Comparison on the Results of Health Related Researches Published on the Selected Newspapers in: 2005 and 2011

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ABSTRACT

Our imagination and understanding of national and universal events largely depends on the image that the media has conveyed to the people in general. The aim of this study is to assess the quality of health related articles of the country's three large newspapers in comparison to the data obtained from similar studies conducted in 2005. This study is a combination of cross-sectional (descriptive – analytical) and as well as comparative and the subject of the study includes 3 newspapers namely, Hamshari, Keyhan and Iran, respectively of which in terms of distribution and in the number of readers are similar. In this study, 638 health related articles were evaluated of which 1/3 were research articles. In the majority of these articles, references were unclear and or sources were not mentioned (33.5%). Average number of health-related papers in every issue is 5.9% and these articles were mostly presented in the science and technology sector and more that 88% of these articles are news articles whereas regarding health related articles 51.1% of these articles were related to maintenance and enhancing public health through public health information and also 64% of these researches were conducted in developed countries while 12.5% were conducted locally and the general population were the majority target population of these researches. Considering the media's effective role in the dissemination of health information, it seems that the attention of mass media especially newspapers having educational purposes is on the increase but still has not reached to an acceptable.

Keywords: Newspapers; Educational purposes; Health information.

INTRODUCTION

One of the main goals of health communication is to disseminate information and educate people about healthand disease-related issues. Newspapers play an important role in health communication because they provide people with access to a wide variety of health-related information, including information on disease symptoms, risk factors, available treatments and recommendations for healthpromoting behaviors (Rimal, 2009).The media's function in the health sector has been of increasing interests to a huge number of policy makers and program planners.

Health communication includes study and application of methods and communications technology in order to disseminate information and influence the individual and group decisions aiming at promoting and enhancing health. Although health communication alone would not be able to change problems in general and the widespread health related problems such as poverty and social corruption and or lack of access to health care, but comprehensive programs on health communication should include research and evaluation on all factors in order to promote health(Yanovitzky, 2005). In a research conducted on Brazilian newspapers, the results showed a significant difference in the way in which the studied newspapers report on health-related research. Folha de Sa˜o Paulo tends to write its own articles and more frequently publishes the results of national research, whereas O Estado de Sa˜o Paulo publishes articles that originate in news agencies, most of which have little national contextualization(Teixeira, 2012). Promoting the level of health in a community and establishing and promoting equity in health is the ultimate and ideal goal of the country's health care system which can be obtained through provision of necessary knowledge in order to enhance and promote management performance in rendering health related services. In truth, the health system will be able to accomplish its mission when changes have occurred and in addition awareness and changes in attitudes would result in enhancing and promoting individual health performance (Malek Afzali,2004). Among the media which currently makes an integral part of the peoples' lives are newspapers and weekly letters in full circulation which are published mostly in populous and major cities and are made available to the public in the categories of communication, and in promoting and determining the level of physical, mental and social health of the community. Newspapers in Sweden have a high amount of readers compared with other European countries. In a study conducted in Sweden in 2007 the results showed that 2.4% of all the contents were related to health (Catalan, 2004; Roberts, 2004). Some researchers believe that knowledge transfer can increase the organization's competitiveness and provide them the possibility to coordinate their rapid changes and innovations (MadjdZadeh, 2009). In 2011,

Ernesto Jaramillo and colleagues has conducted a study in the Department of Health Education at Columbia University assessing the role of the media's health education in controlling TB. Their aim of this study is to increase the demand for direct smears (Jaramillo, 2005). Karl Hanson and colleagues in 2011 have also conducted a study entitled "the use and acceptance of social media for health education" (Carl Hanson, 2011).In 2003, a widespread study supported by the World Health Organization with the cooperation of 13 countries namely; Brazil, Cameroon, Costa Rica, Indonesia, Iran, Kazakhstan, Laos, Malaysia, Thailand, Pakistan, Russia, Senegal and Tanzania conducted by the six regional offices of the World Health Organization and a total of 39 widely circulated newspapers with 2192 issues were evaluated in terms of the presence of health related articles and their quality (Sadana, 2003). The result of this assessment has paved a way in the qualitative and quantitative assessment of 3 widely circulated newspapers in Iran in 2005 (MalekAfzali, 2005). This present study is a supplement of the aforementioned study which is in the format of Master's Thesis and the purpose of this study is to assess the qualities and quantities of health related articles in the three widely circulated newspapers of the country in the year 2010 and compare its results with the previous study conducted in 2005. In this study, by taking into consideration the Ministry of Health's approach with regards to stakeholders' use of research results and at the same time disseminate accurate health news to the readers, the role of the press in this domain was assessed and the content of these 3 widely circulated newspapers were evaluated for the presence of information in the format of health news and to what extent are they based on scientific research and on the priorities of the country.

MATERIALS AND METHODS

This research is a cross-sectional sectional (descriptive-analytical) and comparative study. Subject of the study are the 3 widely circulated newspapers of the country namely; Hamshahri, Iran and Keyhan which were selected on the basis on these two criteria: nationwide distribution and uniformity in the number of readers. These

newspapers were studied within a specified date (winter) to the total number of 45 issues or for two consecutive months. The non-probability purposive sampling and a questionnaire were used in gathering the data. The questionnaire was developed based on the draft sent by the office of the WHO in the year 2003 and was translated and acculturated by the scientific committee and then was evaluated in terms of scientific validity. The country's priorities were also taken into consideration in designing this questionnaire and in order to increase its validity, the questionnaire were sent several times to the chief editors of these 3 newspapers for evaluation and confirmation and then were compared and finalized by the different encoders with the presence of the scientific committee. In order to gain a uniform understanding, an educational training was implemented to the encoders. Data analysis was done by using descriptive and inferential statistics and results were obtained with the use of SPSS software. In conducting this study, each newspaper were under study by an encoder and any information related to health related articles were entered in the questionnaire composed of 3 sections. The first section of the questionnaire contains general information such as; date of publication, title of newspaper andthe second section contains the main features of the health related articles such as the type of article (news, articles that are to be continued in the next publication and ...), references (local and international), the section where the article is featured in the newspaper presence of pictures or shapes and or charts in the article, and the article's conformity to the country's research priorities and it must be noted that in case that the article is health related the third section of the questionnaire must also be completed. The third section contains the main topics of research and its key message, type of research, location of research, target population and *etc.* Each questionnaire must be completed forevery health related article. In cases for articles that are not related to health, only the first section of the questionnaire is completed. T-test was used in order to compare the results of quantitative variables and in this study, 05.0- α was considered. Also in this study, permission was obtained from the ethics committee and ethical principles have been completely observed in gathering the information. Completion of the questionnaire and analysis of data and results were given under the disposition of the stakeholders.

RESULTS

According to the results seen on the table, Hamshahri had published 25% of health related articles while Iran had 39.7% and Keyhan 22.4% respectively. In comparison to the study conducted in 2005, Hamshahri published 22% of health related articles while Iran had 24.8% and Keyhan 28% respectively. Heath related articles published in 2010 totaled to 30.9% in comparison to a total of 24.6% in 2005. Overall, the total number of health related articles published in these newspapers in 2010 totaled to 30.9% in comparison to 24.6% in 2005. Results of the number of health related articles in these 2 years have statistically significant difference (P 0.008). With regards to the references used in these health related articles, majority ofthose articles published in Hamshari and Kayhan were without references and with regards to Iran newspaper, authors are free to make their choice to either include or exclude references while the study conducted in 2005, majority of the references on the articles published by Hamshahri and Keyhan were written by local reporters while in Iran newspaper, majority of references were not specified. In comparing research articles to non-research articles in terms of references, majority of the authors mentioned in the references of research articles were international reporters (47%) while majority of references in non-research articles were not specified (36.4) and were mostly related to news in the congresses, interviews and internet sources while in the study conducted in 2005, 32.3% of research articles with without references.

The part of the newspaper where the health related articles are written varies with each newspaper. In Hamshahri, 72.8% of health related articles are located in the health section while Iran newspaper health related articles (43.2%) are located in science and technology section and in Keyhan (42.5%) are located in the family section. It is important to note that the 3 newspapers have no special or uniform location in placing health related articles. Based on the results, we can conclude that

majority of health related articles (50%) are located in the science and technology section which is consistent with the findings in the study conducted in 2005. The most frequent type of articles in the three newspapers is news articles (88.6%) and the difference between research and non-research articles is not obvious. Also in the study conducted in 2005, research articles were in the type of news articles. It is important to note that more than 50% of health related articles were without pictures, shapes and figures while in the study done in 2005 this ratio was about 60%.

With regards to the main topics discussed in the health related articles, majority of topics were on the maintenance and strengthening general health through public health information and these topics verifies the correctness of health related researches. The second priority was on the new achievements in the fields of life sciences and biotechnology and the third priority is on patients care and the services rendered by health care providers. Topics that have the lowest articles written based on the evaluation done on the 3 newspapers were about articles related to emergency cases such

as; outbreaks of new diseases, water hygiene, environmental pollution and vaccinations whereas in the 2005 study, the lowest health related articles were on health policies. Also regarding health related articles, 51.1% are related to the maintenance and enhancing public health through public health information, 18.6% are related to modern achievements in the field of life sciences and biotechnology, 15.3% are on patient's care, services rendered by health care providers and 5.2% were on health policies, health system, structure, performance and resource allocation of the health services providers system, 4.2% were on social health aspects and 2.7% were on statistics and information related to health indicators (mortality and disabilities), 1.7% on insurance and health care costs, and 0.3% on emergency cases such as outbreaks of new diseases, water hygiene, environmental pollution and vaccinations. Comparison of these results and the results of the 2005 study have shown that the majority of the main topics discussed in research articles on that year were also on the subject on the maintenance and enhancing public health through public health information (62.4%). Majority of the health related

Table 1: Comparison of (percentages) among health related research articles and non-health related research articles based on the type of newspaper in the year 2005 and 2011

	Hamshahri n (%) 2005/ 2011	Iran n (%) 2005/ 2011	Keyhan n (%) 2005/ 2011	Total number of n (%) 2005/2011
Research Articles related to health	76(22)-56(25)	25(24/8)- 112(39/7)	70(28)-30(22/4)	171(24/6)-198(30/9)
Non-research articles related to health	269(78)-168(75)	76(75/2)-168(60/3)	180(72)-104(77/6)	525(75/4)-440(69/1)
Total	345(100)-224(100)	101(100)-280(100)	250(100)-134(100)	696(100)-638(100)

Table 2: Distribution on the frequency of health related researches in order of priority

	Hamshahri n (%)	Iran n(%)	Kayhan n (%)	Total n (%)
Consistent with the countries priorities	9 (16.1)	26 (23.2)	11 (36.7)	46 (23.2)
Inconsistent with the countries prioritities	47 (83.9)	86 (76.8)	19 (63.3)	152 (76.8)
Total	56 (100)	112 (100)	30 (100)	198 (100)

articles' key messages in general in the 3 newspapers were "end results" and "under implementation process". In Hamshahri, majority of the key messages were allocated to describing applied researches and only in 0.5 % of cases were the findings of research articles were discussed which is inconsistent with the previous results. This subject matter in the 2005 study was 0.4%. In the study conducted in 2005, 70% of the study was done on the developed countries and 14.6% were done within the country while in the present study, 64.1% were done on developed countries and 12.5% are within the county and in 20.2% of these research studies, the location of the study were not mentioned. With regards to the target population of this study, 65.7% were the general population in comparison to the 78.9% in 2005 study, 17.7% of these individuals require specific cost, children aged 1-9 years (6.1%) listed in order of priority and this is accountable only when 4.5% cases of women's population and 1% case of the elderly population has been the target of health related researches. With regards to health related articles being consistent to the research priorities of the country, only 23.2% of these articles are being consistent of which from this figure, 54.3% were consistent with the priority of non-communicable diseases followed by nutrition and health (17.4%) followed by drugs and the last (13%) for industry.

DISCUSSION

Based on the study conducted on the three widely published newspapers namely Hamshahri, Keyhan and Iran, Keyhan newspaper had the lowest number of published research articles and non-research articles related to health and it seems that the main reason is in line with the policy of the staff responsible for compiling and printing this newspaper as well as political and economic issues, therefore the pages supposedly devoted to the topics of health related articles are greatly reduced.In the study conducted in 2003 with the cooperation and support from the WHO and 13 countries worldwide, implemented through the 6 regional offices of the WHO, a total of 39 widely published newspapers having 2192 issues were evaluated, results of this study has shown that publication of articles related to health in the country of Iran is more in comparison to countries such as

Cameroon, Costa Rica, Indonesia, Kazakhstan, Laos, Russia and Senegal. But in countries such as Malaysia, Brazil, Thailand and Pakistan one hundred percent of newspapers had at least published one article related to health. In Iran, based on the study conducted in 2005 this figure was 89.4% while in the present study, the figure is 79.2% On the other hand, more than 60% of issues were evaluated in the countries such as Malaysia and Thailand and at least one health related research article is published whereas in Iran based on the result of the study conducted in 2005, 24.6% of health related articles were published and in the present study this figure has reached to 30.9%. While the average number of articles in every issue being evaluated in counties such as Malaysia is 23.3, Thailand 10.8 and Brazil 6.1 respectively, in Iran, the average number of articles evaluated in every issue of the newspapers in the year 2005 was approximately 3.8 and in the present study, the average number reached to 5.98. It seems that the media's attention, especially newspapers, towards educational goals are still very low but the trend is going in an ascending pattern. In fact, ignoring the role of newspapers as one of the easiest and the most basic method of disseminating health information and the lack of appropriate mechanisms of communication between producers of knowledge and intermediaries of knowledge is the main reason for doing this study.Results of the assessment done regarding the references of health related articles in Iran have shown that in Hamshahri and Keyhan newspapers, majority of the article references were not specified and in the case of Iran newspaper, majority of the article references were freelancers and this matter would incredibly reduces the credibility of published articles in these newspapers. It seem that the lack of proper training to journalists and their lack of familiarity with the principles of article writing could be the reason for their lack of interest on this matter. With regards to health related articles, majority of information resources (47%) were foreign reporters, news agencies and or foreign news agencies and information resources of the majority non-research articles related to health were unknown and primarily theses articles were issues on conference news, interviews and information from the internet. In countries such as Brazil, Thailand, Russia, Afghanistan and Indonesia, the most important

source of information of their health related articles be it research or non-research articles are their local journalists. It seems that these countries have allotted appropriate investments in training journalists and providing appropriate environment to become familiar with the principles of research methodology. With regards to section of the newspaper where the health related articles are published, results of the assessment have shown that majority of these articles are found in the science and technology section, health and lifestyle. Currently, Hamshahri newspaper published these articles in a special page entitled "Dedicated to Health" and this clearly show the interests of the newspaper staff on health issues. In 2005, the year when the research study regarding health articles in Iran was conducted, this special section was not present in this newspaper. It is evident that by having this special section in the newspaper for health purposes and efforts in the direction gathering related articles would remarkably help in publishing articles concerning health issues. Majority of health related research articles published in the newspapers of countries such as Brazil, Indonesia and Thailand can be found in the science and technology section whereas in Senegal, 100% of health related articles are published in the health section of their newspapers and in Iran, 50% of these articles are published in the science and technology section.Several studies have evaluated the quality of medical research reports covered by the press. These studies have shown that newspapers are more likely to publish reports that have lifestyle implications or that focus on bad news (Bartlett, 2002; Stryker, 2002). In addition, the clinical implications of medical research are usually underemphasized by newspapers (Stryker, 2002). In Brazil health contents used to be published within the first pages (median in page 13, main mode in 4). 81.3% of all contents were written by journalists, and writers used sources of information in 73.6%. Most frequent topics were about cancer, alcohol, euthanasia and sick leave at work (Daniel, 2007). Results of the assessment done on the type of articles published in the newspapers both in the present study and on the study conducted in 2005, majority of these articles are in the form of news articles. It is important to note that none among these newspapers have presented the title of these health related articles with the exemption of one

case in Iran newspaper and one case in Keyhan which was never published. It seems that due to the newspapers lack of success in the dissemination and in reflections of news related to health, the readers' expectations are also defined in other areas. It is evident that in case of an increase in the efficiency of the newspapers in this area and provide necessary information will be able to build a culture in a society in this area. It is important to note that news articles in other countries such as Brazil, Malaysia and Thailand andconstitute the highest number of articles in the newspaper.

In terms of the presence of images and graphs and in considering that newspapers as part of mass media being accessed by the general population, its contents and articles must be written in a way most readers will be able to understand its content. The presence of a variety of images and contents would help greatly in further understanding but the only inhibiting factor in the use of these images is space limitation. Based on the results of the study on the 3 newspaper in Iran and on countries under study; majority did not make use of any images or charts in their news articles but with regards to translations of medical terms, 88.2% of medical terms are translated and described in these 3 newspapers in way that the readers will easily understand them.Results of the present study in iran, have shown that 51.1% of the main topics of these articles are on general information regarding public health and promotion of health of which in the study conducted in 2005 this topic also resulted to 53.9%. Also this topic was found to be in the first in priority among the health related articles published in the following countries' newspapers; Indonesia, Laos, Senegal and Tanzania. In Thailand where the SARS outbreak happens during this study, the topic of priority (53.8%) was on emergency and epidemics. Thus it is clear that conditions and social situations play an important role in the presentation of topics regarding health related articles. Another important topic is on the presentation of health policies showing the relationships between policy makers as the consumers of research and researchers as the producers of research. Due to the absence proper mechanisms in disseminating this information the rate of this topic showed a very low figure. Of course up to the time that the needs of research priorities

in the field of health as a the fundamental principle in the selection of research topic and the transfer of research results is less relevant, the choice of the main topics of research is solely on the basis of their preferences without taking into consideration of the people's real needs. In this subject matter, we could clearly see that only 23.2% of published health related research articles were in the direction of the countries health research priorities. It is necessary indeed that an appropriate structure within the domain of the deputy for research in all medical universities of the country be created in which the main custodians will be researchers in the field of health in the community and in the process of collaboration of all stakeholders from the choice of topics to the process of implementation and finally to making use of research results and dissemination of information could play an effective role.

Regarding the location of the research study, it can be observed that in 64.1% of health related researches were done on the developed countries and a lesser number (12.5%) were done within the concerned locality, whereas in Pakistan 59.6% of cases were done within the country. In the study conducted in 2005, 71.3% of newspapers understudy were from the developed countries. This trend has been observed in other countries except Pakistan. It seems that by strengthening and developing research performance within the country, encouraging researchers in doing researches in the line with the health priorities of the country, training education on research methodologies and incorporating it into the curriculum at all levels in schools and universities and to establish appropriate channels of communication between research producers and consumers this big challenges will be overcome in the near future. It is interesting to note that none of these research articles published in the selected newspapers in Iran with the exception of one case in Hamshahri was not consistent with the results

from previous researches and in no case where non-beneficial results or non-ethical results were reported but in Kazakhstan, 20% of published articles were reported to have cases of non-beneficial and or non-ethical results. In these selected newspapers, Hamshahri devotes more in presenting results of applied researches and their role in promoting health system research while Iran and Keyhan give more attention in introducing completed researches and or researches under implementation. In general, Iran newspaper has the highest number of researches which are on the implementation processes 45.5%), followed by results of applied researches (42.9%). A similar trend was noted in the 2005 study while in countries such as Brazil, Thailand, Tanzania and Indonesia, the highest number of researches published is on applied research. Evidently, publication of applied researches has been found to have more effective outcome for research consumers. The target population of the research study of these 3 newspapers is the general population (65.7%). Apparently, in considering that the country is composed mostly of the younger generation, it is important that more attention be addressed to this issue. Performing researches within the country basing on the heath needs of this vast group, will serve as proper and useful information to be made available to these youths. However, it is important to note that publication of articles regarding women's health and their related health problems has been given less attention (4.5%) and in considering the role of women's health in promoting the health of the community, giving particular attention to this issue is highly recommended.

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