

## Attitudes of Saudi medical students toward the disclosure of information on cancer in eastern Saudi Arabia

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ABSTRACT

**Objective:** To assess the attitude of future physicians regarding the disclosure of diagnosis, prognosis, benefits, and adverse effects of therapeutic intervention if they happen to have cancer. It also examined the differences if any between regions or gender. **Materials and Methods:** A total of 332 medical students from University of Dammam, in the Eastern Province of the Kingdom of Saudi Arabia were surveyed using a self-administered questionnaire. The questionnaire consisted of nine questions on the attitudes to disclosure of information on cancer. This self-administered questionnaire was completed by the students in the presence of an investigator. **Results:** The vast majority of Saudi medical students stated that they would like to know about diagnosis of cancer (92.8%) and only 7.2% wanted information withheld from them. Further, 67% of the males and 74.1% of the females wanted family members to know ( $P = 0.01$ ), but one-third (33%) did not want their family to know. Only 24.1% of the male and 21.1% of female students wanted their friends to know. In addition, 97% of the males and 98.8% of the females wanted to know the diagnosis, and 97% and 95.8% of females and males, respectively, would like to know the side effects of the therapy. Almost 95% of male and 93.4% of female students wanted to know the prognosis. Also, 98% of medical students from the Eastern Region would want the diagnosis of cancer to be disclosed compared to 73.6% of those from other regions ( $P = 0.01$ ). There is no difference between the genders in attitudes toward the disclosure of the diagnosis, 94.6% and 92.2% ( $P = 0.38$ ). **Conclusions:** There was a consensus among Saudi medical students on the knowledge of the benefits of treatment, adverse effects of therapy, and prognosis. Female students significantly more than males would like their families to be informed. Significantly more medical students from the Eastern Region than those from other regions would like the diagnosis of cancer to be disclosed.

**Key words:** Attitudes, cancer, medical students, region, Saudi

### INTRODUCTION

A majority of both healthy adults, and patients with cancer from western countries and recently from the eastern nations want to be told about the diagnosis of their diseases, options of treatment available, and prognosis.<sup>[1-6]</sup> Of late, changes toward more disclosure of diagnosis and

prognosis of cancer have been reported from the Far East.<sup>[7,8]</sup> In other countries, the rate of disclosure is low.<sup>[9-12]</sup>

As far as we know, there is no available information about the knowledge and attitude of Saudi medical students toward the disclosure of diagnosis, benefits and side effects of therapy, and prognosis of malignant diseases. In addition, since the family is the structural foundation of Saudi society, this study aimed at exploring the medical students' attitude toward sharing any news of any malignancies they have with their family members and friends. The medical students were asked to project their views to what they would want if they had cancer. The purpose of this study was to explore Saudi medical students' preferences for disclosure of the diagnosis of cancer, benefits and side effects of therapy, and prognosis

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if they get cancer. In addition, their views on sharing bad news with their family members and friends were explored.

## MATERIALS AND METHODS

For the purposes of this study, questionnaires were distributed to 332 male and female medical students attending oncology lectures from 2003 to 2008. The medical students consisted of 166 males and 166 females in their fourth, fifth, and sixth years in medicine at King Fahd Hospital of the University. The purpose of this study as well as different opinions in our community were first explained. The medical students were asked to project their views, express their desires and wishes clearly, by answering the questionnaire provided. The author explained in detail the objectives of the study and addressed questions raised by the students. The respondents were allowed to reply 'Yes' or 'No' as they thought appropriate. The following nine questions were developed.

1. Do you want to be given all the information?
2. Do you want to be given only partial information?
3. Should we withhold all the information?
4. Should we tell your family?
5. Should we tell a friend?
6. Should we treat you without telling you the effect of the treatment?
7. Should we treat without telling you about your cancer?
8. Do you want to know all about side effects of the treatment?
9. Would you like to know the prognosis?

All medical students who attended the oncology lectures willingly agreed to participate and answered the nine questions independently without any help.

The  $\chi^2$ -test was performed to examine whether there was a significant difference between answers of the medical students based on their region of origin or gender. The significant level was determined at 5%, and Epi Enfo V.6 Statistical software was used for statistical analyses.

## RESULTS

The response rate was 100% with 166 male and 166 female medical students even though participation was not obligatory. Table 1 presents demographic characteristics of the study subjects. Male and female medical students did not differ significantly in their attitude to the disclosure of the diagnosis of cancer, benefits of treatments, adverse effects of therapy,

**Table 1: Demographic characteristics of the study participants (N = 332)**

Variables	No. (%)
Age range (years)	21–27
Median age	24
Religion	
Muslim	332 (100)
Nationality	
Saudi	332 (100)
Sex	
Male	166 (50.0)
Female	166 (50.0)
Education	
Sixth year	134 (40.4)
Fifth year	99 (29.8)
Fourth year	99 (29.8)
Place of origin (Province)	
Eastern	241 (72.6)
Others	91 (27.4)

informing their friends of the bad news, and their wish to know prognosis. There were significant differences on giving information on their disease to members of their family. Male medical students were significantly less in favor than females to inform their relatives (66.3% vs. 74.1%;  $P = 0.01$ ) as shown in Table 2. Significant differences were also found between the attitudes of medical students from the Eastern Region and students from other regions concerning the disclosure of diagnosis of cancer (98.3% vs. 73.6%;  $P = 0.001$ ). However, there was no significant difference between male and female medical students concerning disclosure of diagnosis of cancer (94.6% vs. 92.2%;  $P = 0.38$ ) as shown in Table 3. There was no significant difference between male or female medical students from the Eastern Region or other regions in their desire to know benefits of treatment, the side effects of therapy, and the prognosis if they fell ill with a malignant disease ( $P = 0.32, 0.62, 0.50, 0.67, 0.30, \text{ and } 0.46$ ), respectively as shown in Table 4.

## DISCUSSION

Studies of attitudes and knowledge of cancer of healthy Saudis have shown a considerable degree of fear and anxiety or misperceptions about the malignant disease.<sup>[13,14]</sup> Fears and false beliefs about cancer are not always limited to the general healthy public but medical students also often have similar feelings.

In this survey, the attitude of future physicians regarding the disclosure of diagnosis, prognosis, benefits, and adverse effects of therapeutic intervention if they got cancer was assessed. The most important finding was that

**Table 2: Medical students' response for 9-item questionnaire**

Questions asked to 332 medical students	Male		Female		P-value ( $\chi^2$ -test)*
	Yes	No	Yes	No	
	No. (%)	No. (%)	No. (%)	No. (%)	
Want to know all information about cancer	154 (92.8)	12 (7.2)	154 (92.8)	12 (7.2)	1.00
Want to know only partial information	10 (6.0)	156 (94.0)	12 (7.2)	154 (92.8)	0.64
Want to withhold all information	3 (1.8)	163 (98.2)	3 (1.8)	163 (98.2)	1.00
Want the family to know	110 (66.3)	56 (33.7)	123 (74.1)	43 (25.9)	0.01
Want the friends to know	40 (24.1)	126 (75.9)	35 (21.1)	131 (78.9)	0.35
Want to be treated without knowing benefit of therapy	7 (4.2)	159 (95.8)	5(3.0)	161 (97.0)	0.52
Want to be treated without knowing the diagnosis	5(3.0)	161 (97.0)	2 (1.2)	164 (98.8)	0.51
Want to know side effects of therapy	154 (92.8)	12 (7.2)	152 (91.6)	14 (8.4)	0.56
Want to know about the prognosis	158 (95.2)	8 (4.8)	155 (93.4)	11 (6.6)	0.41

\*P &lt; 0.05, statistically significant

**Table 3: Characteristics of the sample by preference for disclosure or nondisclosure of cancer diagnosis**

Variables	Disclosure, no. (%)	Nondisclosure, no. (%)	P-value ( $\chi^2$ -test)*
Region			0.001
Eastern (n = 241)	237 (98.3)	4 (1.7)	
Other (n = 91)	67(73.6)	24 (26.4)	
Gender			0.38
Male (n = 166)	157 (94.6)	9 (5.4)	
Female (n = 166)	153 (92.2)	13 (7.8)	

\*P &lt; 0.05, statistically significant

93% of both male and female medical students would welcome all information about cancer; only 7% of them wanted only either partial information or no information at all. According to the study in Taiwan conducted in 2004, only 7.7% of the participants preferred not to be told the truth.<sup>[15]</sup>

This result is similar to ours, in which only 7% of medical students preferred partial information or wanted all information withheld. Several studies have shown that 60–80% of physicians desired to be informed if they had cancer, 84–88% of medical students wished to know if they had advanced cancer and other medical students' attitudes toward nondisclosure of cancer have changed.<sup>[16-18]</sup>

The majority of participants, male and female, would like to share the bad news with their family members, but only a minority of them wanted to share this information with their friends. Only a minority did not wish to know the benefits or the adverse effects of therapy. Almost all the male and female medical students rejected the idea of being treated without being told the diagnosis. Almost all of the participants would like to know the prognosis if they were diagnosed with a

malignant disease. Although other studies of student's opinions on ethical issues showed gender as an important parameter,<sup>[18,19]</sup> in this study, there were no significant differences between males and females on all eight items in the questionnaire. The findings on medical students' attitudes were less homogenous on the question about the disclosure of their cancer information to relatives. Seventy-four percent of female medical students and 63.3% of male medical students wanted their relatives to know the bad news of cancer and the difference was statistically significant.

Saudi Arabia is composed of five large regions; eastern, western, central, north, and southern regions. Of the study subjects, 73% (241) were from the Eastern Region and 27% (91) from other parts of the kingdom. The result of the study showed that 98.3% of the medical students from the Eastern Region preferred and wanted disclosure, and only 2% were against nondisclosure. The study showed that 73.6% of the medical students from the other regions wanted disclosure, but 26.4% did not. The results showed a statistically significant difference between the Eastern Region and other regions. This difference could be the result of traditions, cultural variables, and attitudes of the internal regions of the Kingdom, where prevailing attitudes in traditional cultures would be inclined toward concealment as a measure of protecting and supporting the patients. In addition, the Eastern Region is more multicultural and exposed to other external influences as well.

The last part of the questionnaire examined the medical students attitudes toward disclosure of the benefits of treatment, adverse effects of therapy, and prognosis. There was no significant difference between the male or female medical students from the Eastern Region or other regions in respect of the disclosure of the above three-mentioned items of news.

**Table 4: Characteristics of the sample by preference to know benefits of treatment, adverse effects of therapy, and prognosis of cancer**

Variables	Benefits to therapy			Adverse effects			Prognosis		
	Yes	No	P-value ( $\chi^2$ -test)	Yes	No	P-value ( $\chi^2$ -test)	Yes	No	P-value ( $\chi^2$ -test)*
Province			0.32			0.50			0.30
Eastern (n = 241)	234 (97.1)	7 (2.9)		225 (93.4)	16 (6.6)		223 (92.5)	18 (7.5)	
Other (n = 91)	86 (94.5)	5 (4.5)		83 (91.2)	8 (8.8)		81 (89.0)	10 (11.0)	
Gender			0.62			0.67			0.46
Male (n = 166)	156 (94.0)	10 (6.0)		153 (92.2)	13 (7.8)		152 (91.6)	14 (8.4)	
Female (n = 166)	158 (95.2)	8 (4.8)		155 (93.4)	11 (6.6)		148 (89.2)	18 (10.8)	

\*P < 0.05, statistically significant. Fisher Exact test.

This study reveals that the attitude of medical students at KFHU toward the disclosure of information about the diagnosis of cancer, the advantages and adverse effects of therapy, and prognosis of cancer are comparable and similar to the attitudes of actual Saudi cancer patients in the same institution.<sup>[20]</sup>

The generalization of the findings of our study is limited in two aspects: first, given that the sample size and geographical limitations and the fact that the survey was conducted at a single institute, it is difficult to say whether the outcome of this study could represent the general attitude of all medical students in the Kingdom. Second, we studied the attitudes of medical students rather than the general population who may have different attitudes toward the disclosure of information on cancer.

Other more detailed studies are necessary if we are to find out how much information should be given to cancer patients and the best way to deliver the news.

In summary, our findings in this survey indicate that almost all medical students wanted all information about diagnosis, prognosis, the benefit and adverse effects of treatment to be disclosed if they have malignant diseases. Female medical students significantly more than males wanted family members to be informed. Furthermore, our results also indicated that the attitudes of medical students from the Eastern Region differed significantly from those of medical students from other regions of Saudi Arabia toward the disclosure of the diagnosis of cancer.

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