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People's trust in health news disseminated by mass media in Tehran

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Abstract

Background: People are increasingly interested in health news. As a mass media, the 'Islamic Republic of Iran Broadcasting' (IRIB) has the highest number of target audiences. In Iran, some people follow health news via health programs on satellites and other means of communication. However, all of these programs do not live up to the standards of scientific evidence. In this study, we examined Tehran people's trust in health news disseminated by the IRIB and other mass media outlets.

Methods: A cross-sectional study was conducted in Tehran. Through multistage sampling, 510 households proportional to size were randomly selected from five regions of Tehran including northern, eastern, western, southern and central regions. One person from each household completed the questionnaire through interviews. The questionnaire included questions on people's level of trust in health news delivered by the IRIB, satellite programs, the internet and magazines. It also included demographic questions. The validity and reliability of the questionnaire was evaluated.

Results: Among the interviewees, 50.6% was female. The highest level of trust by the participants was observed in the IRIB (65.2%), and the lowest trust was observed in satellite news (43.4%); $p< 0.001$. The interviewees believed that the IRIB news broadcasters had more mastery over the subject than the ones in satellite channels ($p< 0.001$). The IRIB's coverage of important and relevant health topics was also significantly perceived to be better than that of satellite news ($p< 0.001$). According to 83.5% of interviewees, the quality of health news had improved in the past 10 years. Fifty nine point eight percent of participants believed the quality and accuracy of the IRIB health news was monitored.

Conclusion: People's higher level of trust in domestic news as compared to foreign sources and the better status of domestic sources in other areas such as precision in reporting, coverage of more important news, its delivery in lay language, the news broadcasters' proficiency, and other cases - from the participants' point of view - can highlight the significance of designing interventions for changing health behavior among domestic health news producers. Therefore, the results of this study can prove useful to health news policy makers in the IRIB.

Keywords: Iran, News, Health.

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Introduction

As the most important capital of each person, health has always been a public concern. Nowadays, people are more interested in receiving information on diseases, their methods of prevention, drugs and health determinant factors (1).

The reports released by the IRIB (Islamic Republic of Iran Broadcasting) are among important sources of health news for the public in Iran. Hence, they have effective influence on the public opinion, and their release can potentially affect the public behavior and reactions, sometimes even influ-

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encing the medical community and health system policy-makers (1,2). The majority of the public, who are the main target audiences of mass media, do not have the necessary knowhow to assess the authenticity of the news. In mathematics, proving a hypothesis can undermine all previous findings. In statistical and experimental sciences; however, this is not the case. Scientific rules cannot be changed merely on the basis of a single or even a couple of study results. To reach a presentable result, usually repeating the same findings is necessary as well as the significance of quality and type of study (3). High-quality systematic reviews possess these criteria but their share in research studies is small (4). Nonetheless, time and again, research results that are not scientifically acceptable are disseminated via TV which is one of the most used mass media utility (5). The media play the main role in safekeeping and the correct transference of knowledge to the public, in the language of their own (6). In cases where health knowledge is concerned, the dissemination of precise news gains even more significance. Trust in health news and its broadcasters can pave the way for carrying out public health interventions. Media is an important tool in creating health- related behavior changes and subsequently public health promotion. A study in 29 Asian countries showed a significant relationship between trust in public media and individuals' health level (7). Trust is one of the main domains of social capital (8,9), and social capital itself is one of the determinant factors of health (10-12). Therefore, it is very important to ensure people's trust in important national organizations.

The current study examined Tehran people's trust in media's health news. Some news items lack scientific evidence to be disseminated in mass media, and planning can be done to raise awareness among people and concerned authorities by identifying the level of trust in health news and determining the validity of different news sources.

Methods

Through multistage sampling, 510 households were selected from the northern, eastern, western, central and southern regions of Tehran, from among the 22 municipal areas in 2011. The random selection of regions was performed proportional to size. The visiting hours were such that quota sampling was observed for gender. One person from each household was interviewed to complete the questionnaire. To assure the quality of data collection the questioners were trained in two sessions. They were also allowed access to the project executives to clarify any confusion. At the same time, data collection quality control was present in all five areas during the execution of the project.

International and domestic databanks were reviewed for articles that had been published in the field of trust in the news. The articles and questionnaires were examined for the methods used, and the variables and questions asked. The content validity of the designed questionnaire was approved by 3 professionals and 3 lay experts. The trust of people in the IRIB and satellite health news; the influence of this news on the health behavior of the respondents; the expertise of the news anchormen; the precision and quality of the health news and its transference power to lay people were questioned. The questions were in the Likert scale and subjectively assessed the respondents' point of views. The reliability of the questionnaire was examined through a pilot and test-retest study (18-20 individuals completed the questionnaire at 14-18 days interval). They also commented on the face validity of the questionnaire. Such that, after the second retest the questionnaire's reliability was considered acceptable (mean Kappa= 0.86). Then, the questionnaire was finalized with experts.

Gender, age, and educational, economic and marital statuses were investigated as independent variables. To evaluate economic status 11 questions were asked about the individuals' belongings, which were combined through the principal component

analysis method. The first factor was considered as the economic variable and divided into 5 quintiles ranging from poorest to richest. The dependent variables studied in this questionnaire were the level of trust in various sources of health news, including health news and advertisements in domestic, international and internet-based media.

An informed choice was made to participate in the study. The participants were also ensured of the confidentiality of their names and particulars throughout all the stages of the study and dissemination of research results. This project was approved by Tehran University of Medical Sciences' Ethics Board.

Results

Participants' characteristics: The response rate was 78%; in order to access 510 households, 654 households were visited. No significant difference was observed between the educational status of those who participated and those who did not (p=0.21). According to Table 1, 50.6% of the interviewees were female and the remainder were males. Over 52% were aged 18-34 years. Their average years of education was 11; 3.3% were illiterate and 24.1% had had academic education.

Level of trust in news: The highest level of trust was observed in the IRIB news (65.2%), and the lowest trust was observed in satellite news (43.4%). Males' level of trust in general magazines was significantly

Table 1. Comparison of trust in different health news sources among different groups of participants

	Variable	Participant groups	Participants' trust in different sources Mean (SD) IRIB News	Satellite Channels' News	Professional Magazines' News	General Magazines' News	Internet News
		Number (Percent)	Number (Percent)	Number (Percent)	Number (Percent)	Number (Percent)	Number (Percent)
	Overall trust in news sources		65.2 (12.4)	43.4 (16.8)	58.9 (27.7)	55.7 (13.3)	51.8 (17.9)
Gender	Female	258 (50.6)	66.4 (12.5)	42.3 (16.0)	60.6 (27.2)	55.8 (13.0)	53.2 (17.1)
Gender	Male	252 (49.4)	64.0 (12.3)	44.6 (17.63)	57.0 (28.1)	56.0 (14.0)	51.0 (19.0)
	ANOVA ρ		0.06	0.31	0.28	0.04	0.35
Age group	18-24	133 (26.1)	65.4(11.6)	41.3 (16.5)	59.6 (25.8)	55.7 (12.5)	50.8 (22.4)
Age group	25-34	126 (24.7)	66.2(11.9)	41.0 (16.3)	59.5 (28.5)	55.4 (13.9)	44.6 (27.5)
Age group	35-44	93 (18.2)	64.6 (11.4)	47.0 (15.8)	53.8 (25.7)	57.5 (14.3)	39.0 (30.8)
Age group	45-54	67 (13.1)	65.4 (15.2)	45.1 (18.9)	59.6 (33.1)	54.9 (15.2)	39.6 (24.2)
Age group	55-64	50 (9.8)	67.9 (10.6)	49.0 (20.0)	63.7 (30.1)	57.3 (10.5)	33.3 (24.4)
Age group	65-74	16 (3.1)	61.7 (12.4)	43.9 (15.1)	37.5 (25.0)	51.1 (9.9)	27.3 (0)
Age group	75-84	9 (1.8)	68.0 (19.8)	45.5 (0)	62.5 (17.7)	59.1 (8.2)	26.1 (4.8)
	ANOVA ρ		0.79	0.42	0.54	0.92	0.10
Marital status	Married	337 (66.1)	65.7 (12.7)	44.4 (16.9)	56.5 (30.0)	55.8 (13.8)	51.1 (16.8)
Marital status	Single	149 (29.2)	64.3 (11.8)	41.7 (16.3)	63.0 (24.3)	55.2 (12.3)	54.4 (19.3)
Marital status	Singled by divorce	3 (0.6)	53.8 (10.9)	50.0 (0)	75.0 (0)	53.4 (8.0)	59.1 (0)
Marital status	Widowed by death	12 (2.4)	68.2 (14.1)	43.9 (17.1)	68.8 (8.8)	58.5 (13.3)	27.3 (0)
	ANOVA ρ		0.36	0.75	0.28	0.95	0.35
Educational status	Illiterate	17 (3.3)	61.4 (14.1)	52.3 (14.2)	40.6 (18.8)	54.5 (5.6)	60.2 (14.5)
Educational status	Primary school & Literacy Campaign	54 (10.6)	69.0 (13.3)	43.7 (16.2)	50.0 (29.0)	52.9 (11.2)	42.3 (19.2)
Educational status	Intermediate school	87(17.1)	68.4(12.0)	48.0(20.0)	54.8(30.2)	57.6(14.4)	52.0(20.6)
Educational status	High school	229 (44.9)	64.0(12.4)	42.5(16.2)	58.3 (27.0)	54.7 (13.6)	49.4 (16.0)
Educational status	Academic	123 (24.1)	64.6(12.0)	42.1(16.2)	66.0 (26.0)	57.1 (12.8)	56.4 (18.4)
	ANOVA ρ		0.02	0.48	0.046	0.45	0.08
SES	Poorest	94 (18.4)	65.4 (11.6)	47.6 (17.9)	66.7 (25.7)	60.4 (14.3)	54.9 (14.6)
SES	Poor	95 (18.6)	67.3 (12.3)	44.6 (15.7)	55.2 (29.7)	58.0 (10.9)	49.9 (20.3)
SES	Average	95 (18.6)	66.8 (12.6)	43.3 (14.7)	60.7 (27.2)	55.0 (13.7)	50.1 (18.2)
SES	Rich	95 (18.6)	63.8 (13.2)	39.3 (18.9)	52.4 (25.3)	51.2 (14.2)	55.4 (22.4)
SES	Richest	95 (18.6)	64.5 (11.7)	38.6 (15.1)	53.0 (30.3)	52.6 (9.7)	47.4 (21.5)
	ANOVA ρ		0.39	0.09	0.039	<0.001	0.47

Table 2. Comparison of trust in health advertisements disseminated by different sources of mass media

Source of advertisement	Mean (SD)	Level of significance
Trust in domestic advertisements	51.7 (22.0)	<0.001
Trust in internet advertisements	29.8 (26.3)	
Trust in satellite channels' advertisements	37.9 (31.8)	

higher than in females (p= 0.04). However, the two genders' level of trust in other cases did not significantly differ. Marital status and age group too did not significantly affect individuals' trust in different sources. Participants with primary or intermediate (school) education expressed greater trust in the IRIB news than the others. At the same time, an increase in level of education significantly raised the level of trust in professional magazines' health news (p= 0.046). Poorer individuals had more trust in general and professional magazines' health news as compared to the other participants. The interviewees believed that the IRIB's news broadcasters had more scientific proficiency than the ones in satellite channels (p< 0.001).

According to the interviewees, the IRIB's coverage of important and relevant health topics was also significantly better than satellite news (p< 0.001). On the whole, their level of trust in the IRIB was significantly higher than in satellite channels (p< 0.001).

According to 83.5% of interviewees the quality of health news had improved in the past 10 years. Fifty nine point eight percent (59.8%) of participants believed the quality and accuracy of the IRIB health news were being monitored.

Forty seven point six percent (47.6%) believed that there was an organization responsible for people's health in the country. As evident in Table 2, trust in different types of advertisements was as follows: domestic advertisements: 51.7%, internet advertisements: 37.9%, satellite channels' advertisements: 29.8% (p< 0.001).

Discussion

The objective of this study was to examine people's level of trust in health news in the media. Trust is one of the main elements of social capital (13,14). Social capital is also known to affect health (15-17). Moreover, the level and quality of trust in health news is of paramount importance. No organization supervises health news and advertisements disseminated through the satellite channels and internet. However, drugs and other health products that are advertised in the internet and satellite channels are readily available to the public. Therefore it is important to compare health news disseminated by the media and people's trust in them. Based on our results, people's level of trust in the IRIB health news was 62.5%, and was greater than their trust in satellite channels' and internet health news, which is an important point. Although representative sampling was done in Tehran, and its citizens include almost all Iranian ethnicities, care must be taken in generalizing the findings to the entire country and even Tehran. Survey results in farther cities and villages may be entirely different. The other study limitation is that the precision and quality of the news were questioned from the point of respondents' views which was totally subjective; therefore, they might not be appropriate alternatives for the objective level of the precision and quality of the news. Moreover, using the satellite is legally forbidden in the country, so there is a possibility of respondent bias. Nevertheless, at the beginning of each interview the participants were told that their names would remain confidential and that the results would be analyzed anonymously. Twenty two percent (22%) of the individuals referred to were not willing to participate in the study. Although no statistically significant difference was observed in their levels of education, the possibility of selection bias cannot be overlooked. Lack of complete trust in mass media health news has been seen in studies elsewhere too. For example, a 2012 survey in the USA showed that 51% of people did not recognize the mass media as a trustwor-

thy source of health and medical news (18). According to another survey conducted in the same year 8% had complete trust in the media, and 32% had average trust in them; both of which had declined in comparison to the previous year (19). One of the reasons that have led to society's declining trust in health news is its contradictory nature. Ignoring the level of scientific evidence for citation and citing unproven results of studies of lower quality and validity –such as cross-sectional studies or case control studies on limited populations- can be the reasons behind such contradictions (20,21). Contradictions in media can sometimes influence policy makers' and people's decision making (7). Moreover, the danger of utilizing research results that lack sufficient evidence among people and sometimes even health service providers is always there (22). Hence, trust is a double-sided sword that can promote health if properly utilized; and is an opportunity that can become a threat without planning and proper supervision. Mass media can be a potential tool for promoting societal health. Garnering public trust is the reward of an honest communication, wherein the media plays the main role (6). The media can ensure this trust by presenting contents based on strong evidence and in the target audience's language (24).

Nonetheless, it is the journalist who decides what is disseminated and what is not (23). News publishers never guarantee the accuracy of their statements. Greater accuracy and authenticity rely on the source of news, and a greater proportion of the public lack the required knowhow to recognize the degree of validity and source of news (24-26). Therefore, journalists particularly those in the health domain carry a heavy burden on their shoulders. They must adhere to professional principles and standards and honesty, and steer clear of personal or group incentives (27). Consistency of the news level with that of public health literacy should also be taken into account when producing health news. It seems that as long as health news lacks sufficient evidence greater trust will not lead to better health.

To the best of our knowledge, this is the first study comparing public trust in health news coming from different sources. Anyhow, further studies examining the reasons behind public trust or lack of trust in health news in a more in-depth qualitative manner can be useful.

Conclusion

The following can prepare grounds for the design of interventions aimed at changing health behaviors: people's greater trust in domestic news sources owing to their supervision, albeit non-ideally, but greater than that carried out on free news sources; the better status of domestic health news in the eyes of the public in aspects such as accuracy in reporting, rate of coverage of more important news, presentation in lay language, the news broadcasters' greater proficiency over the subject, and others. This trust however demands greater responsibility in controlling the quality of health news in the media.

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