

Compliance of Medical Studies Published in International Journals with Community Health Needs in 2008R.Samadzadeh M.Sci¹, M.Javadimehr M.A², M.A.Tabasi M.Sci³, R.Hakimi M.Sci⁴,¹Head of Dept. of Information Technology, School of Medicine, Zahedan University of Medical²Dept. Of Medical English; Faculty member of School of Medicine, Zahedan University of Medical Sciences, Zahedan City, IR, Iran³Head of Dept. of Library Science, School of Medicine, Zahedan University of Medical Sciences, Zahedan City, IR. Iran⁴Faculty member of School of Medicine, Zahedan University of Medical Sciences, Zahedan City, IR, Iranjavadimehr@gmail.com

Abstract: Research is to investigate and understand the facts and a plan for discovering the unknown truth. Scientific productions and publishing them in scientific journals is one of the major indices of research and science production in the world. Considering the role of journals which have provided proper conditions for production and transfer of knowledge, it is possible to determine the direction of scientific research of medical researchers by reviewing the content of articles published in the health field. The aim of the present study is to determine the compliance of medical research topics with the issues which are known as the major causes of mortality in the world. Methods: In this survey study, the publishing status of papers has been investigated to determine the scientific direction of medical researchers in a year. Ten leading causes of death worldwide announced by the World Health Organization in 2008 were selected. Keywords of mortality factors were determined, then entered in the Mesh medical subject headings and the proposed words were determined. Then, the new keywords were searched in the Pub med database. The obtained data was entered into the SPSS V.15 software and were analyzed using the chi-square test at a significant level of $P < 0.05$. The results showed that the researchers in the field of human health have not considered the issue of mortality as the main priority in their researches. The direction of their studied shows another orientation. Universities were also negligent to achieve their mission which is the resolving of the health problems of people. University-affiliated publications also were not active to reflect the results of scientific research of their faculty members. So that the results of medical researches of faculty members, have mainly been published in the university-nonaffiliated journals. **Conclusion:** A material incentive is one of the important factors which influence the discrepancies between the studied issues and the community health care needs. The role of scientific journals and their custodians in determining the research priorities is very important. Besides health researches, financial support will help developing the medical sciences. But, these developments should be taking into account the health care needs of people. Otherwise, this notion is found in the community that physicians have been away from their original mission and the sacred medical profession achieved commercialization direction.

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Introduction:

Research is to check, investigate, discovering the truth and is to reach the truth in terms of scientific effort and thinking coupled with a plan for discovering an unknown truth [1]. A research can be a systematic, controlled regulated and logical study based on scientific methods which are summarizing the raw data to reach high reproducible and transferable results [2]. Success in all development-related activities including medicine depends on development of research activities.

If the researchers in various fields of scientific research, put the vital needs as their research priorities, it will contribute the comprehensive development of the community,

undoubtedly. Researchers in the field of global health, according to their original mission, should put the major causes of mortality as their research priorities and thereby take a step toward health development. Since all researches are applied to improve the quantitative and qualitative features of human life, dealing with causes of mortality and improving the health quality are of particular importance. No research is perfect, unless the results will be shared through the scientific community. Such shares may be feasible through various methods. Scientific journals as accepted media play an effective role in transferring the research results [3].

Each scientific paper is considered as

a scientific production. So, the science production in the first step can be manifested in a scientific paper and is published by the journals [4]. In addition, scientific publishing especially publishing scientific journals is known as an important tool for developing science and knowledge. It is very important for any country to have some tools to promote its scientific findings through them. In the present era, scientific journals are one of the most important tools [5]. Also, scientific journals are considered as an effective tool for scientific productions and relations which play an effective role to develop a connection between scientists in various scientific areas [6]. Owing to the rapid dissemination of the contents and use of new data-transferring communication technologies and ideas exchange through journals, this media as one of the main axes of social institution provide both social and scientific relations roles at the same time [7]. Dissemination the results of scientific achievements at the best way and at the fastest possible time is one the most important items which result in promoting the knowledge level in different scientific fields. In the health field, dissemination of such results can lead to qualitative and quantitative improvement of the community health level in addition to improving the knowledge level 6.

In health-related sciences, the public journals, specialized journals and upper-specialized journals was born in the late of eighteenth century, the early of twentieth century and the late of twentieth century, respectively. Besides the rapid and accelerated growth and the orientation toward upper-specialized problems, the impact of these journals on the health community has been added, significantly. So that, not only the treatment methods of patients, but also decisions about public health issues has been affected by the articles published in these journals [8]. The growing number of the scientific journals in the health sciences field demonstrates their valuable role at national and international level. According to official statistics, only 9432 medical journals are indexed in Pub med search engine and have provided for medical researchers up to December 2011 [9].

Considering the role of journals which have provided proper conditions for production and transfer of knowledge, it is possible to determine the direction of scientific research of medical researchers by reviewing the content of articles published in the health field. Due to the nature of medical science, most of these researches are of applied type and are carried out to solve community health problems [10]. It

is obvious that the diseases threaten the society and causes death of great number of people annually should be the first priority of medical researches. The confounding questions are:

How the research priorities for the medical society are determined? Are the physicians' studies in the direction of reorganization of disease and mortality causes? Do medical researchers investigate to solve community problems? Considering that conducting required researches in medical fields in order to promote

Community health level is the mission of medical science universities, the question arises that whether the academic staff effort to investigate on diseases that have the highest incidence and mortality in the community?

Bibliometrics (statistical bibliography) studies can be used to answer these questions, because it is possible to utilize the bibliometrics to study the scientific production in a research field in order to comparing the conducted researches in various countries and different periods and in the tributaries of a subject, the direction of scientific production in different subject areas and the scattering pattern of a subject in various Scientific journals [11].

Pritchard believe that the aim of bibliometrics is to clarify the documented communication process. The nature and development of each scientific field can be identified by counting and different analyzes of its documented communications [12].

In order to assess the scientific production in the field of medical science, and their subject scattering, it is possible to answer the following questions which are the main objectives of the present study, regarding the community health priorities and using the bibliometry methods.

1. Is the main objective of medical researches the causes of population mortality?

2. Considering the mission of universities, is the main objective of medical researches of the faculty members the causes of population mortality?

3. Do research centers and academic publications their role in informing people about the issues threaten their health?

4. Do the material issues affect the insights and perspectives of medical researchers about solving the community health problems?

Methods

In this survey study, the publishing status of papers has been investigated to determine the scientific direction of medical researchers in one year. The survey is a method to obtain information about the views, beliefs,

opinions, behaviors or group characteristics of statistical community members through conducting a research [13]. At first, the main causes of morality in the world announced by the World Health Organization were selected. The World Health Organization is one of the UN specialized agencies which one of its main tasks is to provide important health statistics. Recent statistics provided by the organization on the ten leading causes of human mortality in 2008 was reviewed.

The keywords of mortality causes were determined, then entered in the Mesh medical subject headings and the proposed words were determined. Then, the new keywords were searched in the Pub med database. Pub med database was selected, because the bibliographic data of 16,700,000 papers was indexed in 2008. This number has increased to over 12 million articles until October 2011. The articles are related to 5400 publications that are indexed in Pub med. According to information obtained from this search, it can be claimed that the results of search in this database is also exposure to other databases.

The search in the database was limited to 1.1.2008 and 1.1.2009. The number of articles published in 2008 was identified by the subjects. The list of diseases was received and classified according to the Mesh's medical subject headings. The number of articles and the location of each ten factors were inserted in the class of the corresponding disease. In the next step, the first morality cause in terms of priority which was previously limited based on history and human was also limited to journal fields. 1300 titles of all obtained information were selected based on the sample volume. In each journal, information about the authors and the journal affiliation was identified and entered in the SPSS software. Then, for comparison, the issue of Pathological Conditions, Signs and Symptoms disease which assigned the most articles in 2008 was searched in Pub med as the first cause of mortality with similar restrictions. The obtained information was entered in SPSS software and the results were analyzed using chi-square test at a significant level of $P < 0.05$.

Results:

The search was conducted in Pub med database and the number of published articles on the most prestigious scientific journals in 2008 was determined in the case of each disease. Table 1 shows the results. The results show that the lowest and highest number of articles was about diseases with environment – related disorders (0.01%) and pathologic symptoms (18.64%), respectively. From the total number of 767 000 articles published on

various diseases worldwide in 2008, only 11000 papers (1.5%) was on Myocardial ischemia heart disease, i.e. the first issue that has caused the highest mortality rate in the world. Note that the content of scientific articles reveals the latest findings and the medical researchers' orientation; the obtained results show that the Myocardial ischemia heart disease has not been the research priority of medical researchers worldwide. The most published articles in the diseases classes were in the subject area of Pathological Conditions, Signs and Symptoms. Given that this issue is related to the signs and symptoms of diseases and it is associated with almost all diseases, the highest number of articles is not surprising. Therefore, in order to minimize the overlap between the myocardium with this issue, the myocardium keyword was eliminated and the result was reduced to 135497 papers, i.e. only 7500 papers were reduced from the number of articles. If researchers are not independent, they are affiliated to universities and research institutions. It is expected that the faculty members of universities and research centers publish their research results in their university-affiliated or other universities journals. While Table 2 shows that, this is not the case for Pathological Conditions, Signs and Symptoms which has allocated the most published articles in 2008. Center faculties were more willing to print their articles in university-nonaffiliated journals. In the case of myocardial ischemia which was the greatest cause of mortality in 2008, no significant difference was observed between the author situation and the location of article publication (Table 3).

Comparison of statistical results showed a significant difference in the location of paper publication in terms of author. Comparison of statistical results showed no significant difference between the location of paper publication and the author situation ($p=0.7$). Scientific journals accept and publish the article based on domestic politics and the comments of editorial board. Table 4 presents data to determine the consistency of the academic and non-academic journals policies with the community issues. Statistical survey indicates that there is a significant difference between the centers in terms of the topic of published articles. So that, the number of published articles on myocardial ischemia disease topic (the world's highest morality cause in 2008) was higher in the non-academic journals than academic journals. Academic centers should publish the results of their researches.

Formally through affiliated publications. While Table 4 shows that although, the authors are affiliated with academic centers, but they publish

their articles in other publications.

Comparison of the statistical results shows that 16% of authors who published papers on myocardial ischemia were independent. While only 1% of authors who published articles on Pathological Conditions, Signs and Symptoms were independent. A statistically significant difference was observed between the independent authors in writing articles on different subjects ($p < 0.0001$).

Discussion and Conclusion

The latest research results and scientific findings are disseminated in the fastest time by publishing the articles. Publication of articles and their subject direction various topics depends on their importance for researchers. In many countries, people are involved in research costs and the governments allocate some of public funds for research. In fact, public money is spent for research. So, people have rights to know how their money is spent and what benefits will obtain from medical research.

It is expected that most medical research is combined with community participation. If health research is well done and be at the direction of health and social development, it should be based on the principle of social justice. Accordingly, the health care needs of poor and vulnerable groups are considered, and the produced knowledge is used in order to promote community health level. However, the results of the present study showed that the medical researchers are not in direction of the international community issues.

According to statistics published in 2008, US academic libraries have allocated 2700 million dollars to purchase books for students and teachers. The cost for developing research opportunities for faculty members is a part of fund that government cost for research. In developed countries, 2 to 3 percent of GDP in revenue is allocated for research activities. This is done for research and academic centers while the direction of medical researches of faculty members is mainly associated with off-campus centers. The results of present study showed that universities were also negligent to achieve their mission which is the resolving the health problems of people. University-affiliated publications also were not active to reflect the results of scientific research of their faculty members. So that the results of medical researches of faculty members, have mainly been published in the university-nonaffiliated journals. The Results also showed that the academic publications as a prestigious scientific medium do not play their role in society, effectively.

These publications are on own way and the community issues are not a priority for

them.

Medical researchers who seeking treatment and communication with the community, should be able to keep pace with advances in science and correct diagnosis in order to solve health care problems. However, the results do not confirm this. Lo at all have also reported that many faculty members of universities are marketing, conducting scientific research, or providing services as consulting or as lecturer for commercial companies [22]. Physicians do not only treat the diseases, but their other duty is also to investigate the causes, methods of prevention and treatment of diseases in their specialized field.

It is expected that they conduct their research to solve health problems of the society. The results of a research in America show that 98000 hospitalized patients lose their lives annually because of medication side effects while more than 30% of pharmaceutical revenues in the pharmaceutical industry is spending for marketing and more than 90 percent of this amount is paid to physicians [21].

Lack of attention to community problems by medical researchers may have a material background. Material motivations for an educated group, like physicians, should not be ignored. These incentives can affect their insights directly [22-25]. Interesting the material issues has also become prevalent in medical research as far as it is possible to promote biased results in the research process in favor of industries [26-30]. Conflicts of interest pose a threat to scientific research and care of patients [22]. The results of a research in US shows that while a number of medical researchers are concerned about the impact of industry on medical research, the industry is more connected to people and orders clinical trials [26, 31].

Scientific journals which should publish the results of researchers and establish connection between researchers and the society accept and publish articles regarding their policies and are not aligned with community problems. The results of a research showed that prestigious medical journal only accept less than 5% of received articles [32]. Although, the government and professional institutions are seeking a procedure to determine the connection between physicians and industries, but universities and medical journals go their own way [26]. The ranking of an academic journal is not less than non-academic one, but university faculties tend to publish their articles in non-academic journals.

In this case, material incentives are very important. Taking order for research is not

unusual in developed countries. The research of Lo et al expresses the concern of US government officials and pioneers of medicine in America which reveals the indiscriminate association of industry and medical research [22]. Perhaps, this is because the results of such orders should only be published in special journals. Using the articles of a reputable scientific journal is not free.

The price of medical journals has increased by 479% since 1984 until 2004. Given the recent trend which goes towards merging the publisher and dealer, annual increase of 20 to 30 percent is normal [33]. It is obvious that the researcher must also be paid for the production of scientific articles. However, it is clear that who manage the scientific journals are the same people who determine the direction of research in the countries. This group does some investments and expects interest in future. It is obvious that the financial support together research will help medical sciences development [22, 34-35]. But, this progress must also consider the public health needs. Otherwise, this notion is found in the community that physicians have been away from their original mission and the sacred medical profession moves toward another direction.

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