbakhsh N, Mouodi S. Identify Aspects of Scientific Authority in Babol University of Medical Sciences. Research in medical education (rme). 2017; 9(1): 71-67. Persian.