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# Media Mix for Awareness and Health Promotion in Lung Cancer Patients

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**Background:** Lung cancer is the most common cause of death due to malignancy. The media as a source of information about cancer especially lung cancer could make substantial contribution to help physicians and patients in terms of prevention, treatment and follow up. This study aimed to obtain in depth understanding of the role of media in the context of clinical knowledge and recognize its effect on behavior of patients.

**Materials and Methods:** Using lung cancer patients' records admitted to Masih Daneshvari Hospital, we conducted a structured interview with them via telephone to collect information. The transcript of interviews was prepared. The transcript was then coded and analyzed using MaxQDA based on "theme method". Due to the structured basis of the study, the primary frameworks were considered as conceptual categories in coding.

**Results:** The majority of lung cancer patients did not receive any information before the awareness about their disease unless having a family with a history of cancer. Following awareness of disease, they mostly received their information from physicians. In spite of the large amount of medical information available in the media, insufficient use of media by cancer patients indicated the absence of appropriate communication between the media and patients. Television was the mass media commonly used by patients and as a result of no access to Internet and medical books as well as lack of proficiency in English language they were deprived of specialized resources of information. **Conclusion:** Mass media should focus on raising awareness about prevention and treatment of lung cancer. This study can be a preliminary step in health communication research and may be used by researchers in terms of methodology and vision.

**Key words:** Media, Lung Cancer, Information, Awareness

## INTRODUCTION

Public health is one of the most important contexts in which the media can be used to inform people, prevent diseases, link professionals and patients, and disseminate new knowledge and new skills to people. Despite the enormous importance of media in the health care, extensive research has not been carried out in this area in our country and even in the rest of the world. Yet having

considered technical advances in media along with progress in medical research activities, more decent interdisciplinary scientific works have to be carried out in the media and health. Needless to say, the media is capable of playing a leading role in patients' preference to clinical intervention. It is known as a tool to encourage them to request effective treatment as opposed to common ineffective ones (1).

Nowadays, people increasingly make the final decisions to choose a treatment for their disease, and the higher the level of patients' education, the more active their participation in treatment process. Not only the English language proficiency but also access to the Internet has an impact on the quantity and quality of the information collected by patients (2). Behavioral change is one of the benefits of increased access to information for all people, especially in those with a lower level of education (3).

One of the hot topics in health communication is the potential role of media in cancer prevention and treatment; not to mention that patients with cancer preferentially ask physicians for information about the treatment process (4). In addition, providing insufficient information by the physician would result in patients' anxiety and reduction of patients' active participation and cooperation in treatment (5). Patients' gender and age are two important factors affecting the type and mode of seeking information by cancer patients (6).

Lung cancer is the leading cause of mortality due to malignancies, and unfortunately the majority of lung cancer patients become aware of their disease in advanced and inoperable stages of their disease. As a matter of fact, giving appropriate information to the high risk patients is the crucial part of cancer program with the purpose of prevention, early diagnosis and effective treatment process. Measures to improve the role of media to raise public awareness are considerably less expensive than the consequences of delayed or ineffective cancer treatment.

The media as a source of information has different functions. Six functions of media from the perspective of Van de Donk and colleagues in 2005 include 1) News and current affairs, 2) Opinion and debate 3) Special information, 4) Culture, arts and education 5) Entertainment and 6) Advertisements, persuasive information and communication (7). However, new media technologies and their position in society, particularly among families, have combined new functions such as communication, education and information with the

traditional ones. Role of media in broadening health knowledge ought to be taken into consideration as one of the social roles of media mentioned by Roger Klaus (8).

This study aims to evaluate the usage of media among patients with lung cancer for the purpose of prevention, early diagnosis and treatment. Furthermore, our findings regarding the effect of media on lung cancer management and patients' interaction with media may introduce a new approach to facilitate prevention programs and improve patients' participation in diagnosis and treatment.

## MATERIALS AND METHODS

This was a qualitative study with context analysis aiming to gather themes and ideas in order to reach an in-depth understanding of the subject. This research was a subjective approach to express experience as a means of observation to define different aspects and the relationship between them. Purposeful sampling was undertaken among lung cancer patients admitted to Masih Daneshvari Hospital in 2012. The inclusion criteria were hospitalization due to lung cancer and willingness to attend the interview. Each phone interview took about 15-20 minutes. Interviews continued until we reached the point of data saturation.

The interview was conducted in 2013. Consent was obtained from all patients to record the interview and patients were assured that their personal information would be completely confidential and findings would be reported anonymously. At the end of the interview, transcribed contents were returned to patients and then they were asked to proclaim their views regarding the interview content.

Thirty patients or one of their family members participated in the present semi-structured interviews and all interviews were recorded and transcribed word by word. Demographic characteristics (age, sex, profession, location, education, and present illness) of patients were extracted from medical records. Primary information, such as history of cancer in the individual or his family, English language proficiency and the patients' access to the

Internet were asked ,and then patients had to answer several open questions including “how did you obtain your first information about your disease?” , “how did you obtain the most information about your illness? ” , “ how did you receive your information mainly before your disease ? ” , “What effects did your information have on your illness? ” , and “ did you actively participate in the treatment process?”

From a total of 30 patients participated in this study, 21 were males and 9 were females, 16 patients aged between 35 and 65, 12 were older than 65 years of age ,and only 2 patients were younger than 35. Six patients were employees, 9 and 15 were housewives and workers (and self- employed), respectively. Twenty-two patients were illiterate, 6 patients completed high school and only 2 of them had attended college. Eleven patients were living in Tehran and the remaining were from other cities of Iran. Half of the patients had history of cancer in their families and friends. Common symptoms at the time of diagnosis were cough, dyspnea, hemoptysis, pain and weight loss. Four criteria of credibility, transferability, dependability, and conformability were applied to assess the validity, accuracy and reliability of qualitative data.

In order to analyze data collected from interviews, the six-step technique of “theme analysis” was applied. MaxQDA software version 10 was used after tape record and transcription. In this method, after repeated review of data and search for meanings and categories, coding was carried out. Then codes were considered as main and sub theme review and re-analysis. Afterwards, defining and naming themes and preparing a map of the themes were performed and ultimately final analysis and report writing were done.

## RESULTS

Findings were divided into two main groups of seeking information and effectiveness of collected information and six subgroups. Seeking information was comprised of the followings:

1- First information collected after the disease onset

2- Most information collected after the disease onset

3- Information before the disease

Patients collected information from their physicians, friends and family, television, the Internet, magazines and health guide books and leaflets.

Most of the participants in this study had obtained their first and primary information from their physician. They thought of their physician as a reliable source of information; although, one of the patients had received information regarding cancer via one of his family members familiar with the Internet.

“My father was ill for a long time, and coughing all the time. He was losing weight day by day. First, we thought he had caught a cold, but the disease took longer than usual, and as I could use the Internet I started to search. I found out that these are the signs of cancer and immediately referred him to a physician.”

Also, two of the patients obtained their initial information via a family member who worked in a health care center.

“My son works in a hospital; whenever we have a health problem he is the one who gives us the required information. I was constantly coughing, and sometimes I had bloody sputum. My son noticed my illness and took me to see a doctor immediately.”

“I am a nurse and I work in a hospital. Well, lots of patients come here every day, so I know some of the initial signs of disease. When my husband who was a smoker did not recover after a prolonged cold, I took him to a doctor immediately.”

Patients with families and friends with a history of cancer got their first information from them.

“My mother had cancer, and I was always worried about her. I had a poor appetite for a while, and I was coughing all the time. I was really afraid of my health condition and immediately referred to a physician.”

Patients received most of their information regarding cancer from their physician, followed by television as the second most helpful source of information. Although most of the patients had access to the Internet, they did not use it

as a source of information. Educated patients who were able to use the Internet and benefited from English language proficiency did not merely rely on the information obtained from their physician, but collected further information from different sites and search engines. These patients were able to analyze data due to their level of education and command of English language. Besides, they benefited from brochures, leaflets and guide booklets as a source of information which they received from the hospital.

“I really trust my doctor, but I also read the booklets that I got from the hospital and it was really helpful.”

This interview shows that patients received information regarding different diseases via various sources including television and health related magazines before the onset of disease.

“I usually watch health programs on television, because it is interesting for me to know about different diseases and their treatment, but I never knew that severe cough and weight loss could be the sign of cancer.”

“I am interested in reading magazines, and I try to read as much as I can. But I wish I could find more information about different types of cancer and their signs on health magazines which could be very helpful.”

In this study, educated people with good English command used the Internet. A number of patients did not seek information about different diseases, and did not feel the need to know or to be informed about diseases and mentioned no history of cancer in themselves or friends and family. Since most of these patients had no information about initial signs of cancer, they mistook it for common cold.

The effectiveness of collected information is another issue regarding the media and patients, which is divided into three subgroups as below:

- 1- Type of information sought about disease
- 2- Patient's tendency to cooperate with the physician
- 3- Effect of the collected information on the course of disease

Interviewees were more interested to know and be informed about treatment. Also, simple workers made more efforts to seek information about the course of disease, while other patients were concerned about seeking information regarding type of treatment. Seeking information in terms of course of disease was of paramount importance for the elderly patients as well as the ones who had a history of cancer in their friends and family. Moreover, men paid more attention to the course of disease than women.

“My brother had cancer too and died very soon. It is really important for me to know more about the course of my disease and what stage of the disease I am in, and also for how long I will be able to continue a normal life.”

“I have heard that cancer grows very rapidly in the body, and it involves all organs, so I am seeking information about the disastrous consequences of my cancer, and what stages I will go through.”

Middle aged patients paid more attention to gain information about the type of treatment, most patients had strong tendency to cooperate with their physician after they obtained necessary information

Results of the study showed that patients with history of cancer in family and friends had greater tendency to cooperate with their physician during the course of disease, and patient cooperation was favorable in the majority of cases.

“Well, my father and my cousin had cancer too; both of them are alive now, just because they listened to their doctor's advice very carefully and followed their orders. For example, my cousin quit smoking when his doctor warned him about the risks of smoking.”

Cooperation was more significantly seen among educated patients who were able to use the Internet, health magazines and guide booklets and leaflets.

“I could obtain the information that I was seeking via cancer guide booklets and leaflets provided by the hospital, and I am really thankful to the hospital for helping patients in this regard.”

“I not only received information from my physician during the treatment process, but I also tried to gather more information about my disease via the Internet and health magazines to be able to cope with this condition and know what to do about my disease.”

In this interview, effect of information on increased rate of cooperation was more significant in women; also, women more than men emphasized on the effectiveness of collected information. Educated patients were more cooperative after receiving the acquired information which led to increased efficacy of information.

## DISCUSSION

The results of the present study showed that patients with lung cancer were unaware of symptoms, treatment process and prognosis of their disease which resulted in delayed physician visits, diagnosis and treatment and consequently poor prognosis of their cancer. On the other hand, is the media has the responsibility to reduce the gap between the onset of symptoms and diagnosis and also improve patients' participation and cooperation in diagnosis, treatment process and follow up visits. As mentioned earlier, the media also plays an important role in the selection and usage of medical interventions and can encourage people to use successful treatment methods.

Chen et al, (2001) (2) demonstrated that the majority of patients received basic information about lung cancer from their physicians. While English language proficiency and Internet access had a clear effect on the amount of sought information, information seeking had no effect on patient-physician relationship. In the present study patients received first and most information from their physicians and patients with higher educational level and more proficiency in English language used Internet, health journals and cancer guide booklets besides physicians' visits. Meanwhile, none of the patients without the ability to search the web were able to obtain information from other scientific sources except their physicians. This is consistent with the knowledge gap hypothesis (9), in which people with higher socioeconomic status have the ability to

receive information more and faster than those with lower socioeconomic status.

In our study, due to the lack of cancer symptoms awareness, the majority of patients confused symptoms of cancer with those of common colds which led to delayed diagnosis. In addition, they did not take into consideration the need for seeking and reading cancer information. This finding supports the need for a protocol to improve the quality of information provided by the media about cancer and develop a better understanding of the disease. Therefore, the media has the responsibility to promote public knowledge with the aim of behavioral change especially among those with lower educational level (3).

In a review of 122 articles about cancer and the media (4), it was demonstrated that patients with cancer mainly sought information about treatment options. In other words, they looked for information about cancer stage, treatment and complications during diagnosis and treatment process, respectively and then information about recovery and survival rate following cancer treatment, similar to our findings.

According to a study by Jenkins and colleagues (6), elderly cancer patients were more interested in receiving details about their disease, while women preferred mainly to receive information about a variety of possible treatments and also the specific medical term of their condition from physicians. Similar findings were obtained in our study, except that elderly patients in our study paid more attention to information about the course of disease.

Anxiety over the cancer consequences and having a positive experience of the outcome of effective participation in treatment process among patients with a history of cancer in their families and relatives increased their willingness to actively participate in the treatment process. Additionally, well-educated patients actively sought information about the course of disease from the media which was consistent with the “Media and Audiences relationships” theory (8). In this theory, the audiences are motivated to willingly choose

communication channels such as the media and use their products (10).

## CONCLUSION

The mass media authorities such as the broadcasting company managers ought to pay more attention to awareness about prevention and treatment of cancer. Enrichment of Farsi websites, TV programs providing information about symptoms, diagnosis, and treatment of lung cancer and the press will have considerable impact on people's understanding of cancer. This study may be used as a preliminary step in health communication research and enhance the vision of researchers in this field.

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