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RESEARCH ARTICLE

INVESTIGATING THE IMPACT OF PHYSICIANS' ATTITUDES TOWARDS DEATH AND THEIR DEMOGRAPHIC FACTORS ON DISCLOSURE OF BAD NEWS TO CANCER PATIENTS

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ABSTRACT

BACKGROUND:

This study aimed to investigate the attitudes of physicians towards death and cancer patients as well as to examine the relationship between physicians' demographic variables, their death anxiety, their attitudes and avoidance behavior towards informing patients about their diagnoses, and physicians' opinions about the necessity of education on how to approach patients with terminal illness.

METHODS:

The study involved 90 physicians calculated with Cochrane sample size formula who completed a questionnaire on sociodemographic information, the Death Anxiety Scale, and a 21-item questionnaire prepared by the authors to evaluate physicians' attitudes. The proposed questionnaire is designed in such a way that contains 45 questions, questions are related to demographic characteristics, including age, gender, specialized field, place of study, workplace, work experience, marriage, and having children. following questions about physicians' opinions the need for medical ethics training and death and giving bad news, about end-stage patients, good death and the availability of training on giving bad news for physicians. Death fear was evaluated by Templer questionnaire. Data were analysed with chisquere test with SPSS 26 software.

RESULTS:

The results showed that 87.8% of the physicians believed that patients had the right to be informed of their diagnoses and disease condition completely. However, only 52.2% of the physicians accepted that the diagnosis should be announced. Moreover, when the patient was a physician themselves with cancer, 94.4% of the physicians agreed that they prefer to be informed about the diagnosis and survival. This ratio decreased to 56.7% when the patient was a physician's relative. Additionally, 94.4% of the physicians (n=287) agreed that education on how to approach death and cancer patients should be given during or after medical education. The responses to the questionnaire differed according to the variables of death anxiety, practice area, gender, and marital status.

CONCLUSION:

According to the results, this paper shows the importance of the socio-demographic factors and the physician's attitude toward dealing with patients and giving bad news, and try to unify it by using a written training program in dealing with patients and giving bad news and reducing the effect of individual factors of physicians in dealing with Patients.

KEYWORDS

death, anxiety, physician, cancer, socio-demographic factors

INTRODUCTION

Giving bad news is an inevitable and unpleasant part of the career of physicians and medical students. It is a difficult task for both the speaker and the recipient [1]. Even small language variations in delivering bad news can significantly affect the health message, physician evaluation, and medical goals [2]. In Western countries, the main concern is choosing the best way for the healthcare team to break the news to patients. However, in many Asian countries, giving bad news faces several challenges, and there is no consensus on whether patients should be informed of their diagnosis or not [3]. The prognosis of the disease is one of the most challenging cases in the relationship between the doctor and the patient, as it can affect the acceptance of the disease, treatment decisions, and care measures [4,5]. There are cultural, professional and emotional challenges to revealing the truth to cancer patients. In Iran, patients with cancer do not have enough information about their disease and treatment choices. It is evidence that cancer is considered as bad news because Bad news" has been defined as "any information likely to alter drastically a patient's view of his or her future.

Some studies on this topic showed that final year medical students, who were about to enter the medical profession, felt incapacitated, unprepared, and unsuccessful when faced with the task of breaking bad news. Additionally, some physicians in the same situation felt guilty, as if they were responsible for the patient's condition [6-8]. A survey shows that 40% of Iranian cancer patients are not aware of their disease, but they prefer to know more about their diagnosis. Those who are aware of their diagnosis prefer to receive more details directly from their physician [9].

In Eastern countries, establishing a balance between independence and the obvious influence of families is an important factor in giving information to patients with a cancer diagnosis. A considerable number of patients do not receive a cancer diagnosis directly from their physician. Some studies showed that in countries like Japan, Saudi Arabia, and Iran, cancer patients and even physicians confirm that the physician should inform the family first and let them give the news to the patient. Requesting not to be informed is the patient's right, but if the family is informed by the physician without the patient's permission, this would be against the patient's autonomy [10]. Even families prefer to know first most of the time, and they should be informed about the patient's autonomy [11].

The importance of physician communication skills for bad news is increasingly recognized and there is evidence that this skill has improved, but giving bad news is still challenging and physicians lack the necessary clinical skills. Although there are a number of guidelines for communicating bad news to help doctors disclose the diagnosis and prognosis of the disease, a high proportion of cancer patients still receive insufficient information about their disease [12].

When searching for studies done in Iran on this subject, it is evident that studies evaluating the approaches and attitudes to breaking bad news make up the majority of them [11-13]. In the era of compiling instructions for giving bad news, there is little data in many countries about the attitudes and expectations of doctors and the demographic characteristics of doctors and their impact on their relationship with patients in giving bad news. But emotional situation, beliefs and attitude toward death, marital status or having children, place that they work because of different culture of population and its interaction with physicians, place of study according to different teaching strategy that may also be influenced with cultural atmosphere and also work experience according to receiving feedback from patients and maturity of physicians, may all change the dealing of physicians with patients. Newer investigations insist on physician's readiness for giving bad news compared to just patient preparation and information giving space [14].

Unfortunately, we did a study on how the personal attitude of doctors toward death may affect their relationship with patients that have higher death risk accept. Therefore, we were interested to investigate the physician's opinion toward death and their fear of death and its effect on disclosure with patients in higher risk of death and this shows that we should have educational programs to reduce the effect of characters that may influence the physician patient relationship in giving bad news.

One of the goals in giving bad news is to minimize the discomfort of professionals. This discomfort may be caused by fear of the patients' reactions, their own feelings, their incompetence, or their fear of being blamed. Minimizing such distress to the extent that it may affect professionals' own health affects their satisfaction and competence in delivering bad news [15]. Nowadays malpractice is more because of poor patient-physician relationship especially in effective communication than quality of treatments. The impact of this phenomenon increases the risk of suing phycians and doctors are increasingly view patients as potential adversaries and this may result practice defensive medicine, which more and more eroded their relationships. Studies have demonstrated that the practice styles of not sued physicians do not differ in technical aspects of clinical care. Nearly one-third of complaints are related to communication [16]. this will result in patient safety issues, adverse effects on the public opinion, reduced empathy between the physician-patient, and challenges of medical professionalism and Lack of optimal treatment increases the complaints from the physicians [17] all this will affect healthcare system. On the other hand, general belief about cancer despite advanced therapy methods and better survival compared to previous decades is still associated with fear and hearing word cancer is still horrible for many patients and even physicians are affected with this belief and many may try to reduce the difficulty of this situation by involving family members rather than the patient [18].

Knowing that which characteristic may influence physicians encounter with patients and to program for correcting and decreasing effect of personal characteristic encountering patients with cancer and giving bad news is required .on the other hand death anxiety also may influence physicians encounter with patient with diseases that may result in dead so we should know the effect of death anxiety on dealing with cancer patients, it should be managed and educated during learning years. Doctors' perception is often conflicted with patient's preferences and for each region, the unique model of the region should be designed according to the existing cultural differences, so we conducted the present study to evaluate the skills of doctors in breaking bad news. to cancer patients that may lead to clinical guidance on how to deliver bad news to patients in Iran regarding between their demographic characteristics, their view of death, and its impact on giving bad news.

METHODS

According to the latest statistics from the medical system website, the total number of specialists in Iran, including all relevant subspecialty branches in the fields of general surgery, internal medicine, radiotherapy, and radiology, is estimated to be around 13,476 people. Considering the population above 10%, i.e., 1,347 people, were considered as the population of the society. Extreme case sampling involves selecting a sample of individuals or units that are considered extreme or unusual in terms of the characteristics or characteristics the researcher is interested in investigating. This type of sampling is used to understand unusual or exceptional experiences or characteristics in society. Therefore, considering the judgment of researchers and less access to the general community of specialist doctors, this number was considered.

Cochran's formula was used to estimate the required sample size in this research. According to Cochran's formula, N is the population size, and n is the sample size. The allowable error value, which is usually considered equal to 0.05, is represented by d. The ratio of possessing the desired trait is represented by p, and the ratio of not having the desired attribute, which is usually considered equal to 0.5, is represented by q. Based on Cochran's formula, with confidence level of 95%, margin of error 10, population proportion 50, the estimated sample size is at least 90 people and at most 299 people. Our study is a pilot study of the population because of large number of population and also Difficulty in reaching the people of the target society and that this group of doctors are less willing to participate in filling out the questionnaires due to their busy schedule, we selected 90 sample size.

In this research, the questionnaire method was used to collect information. Before distributing the questionnaire, the plan, the purpose of the questionnaire, the way of answering, the confidentiality of the information, and also

their non-traceability were explained to the target population. The questionnaire was established based on the literature review and after examining its content validity by a number of psychiatrists. Patients' view and variables affecting how to break the bad news was discussed in the questionnaire. This questionnaire contains 45 questions, of which the first 8 questions are related to demographic characteristics, including age, gender, specialized field, place of study, workplace, work experience, marriage, and having children. One of these characteristics is type of university of study. The ranking or in better words the classification of medical sciences universities of Iran is based on The factors that determine the names of type 1 universities of medical sciences, including the axes of science production such as articles published in ISI, Scopus, the ratio of the total number of articles to the number of academic staff, etc. and the axis of structure such as human resources, student research, research infrastructure, etc. It has been announced. The names of medical sciences category 1 universities include the following, which you can see in the order and points they have earned. Tehran University of Medical Sciences Shahid Beheshti University of Medical Sciences, Isfahan University of Medical Sciences, Shiraz university of medical sciences, Tabriz University of Medical Sciences, Mashhad University of Medical Sciences, Ahvaz University of Medical Sciences, Kerman University of Medical Sciences.

From questions 9 to 30, physicians' opinions were examined in the field of evaluating the need for medical ethics training and physicians' attitude toward death and giving bad news, physician's feelings and thoughts about end-stage patients, opinions, and attitudes about good death and the availability of training on giving bad news for physicians. At the end of the questionnaire, the physicians' comments about telling the diagnosis of the disease when the physician himself/herself or one of his relatives is diagnosed with cancer were collected.

In designing the final 15 questions, Templer's fear of death scale, which was designed in 1970 and examined in various studies in Iranian society, was used [19]. The questionnaire was designed by a specialized team, including one psychologist, three radio-oncotherapy specialists, two general surgeons, and one onco-surgeon, who reviewed previous studies conducted in this field [6]. After completing the questionnaire by the target group, the data were extracted from the questionnaire and entered into the SPSS software 26, and the variables were measured using Chi square test.

RESULTS

Out of the 90 questionnaires in this study, 50 (55.6%) were completed by women and the remaining were completed by men. The majority of participants were married (80%) and had children (66.7%). The average age of participants was 42.76 ± 9.53 years. 41.1 % of study subjects had more than ten years of work experience. The specialties of the participants in this survey were internal medicine (33.3%), surgery (30%), radio-oncology (26.7%), and radiology (10%), and the majority of them were from first-class medical sciences universities (71.1%). The city where more than half of the participants (68.9%) worked had a population of under 500 thousand people (Table 1). The average death anxiety score was 6.88±3.27, and the lowest score was 1, while the highest was 15. More than half of the participants (73.3%) had a death anxiety score of less than or equal to 8, and 24 of them (26.7%) had a death anxiety score greater than 8.

The results of the statistical tests in Table 2 showed a statistically significant difference between the average death anxiety score and variables such as gender (p=0.002) and specialty (p=0.009). Male physicians had a higher percentage of death anxiety score. Surgeons and radio oncologists had lower death anxiety scores than internal medicine specialists and radiologists. However, the average death anxiety score did not show a significant relationship with variables such as age, marital status, having children, city of work, city of education, or work experience (p>0.05)., as it is shown in Table2.

TABLE 1. DEMOGRAPHIC CHARACTERISTICS

Demographic characteristics		Frequency	Percent
Age	Under 40	42	46.7
	40 and above	48	53.3
Gender	Female	50	55.6
	Male	40	44.4
Marital status	Single	18	20

	Married	72	80
Children	Have	60	66.7
	Don't have	30	33.3
Specialty	Internal medicine	30	33.3
	Surgery	27	30
	Radiology	9	10
	Radio-oncology	24	26.7
Population of the city of work	Under 500,000	62	68.9
	500,000 and above	28	31.1
University class of the residency 2	1	64	71.1
	2	24	26.7
Work experience	5 and under5 years	33	36.7
	5 to 10 years	20	22.2
	Above 10 years	37	41.1

TABLE 2. THE RELATIONSHIP BETWEEN SOME DEMOGRAPHIC CHARACTERISTICS OF DOCTORS AND THEIR LEVEL OF DEATH ANXIETY

Variable		Death anxiety score			
		Under and equal 8		Above 8	
		Number	Percent	Number	Percent
Gender	Female	43	65.2	7	29.2
	Male	23	34.8	17	70.8
	0.002 =P value		$\gamma^2 = 6.825$ Chi squere		
Speciality	Internal medicine	22	33.3	8	33.3
	Surgery	22	33.3	5	20.8
	Radiology	3	4.5	7	29.2
	Radio oncology	19	28.8	4	16.7
	0.009=P value		$\gamma^2 = 11.531$		
Do you think that even if you don't tell the patient about his/her condition, he/she will know about his/her condition unconsciously?	Yes	17	25.8	12	50
	NO	40	60.6	12	50
	No opinion	9	13.6	0	0
	0.033=P value		Chi squere $\gamma^2 = 6.825$		
If I have cancer, I would like to know completely about my disease and its survival	Yes	65	98.5	20	83.3
	No	0	0	3	12.5
	No opinion	1	1.5	1	4.2
	0.012=P value		Fisher's test		

Physicians with a higher level of death anxiety had a higher level of emotional difficulty in giving bad news. Regarding the question "Do you think that even if you don't tell the patient about the condition of the disease, he/she will be

informed about his/her condition unconsciously?", physicians with a higher level of death anxiety believed that patients would understand even if they were not given a complete explanation. Patients who are aware of their disease like to talk about their condition and death.

DEFINING THE DEMOGRAPHIC VARIABLES

Sociodemographic variables including age, gender, marital status, having or not having children, specialty field, the amount of population of city of work and study and years of work experience are socio demographic characters that are evaluated in our study and distribution is demonstrated in Tables 4 and 5. Besides, Table 3 shows that all physicians agreed that a patient's awareness of their cancer diagnosis and prognosis affects their treatment choices. The majority (94.4%) of physicians agreed with the need for a professional team to help them inform cancer patients. 94.4% of physicians answered positively to the question "If I have end-stage cancer, I would like to know everything about my disease and its prognosis."

TABLE 3. ABSOLUTE FREQUENCY DISTRIBUTION OF THE RESPONSES OF THE STUDIED SUBJECTS

Objects	Yes	No	No Opinion
	Number(percent)	Number(percen)(	Number(percen)(
1.Is breaking the news of impending death difficult for you emotionally?	(87.8)9	(10)9	(2.2)2
3. Do you think that even if you don't tell the patient about his/her condition, he/she will know about his/her condition unconsciously?	(32.2)29	(57.8)52	(10)9
4.Is there a need for education about end-of-life palliative care and available supports	(84.4)76	(11.1)10	(4.4)4
5.Have you been trained to talk to the patient about cancer conditions?	(17.8)16	(76.7)69	(5.6)5
6.Is the help of a professional team needed in informing patients with cancer?	(94.4)85	(2.2)2	(3.3)3
9.In your opinion, does the patient's awareness of the cancer diagnosis and survival of the disease have an effect on the patient's choice of treatment method?	(100)90	0	0
10. Should the patient be told the approximate length of time he/she will be alive?	(47.8)43	(37.8)34	(14.4)13
11.All information must be given to the patient completely?	(52.2)47	(43.3)39	(4.4)4
14.If I have cancer (end stage), I would like to know completely about my disease diagnosis and its survival.	(94.4)85	(3.3)3	(2.2)2
15.If my loved ones are suffering from cancer, they should know fully about the diagnosis of the disease and its survival.	(56.7)51	(34.4)31	(8.9)8
16.In my opinion, telling patients about advanced cancer conditions has no effect on survival.	(37.8)34	(40)36	(22.2)20
17. Patients have the right to know their cancer diagnosis and the full extent of the disease's condition.	(87.8)89	(5.6)5	(6.7)6
18. Does informing patients about the condition of their disease lead to increased trust in their doctor?	(82.2)74	(7.8)7	(10)9

19.Do you ask the patient's permission to inform their family about their cancer diagnosis?	(56.7)51	(34.4)31	(8.9)8
20.Do you entrust the family to inform the patient about their cancer condition?	(26.7)24	(61.1)55	(12.2)11
21. If one of your loved ones has cancer, do you expect information about their disease to be given to you without their knowledge?	(51.1)46	(42.2)38	(6.7)6
Patients who are aware of their disease like to talk about their condition and death.	(71.1)64	(16.7)15	(12.2)11

TABLE 4. THE ABSOLUTE FREQUENCY OF MULTIPLE-CHOICE QUESTIONS

Objects		Number	Percent
2. How do you feel when you give the news of cancer?	Feel guilty	3	3.3
	Absurdity	11	12.2
	Sadness	66	73.3
	Anxiety	29	32.2
	Fear	6	6.7
	No special feeling	9	10
7. If you need the help of a professional team in informing cancer patients about their disease, which one would you prefer?	Oncologist	54	60
	Patients surgeon	24	26.7
	Psychologist	51	56.7
	Psychiatrist	37	41.1
	Religious advisor	6	6.7
	To several items at the same time	25	27.8
	None of them	3	3.3
8. Giving information about disease diagnosis and situation to the patient depends on what factors?	Patients religious beliefs	23	25.6
	Economic level	27	30
	Social level	26	40
	Level of education	37	14.1
	All items	56	62.2
	None	4	4.4
12. Which option do you choose regarding the giving diagnose and information method?	The patient should be told first, and if the patient allows it, the family should be told	20	22.2
	The information must be given to the patient first	9	10
	The information should be told to the patient's family first	13	14.4
	It depends on the condition of the patient	48	53.3
13. If you do not agree to give complete information to the patient, what is the reason?	Emotional reactions of the patient	42	46.7
	It is difficult for me	17	18.9
	Worried about being blamed	3	3.3
	Worry about patients going to another physician	0	0

	Worrying that the patient will refuse treatment due to disappointment	47	52.2

TABLE 5. THE RELATIONSHIP BETWEEN QUESTIONNAIRE QUESTIONS AND DEMOGRAPHIC VARIABLES

Variables (Age, marital state, speciality, City of work, class of university of studying residency)		Yes	No	No idea
		Number(percent)	Number(percent)	Number(percent)
Do physicians deal with patient as the deal with their relatives (if they have learned standard dealing manner. Age and if one of your loved ones has cancer, do you expect information about the diagnose and disease to be given to you without your loved one's knowledge?	Under 40	(% 17.8)16	(% 26.7)24	(% 2.2)2
	40 and above	(% 33.3)30	(% 15.6)14	(% 4.4)4
		P value =0.027	$\gamma^2 = 7.191$ Chi squere	
dose marital status changes information giving concept of physicians All information must be given to the patient completely?	Married	(% 40)36	(35.5%)32	(% 4.4)4
	Single	(% 12.2)11	(% 7.8)7	0
		P value =0.020	$\gamma^2 = 11.735$ Chi squere	
Dose Marital status change the concept of physicians on respecting patients right to keep the disease information secret: Do you ask for the patient's permission to inform their family about	Married	(% 42.2)38	(% 28.9)26	(8.9%)8
	Single	(% 14.4)13	(% 5.6)5	0
		P value<0.0001	$\gamma^2 = 22.467$ Chi squere	

their disease condition?				
Dose the Specialty change the: If I have end-stage cancer, I would like to know everything about my disease and its prognosis.	Internal Medicine	(% 32.2)29	(1.1%)1	0
	Surgery	(30%)27	0	0
	Radiologist	(8.9%)8	(2.2%)2	0
	Radio-oncologist	(23.3%)21	0	(2.2%)2
		P value=0.016	Fisher's test	
Which Specialties feel more need for end life palliative education: Is there a need for education on end-of-life palliative care and available support?	Internal Medicine	(25.6%)23	(5.6%)5	(% 2.2)2
	Surgery	(% 24.4)22	(5.6%)5	0
	Radiology	(% 8.9)8	0	(% 2.2)2
	Radio-oncologist	(% 25.6)23	0	0
		P value=0.026	Fisher's test	
Dose giving bad news is more difficult for physicians working in lower populated cities: Is breaking the news of impending death emotionally difficult for you?	Under 500,000	(63.3%)57	(3.3%)3	(2.2%)2
	and above 500,000	(24.4%)22	(6.7%)6	0
		P value=0.04	Fisher's test	
Dose physicians working in lower populated cities feel more need for training to discuss cancer patients : Have you been trained to discuss cancer conditions with patients?	Under 500,000	(8.9%)8	(58.9%)53	(1.1%)1
	and above 500,000	(8.9%)8	(17.8%)16	(4.4%)4
		P value=0.006	$\gamma^2 = 10.260$ Chi squere	
does physicians working in lower populated cities prefer to have a team to inform patients: Is the help of a professional	Under 500,000	(67.8%)61	0	(1.1%)1
	and above 500,000	(26.7%)24	(2.2%)2	(2.2%)2
		P value=0.034	Fisher's test	

team needed to inform patients with cancer?				
Dose physicians working in lower populated cities prefer to inform family rather than patients: Do you rely on the family to inform the patient about their condition?	Under 500,000	(23.3%)21	(36.7%)33	(8.9%)8
	and above 500,000	(3.3%)3	(24.4%)22	(3.3%)3
		P value=0.05	$\gamma^2 = 5.982$ Chi squere	
Dose physicians working in lower populated cities believe that they should be informed more than patients as family member : If one of your loved ones has cancer, do you expect to be informed about their disease without their knowledge?	Under 500,000	(% 42.2)38	(24.4%)22	(2.2%)2
	and above 500,000	(8.9%)8	(17.8 %)16	(4.4%)4
		P value=0.008	$\gamma^2 = 9.722$ Chi squere	
Dose the educational system of cities with lower population encourage physicians to give more information to the patients: All information must be provided to the patient completely.	First class*	(31.8%)28	(39.8%)35	(1.1%)1
	Second class	(19.3%)17	(4.5%)4	(3.4%)3
		P value=0.003	Fisher's test	
Dose the higher work experience result in giving more information to the patient? : Does informing the patient about their disease	5 and under 5	(32.2%)29	(1.1%)1	(3.3%)3
	Above 5 to 10 years	(15.6%)14	(5.6%)5	(1.1%)1
	Above 10 years	(34.4%)31	(1.1%)1	(5.6%)5
		P value=0.026	Fisher's test	

condition increase their trust in the doctor?		

Most physicians (87.8%) believed that patients have the right to know the full extent of their disease's condition. 87.8% of physicians answered positively to the question "Is it emotionally difficult for you to give the news of impending death?" More than half (76.7%) of physicians have not received training to talk to patients about their cancer condition and how to deliver bad news.

84.4% of participants chose the positive answer to the question "Is there a need for education about end-of-life palliative care and available supports?" The majority (73.3%) of the participants chose sadness when asked how they feel upon receiving news of cancer, but death anxiety did not have an effect on their response. 56.7% of the participants would refer cancer patients to a psychologist for help. Regarding the factors that influence giving information about the disease to the patient, 37 (41.1%) chose level of education, 36 (40%) chose social level, 27 (30%) chose economic level, 23 (25.6%) chose religious beliefs, 56 (62.2%) chose all the items, and 3 (3.3%) chose none. The majority of physicians believe that the educational, social, economic, and religious condition of the patient should be taken into account altogether. Regarding the method of giving information to the patient, 48 (53.3%) chose the option "depends on the patient's condition," which demonstrates that most physicians do not have a strict method for giving information to patients and may easily decide to give the diagnosis and information to the family first.

47 (52.2%) of the physicians stated that the reason why they did not agree to give complete information to the patient was the fear that the patient would refuse treatment due to disappointment, 42 (46.7%) chose emotional reactions of the patient, 3 (3.3%) worried about being blamed, and 17 (18.9%) chose "it is difficult for me." None of them chose "being worried about patients going to another doctor" (Table 5).

When examining the effect of demographic factors on questionnaire responses, it was found that physicians over the age of 40 significantly indicated their preference to know all the details of the disease if their family members were diagnosed with cancer, even without their family members' knowledge. Married doctors significantly believed that complete information about the disease should be given to the patient, but they also believed that permission should always be obtained from the patient to provide information about their illness to family members. All internists, radiologists, and surgeons preferred to know all the details of their own cancer diagnosis, which was statistically significant.

All specialties, including surgeons, radiologists, radio-oncologists, and internal medicine physicians, felt a greater need for education on end-of-life care. Physicians who worked in cities with populations under 500,000 faced more difficulty in delivering bad news to patients and expressed more frequently that they had not been trained to talk about cancer with patients. They also expressed a need for a professional team to deliver bad news to patients.

Physicians who worked in cities with populations over 500,000 disclosed less information about the disease to the patient's family. In contrast, physicians in small towns expected that, in the event of a family member's involvement with cancer, they would be aware of all the details of the disease without the patient's knowledge. Physicians who had received education in universities ranked as class 2 were more likely to believe that complete information about the disease should be given to the patient. Physicians with more than 10 years of work experience believed more strongly that providing complete information increased patient trust in the physician.

DISCUSSION

In our study, all doctors responded positively when asked whether a patient's awareness of their diagnosis and survival affects their treatment choices. and also However, majority of doctors believed that patients have the right to know the full extent of their illness and 71 believed that patients who are aware of their disease like to talk about their condition and death. Furthermore, only 43% believed that the approximate time of survival should be disclosed to the patient, and 52.2% believed that all information about the illness should be disclosed to the patient. Despite the physicians' belief in a patient's right to know everything about their cancer and survival, a lower percentage

prefers to divulge the details of the diagnosis and survival due to concerns about the patient's emotional reactions or refusal of treatment. The physicians believed that the extent of information given to the patient mostly depends on social and educational levels, followed by economic and religious levels.

In a similar study by Arbabi et al. [20], the emotional reactions of the patient and concern about their inability to control their reactions were mentioned as the primary reasons for withholding complete information from the patients. In that study, only 14% of doctors believed that the time of survival should be disclosed to the patient, whereas in our study, 43% believed that the approximate time of survival should be disclosed to the patient. In the study by Kaplowitz et al. [21], none of the doctors were willing to disclose information about the approximate time of survival to the patient, which may be due to the increased tendency of doctors towards transparency with patients in recent decades.

Although studies conducted in Iran on patients' opinions about receiving information about their illness, such as the study by Managheb et al. [22], have shown that more than 90% of patients prefer to receive all details and information about their illness, our study found that only 52.2% of participating physicians believed that all details should be explained to the patient. Higher agreement was found among individuals who had received education at type 2 universities. The reasons for this difference may be due to the low number of participants or the type of education provided in these universities, which needs to be investigated and compared with a larger number of participants from different universities.

The majority of physicians, about 79%, experienced emotional difficulty when giving bad news of impending death, and about 66% of physicians experienced emotional sadness when delivering such news. Additionally, about 76% of physicians expressed the need for training in end-of-life care. However, only 16% of them had received training on how to talk to cancer patients and deliver bad news. Similarly, in a study by Arababi and colleagues, 94% of physicians reported that they had not received any training on how to deliver bad news during their education or career. Only 22% rated their own experiences of delivering bad news as good or very good. In the study by Biazar et al. [11], only 13.6% of physicians had received training on how to deliver bad news, while 83% felt the need for training courses. In our study, 94.4% of physicians stated that they needed a professional team to inform cancer patients about their condition. The majority preferred that the diagnosis and information about the disease be provided by an oncologist and a psychologist in the second stage. In the study by Paul et al. [23], oncologists were recommended to deliver bad news due to their higher experience in dealing with cancer patients. This demonstrates that physicians feel the need for educational courses on delivering bad news.

In a study by Ozkiris et al. [6], 95% of doctors expressed a desire to know the details of their own illness if they were diagnosed with cancer, while 84.1% said they would want to know the details if a family member had cancer. Similarly, in our study, 94.14% of respondents said they would want to know the details of their own illness if they were diagnosed with cancer. However, if a family member was affected, only 56.7% of respondents would prefer the patient to know the details. This is similar to the percentage of doctors who would allow the patient's family members to be informed about the illness, which was 56.7%.

Cancer diagnosis is not routinely disclosed to patients in several cultures of Africa, East and South Europe, and Middle Asia. The reasons for this situation include physicians' desire to protect patients from psychological stress after learning their diagnosis, families' reluctance to have the diagnosis disclosed due to the synonymous perception of cancer and death, and patients' unwillingness to know their diagnosis. While family members are reluctant to have the diagnosis disclosed, physicians typically discuss the diagnosis with family members before the patient.

Patients who wish to be informed are not satisfied when deprived of this information, which can lead to negative consequences. In our study, only 56.7% of participants ask for the patient's permission to disclose their disease details to family members. Additionally, 61.0% of respondents in our study said they would entrust family members to provide information about the disease to the patient. However, they expect to be aware of the details of a family member's diagnosis and details, particularly in cities with populations under 500,000, if the family member was affected by cancer.

Khalili et al. [24 reviewed 55 journals, including those from Egypt, Iran, Israel, Jordan, Kuwait, Lebanon, Palestine, Pakistan, Saudi Arabia, Turkey, and the United Arab Emirates. Based on Khalili et al. [24] summary, the diagnosis of cancer is still associated with social stigma and

misconceptions about incurability in the Middle East region. Physicians maintain a policy of disclosure, where they respect certain historical and cultural misconceptions about cancer and, therefore, disclose the truth about cancer to a family member while acknowledging the patient's right to know the truth. They would prefer to disclose it to the patient (or family member) if possible. It appears that the attitude, perceptions, and beliefs of family members and caregivers about telling the truth to the patient favor concealment. There are conflicting results on the assessment of physicians and patients about the quality of truth disclosure in the literature. Many countries lack educational programs for disseminating bad news. Finally, the most important and common problem affecting truth disclosure for cancer patients is the lack of codes and laws related to patients' rights in informed consent. Studies, laws, and educational programs in this area are needed in Middle Eastern societies [24].

The results of our study in cities with populations under 500,000 are presented below. Giving bad news emotionally was found to be more difficult, and there was a greater need for professional team support. Participants expected to receive information about their loved one's disease without their knowledge. This could be due to cultural differences and the types of relationships found in smaller population cities. We also studied death anxiety and its relationship with physicians' willingness to inform patients. Death anxiety was higher in men, and the fields of oncology and surgery had the lowest death anxiety. Individuals with higher death anxiety had less desire to know complete disease information if they were to become ill.

They also experienced higher emotional difficulties when encountering patients with cancer. The study by Ozkiris et al. [6] reported a higher level of death anxiety in women. Ozkiris et al. [6] study also found that death anxiety resulted in more emotional difficulty when informing patients and their families. This may suggest that a physician's attitude towards death can affect how they interact with cancer patients and the information they give to them. A questionnaire with a larger number of physicians should be conducted.

The difference in the approach of physicians in less populous cities may be due to cultural differences, greater familiarity among individuals, or communication limitations in such cities. This requires further investigation with a greater number of physicians from different cities. Limitation: our limitation was small number of physicians taking part in the study from different specialty groups, and also having no assess to other individual factors affecting the physicians' attitude toward cancer patients such as personality type, their familial culture.

CONCLUSION

Our study highlights the need for training courses during education and work to help physicians deliver bad news to patients. On the other hand, the perspective of physicians in their city of work and city of study due to cultural environment or other interfering factors and sociodemographic characteristics may also affect their views on giving bad news. Standardization methods and educational methods according to spatiality and interfering factors during education can minimize these differences. The weakness of our study is the small number of participating patients. There are guidelines available which guide to how give unfavorable news. But in countries like Iran, cancer is still considered the biggest taboo, reactions while giving bad news of cancer can be very unpredictable both for the patient and their families so we decided to investigate on disclosure of bad news in cancer patients. In future studies, larger number of participants from different characteristics that were studied here can provide more precise sight on finding all characteristics that may affect optimal patient physician relationship in poor prognosis disease.

ETHICS APPROVAL

The Babol University of Medical Sciences approved the ethic and content of this paper under the code of #B01267747.

DISCLOSURE STATEMENT

The authors report there are no competing interests to declare.

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DATA AVAILABILITY STATEMENT

The data are available from the corresponding author upon the reasonable request.

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