

## Evaluation of Educational Requirements among Iranian Cancer Patients Undergoing Radiotherapy

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### Abstract

**Introduction:** Cancer is the 3<sup>rd</sup> cause of death after heart disease and injuries in Iran. Radiotherapy is one of the most effective procedures in cancer therapy, but in spite of widespread usage, its nature and side effects are still unknown for many patients. The main goal of this survey was studying various educational needs among cancer patients with specific emphasis on radiation therapy and its side effects.

**Patients and methods:** This study was a descriptive-analytical research based on the information extracted from personal interviews and files in order to determinate patients' educational needs and their relationship with different variables such as demographic characteristics and the kind of disease among those referred to radiation therapy department in Mashhad Omid Hospital during a 6 months period.

**Results:** Our findings show that age and marital status have a statistically significant association with educational needs ( $P < 0.01$ ). Also patients in early stage of their disease had higher educational requirements. Most of the patients had limited or moderate information about their disease and treatment effects (88%). In addition 46% of patients mentioned the physician as their preferred source of information.

**Conclusion:** Findings indicate lack of training about radiotherapy and its side effects among our cancer patients, and emphasizes the need for a structured program to alleviate this problem. It seems that the role of physicians in this field is more significant than other health care staff.

**Key words:** Cancer, radiation therapy, education, physician, Iran.

### Introduction

Based on the existing statistics, cancer is considered to be the third deadly disease ranked after cardiovascular diseases and injuries in Iran; every year 51,000 new cancer patients are detected in Iran and about 35,000 Iranians die each year due to various cancers <sup>(1,2)</sup>.

Radiotherapy is one of the most effective treatment methods in various cancers, which despite being in use for quite a long time; this method is relatively unknown to patients and raises unanswered questions among them. The insurmountable stress that diagnosis of cancer creates in individuals and their family is the most significant communication barrier between the patient and the treatment personnel <sup>(3)</sup>. As much effort, particularly at the beginning of treatment, is

allocated to giving mental-psychological support to patients, a number of critical questions regarding the nature of disease, process of treatment and its consequences will remain overlooked. It has been established that the lack of appropriate knowledge about the disease among cancer patients will have adverse effects on their treatment <sup>(4)</sup>. Satisfying the patients' educational needs in various stages of treatment and understanding the fact that various patients with varying educational, cultural and even religious backgrounds require different levels of education are important subjects that require consideration, parallel with new treatment advances <sup>(5)</sup>.

The present study, was aimed at studying the educational requirements of patients undergoing

radiotherapy treatment for cancer, and finding the relation between these needs and individual characteristics (such as age, sex, educational background, occupation and income) and the disease condition (type of cancer, stage of disease, other treatments received, etc.).

## Patients and Methods

The present research was a descriptive-analytical study performed on 743 cancer patients referred to Omid Hospital in Mashhad in the course of 6 months from March through October 2010. Out of these patients, some 547 were excluded from the research based on exclusion criteria (their unawareness of the disease (450 patients), denial of illness (23 patients), lack of inclination to participate owing to agedness, severity of the patient's condition (57 patients), and not knowing Persian language (17 patients)). Finally 196 patients, meeting the conditions of participation (awareness of the type of disease and accepting it) were included in the study.

The sample size was estimated using a pilot implementation of the questionnaire through distribution among 20 patients. The information was gathered by interviewing the patients and filling the questionnaires and observational checklists. The questionnaire comprised of three main parts. The first part of the questionnaire, studied the extent of patients' awareness about their illness (comprising 7 questions). The second part included questions regarding the demographic data (9 questions) and 12 other information points which were extracted by researchers from the patients' files; as well evaluation of the patients'

awareness of their disease and treatment (11 questions). The third part included 15 questions to assess the patients' educational needs regarding generalities of radiotherapy, required cares, possible side effects and methods of encountering them. As the emphasis in the present research was on patients receiving radiotherapy, and in order to reduce the effect of other treatment variables such as chemotherapy, the patients were categorized depending on the type of treatment into three separate groups: (1) only chemotherapy; (2) chemotherapy before radiotherapy; and, (3) concurrent chemotherapy and radiotherapy.

## Results

The distribution of participating individuals based on demographic specifications is demonstrated in Table 1.

The findings reached in this study showed that amongst individual characteristics only age and marital status were relevant to educational needs of patients. In this case single ( $p < 0.01$ ) and younger ( $p < 0.01$ ) individuals had more educational needs (Figure 1). Furthermore, there was also a significant relation between the stage of disease and educational needs. Individuals that were in the primary stages of their illness felt more need for education (31% against 69%). Furthermore, the findings showed that the more patients' treatment reaches its final stages, the more patients require education, as compared to the initial days of treatment.

Among patients participating in this study 37.8% had low awareness, 51% had moderate knowledge and only 11.2% had extended information about

**Table 1:** Distribution of patients based on demographic characteristics.

Employer					Incomes				Education			Sex	
Other Jobs	Unemployed	Housekeeper	Job	Employee	600	400-500	300-400	200-300	Educated	Diploma	Under Diploma	Female	Male
19.8	26.5	14.7	23.4	15.3	11.7	27	42.9	18.4	3.6	32.7	63.8	97%	96%
p=0.6					p=0.4				p=0.052			p=1	

their disease. Among patients 41.3% mentioned that from the words they heard frequently during their treatment course( tumor, chemotherapy, radiation therapy, and cancer);they did not feel good when hearing the word “cancer”, but most patients were interested in asking about radiation therapy from the staff and only 20% of patients were satisfied with the answers given to their questions. Contrary to what is usually believed about the cancer in our country, 71.4% of patients were willing to know more information about their disease, treatment progress, and treatment outcome and 83.3% wanted to have more information about the side effects. Our data indicated that 53.6% of patients desired to receive more information in the presence of their family. Also 46% of patients preferred the information to be provided by their physician during the treatment process. The results of this study showed that 75% of patients participating in the research had begun their treatment without any special information about radiotherapy and its side effects and 62% of them had faced side effects during treatment. Considering the psychiatric issues and dealing effectively with stresses caused by the disease and treatment, 43% of patients mentioned that family had the most prominent role in improving their mood and helping them to cope with the side effects. Finally no significant relationship was found between patients’ education, the location of radiation therapy, the patients’ medical history, the patients’ perception of the outcome of their disease

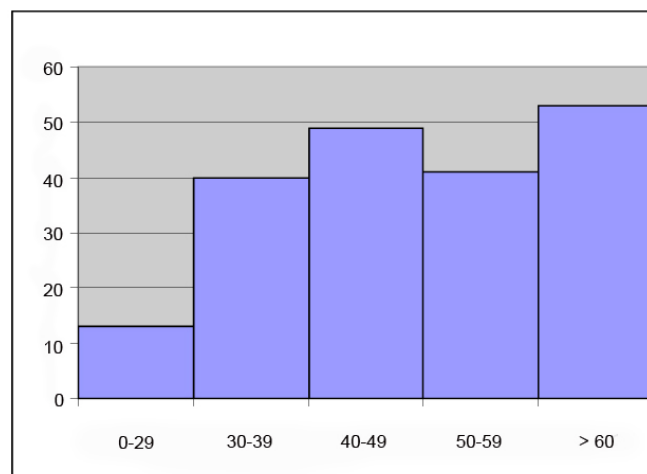
and the length of treatment, and their knowledge about the disease and radiotherapy.

### Discussion

Nowadays, in addition to developing better treatment methods, there is a growing attention to increase the cancer patients’ pre-treatment awareness in order to help them to cope with the relatively long process of oncologic treatments. To achieve this goal, a codified educational and supporting program titled “Living with Cancer Education Program” has been implemented in some countries <sup>(6)</sup>. The aim of this program is to improve the patients’ awareness of their disease, the treatment and its consequences, as well as to train them how to get on with their ordinary life during and after the treatment. The present study showed that about 88% of our patients had low to moderate awareness of their disease, and therefore required more education. Similarly in a study by Johnson and Grahn conducted to teach the patients how to live with cancer, 90% of patients felt like they needed a lot to learn about cancer and its related complications <sup>(3)</sup>.

In our study 71% and 75% of patients desired to receive as much information as possible about their disease type and its treatment methods respectively. The results of a study in the Netherlands in 2000 have indicated similar findings <sup>(7)</sup>. Another study in Italy also indicated that 81% of patients who were treated for cancer, wished to receive the maximum information about the type of disease and means

**Figure 1:** Percentage of patients needing information based on Age.



of treatment <sup>(8)</sup>. Thus, our findings show that most of the patients like to know more facts about their disease and its treatment; and this represents the importance of education in this respect.

In this study 53% of patients preferred to receive information in the presence of a companion which was 85% for a similar study in Italy <sup>(8)</sup>. This indicates that the family plays a prominent role in encountering the disease tragedy; hence we should consider the family as an important channel for giving required education and improving the patients' compliance with treatment.

In the present study 68% of patients wished to get their required information during the course of treatment, whereas in Italy, 63% preferred the pre-treatment period as the appropriate time for accessing the information <sup>(8)</sup>. Considering that 46% of patients desired to get information directly from the attending physicians, this indicates the critical role of the physicians in dealing with cancer patients in our population. So it is necessary for our physicians, to inform the patients prior to, during and after completion of treatment, about the subsequent measures and the side effects of treatment, and to be responsive for patients' educational requirements.

In our study 75% of patients started their treatment without being informed of its process and subsequent complications which emphasizes the shortcomings of our educational system in familiarizing the patients with the treatment course and probable outcomes before initializing the treatment.

## Conclusion

Our findings indicate a shortage of training about oncologic treatment and its side effects among cancer patients, and emphasizes the need for developing a structured program to alleviate this need. It seems that the role of physicians in this field is more significant than other health care staff.

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