

# An Investigation and Analysis on the Cognitive Status of Medical Legal System of Medical Undergraduates in Shaanxi Province

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**Abstract:** Objective: To analyze the cognitive status and existing problems of medical undergraduates in Shaanxi Province. Methods: A questionnaire survey was conducted on 988 medical undergraduates in Shaanxi Province, and the data were tested by chi-square test. Results: Medical students are unclear about the concept of medical malpractice and medical damage. They are not fully aware of the scope of rights that may infringe patients. There are differences in the level of cognition, including the informing the content of the obligation in grades, majors, and internships; and the standard of diagnosis and treatment in grades, genders, and hospital internships. Discussion: In order to train qualified medical students, it is necessary to strengthen the cultivation of medical students' legal literacy, especially in the areas of tort liability awareness and respect for patients' rights, so as to improve the quality of prospective doctors' future medical services.

In 1987, the "Measures for Handling Medical Accidents" promulgated and implemented by the State Council classified accidents into technical accidents and liability accidents, and solved a large number of doctor-patient disputes to a certain extent. The "Regulations on the Handling of Medical Accidents" implemented in 2002 was again reformed and the medical accidents were classified into clear grades. The identification of medical accidents began the identification of "dualization". Patients could copy medical records and the Medical Malpractice Measures implemented in 1987 were abolished. The Tort Liability Law, which was implemented in 2010, officially established the "Medical Damage Liability System", and it also ended the "dualization" identification situation. The Regulations on Prevention and Treatment of Medical Disputes, which was implemented in 2018, once again opened the identification system of "dualization". To become a qualified doctor, medical students must have medical expertise, doctor professional ethics, and legal awareness and literacy. In order to investigate the medical students' cognition of the medical legal system, the author conducted a survey of medical undergraduates in Shaanxi Province from May to August 2019, and completed this paper with some discussion and suggestions.

## 1. Objects and Methods

### 1.1 Survey Object.

From May to August 2019, the author conducted a questionnaire survey on medical undergraduates of Shaanxi University of Traditional Chinese Medicine, Yan'an University School of Medicine, and Xi'an Medical College. 1000 questionnaires were distributed through the Internet, and 988 were collected, with a recovery rate of 99%.

### 1.2 Survey Content.

The main contents of this survey include medical students' medical damage, medical accidents, and medical infringement concepts; the scope of infringement of medical damage; the content of the obligation to be informed; and the cognitive status of the content of the medical treatment. The above survey contents are all part of the system's core content or legislative ambiguity.

### **1.3 Statistical Methods.**

The questionnaire data was established using SPSS 21.0 and analyzed by chi-square test.

## **2. Results Analysis**

### **2.1 Basic Information.**

The survey subjects were mainly undergraduate students in Shaanxi Province. Grades: 255 (25.8%) freshmen, 156 (15.8%) sophomore, 162 (16.4%) junior, 58 (5.9%) senior, 249 (25.2%) graduate and 108 (10.9%) gauge trainee. Gender: 310 boys (31.4%) and 678 girls (68.6%). Major: 769 (77.8%) in clinical medicine, 98 (9.9%) in Chinese and Western medicine, 101 (10.2%) in Chinese medicine, and 20 (2%) in medical imaging. Internship or trainee hospital: 657 (35.5%) in the Three A hospitals, 80 (8.1%) in the Three B Hospital, 180 (18.2%) in the Two A hospital, and 71 (7.2%) in the Two B hospital. Internship or internship room: 405 (41%) in internal medicine, 167 (16.9%) in surgery, 45 (4.6%) in gynecology, 31 (3.1%) in pediatrics, 144 (14.6%) in other departments, and 196 in general outpatient clinics (19.8%).

### **2.2 Cognitive Investigation of the Concept of Medical Malpractice and Medical Damage.**

279 (28.24%) people believed that the scope of medical damage was wider, 523 (52.94%) informants believed that there was a cross between these two concepts, 180 (18.22%) people showed they did not understand, and 6 people (0.61%) considered there was no difference. The actual range of medical damage is greater than the scope of medical malpractice. In addition, when asked if “a medical error has occurred, but no medical accident has occurred, whether someone should be legally responsible for that”, 400 (40.49%) people think that they are not responsible, and 319 (32.29%) think that they are responsible and 269 (27.23%) informants could not be able to answer.

The chi-square test showed that medical students' knowledge of the above concepts was not statistically different in different grades, genders, majors, internships, trainee hospitals and departments ( $P>0.05$ ). In summary, it can be seen that medical undergraduates have a vague understanding of the scope of medical accidents and medical damage concepts.

### **2.3 Cognitive Investigation on the Scope of Possible Infringement of Medical Damage.**

In general, the number of medical undergraduates who chose “right to life”, “right to know”, “right to privacy”, “autonomous choice”, “other civil rights” and “property rights” accounted for 96.15%, 72.06%, 59.51%, 54.66%, 47.67% and 41.4% of the total number of surveys respectively. Only the “right of portrait” accounted for a relatively small proportion, accounting for only 25.81%. After the chi-square test, medical students have different grades of cognition about privacy rights. There are professional differences in cognition of autonomy and other civil rights. In addition, medical students in different internship hospitals also have cognitive differences in autonomy (Table 1).

### **2.4 Cognitive Investigation of Medical Treatment Norms.**

In general, the number of medical students who chose “technical specifications and standards”, “diagnostic guidelines”, “quality management system”, “clinical path”, “medical frontier literature” and “others” accounted for 86.54%, 77.73%, 67.61%, 70.04%, 56.58% and 32.39% of the total number, respectively. The chi-square test revealed that medical students have different opinion in the “diagnostic guidelines”, “quality management system”, “clinical path” and “medical frontier literature” with different grades, internship hospitals and gender (Table 2).

Table 1. Analysis of the cognitive status of the possible infringement scope of medical damage

Patient rights	Grade						Major				Train hospital				
	P	freshmen	sophomore	junior	senior	graduate trainee	P	Clinical medicine, traditional Chinese and Western medicine, clinical medicine, medical imaging			P	Three A Two A	Three B Two B		
Privacy	0.004	171	76	93	34	157									
		57													
		(29.1%)	(12.9%)	(15.8%)	(5.8%)	(26.7%)									
Autonomous choice	0.001	444	40	43			0.01	380	38	94					
		13						28							
		(82.2%)	(7.4%)	(8%)	(2.4%)										
Other civil rights	0.020	378	46	34			0.020	378	46	34					
		13													
		(80.3%)	(9.8%)	(7.2%)	(2.8%)										

Table 2 Cognitive survey of medical students on the standard of diagnosis and treatment

Medical treatment norms	Grade							Gender		Train hospital					
	P	freshmen,	sophomore,	junior,	senior	graduate,	trainee	P	male,female	P,	ThreeA,	ThreeB,	TwoA ,	Two B	
Technical specifications and standards										0.023	580	70	151	54	
											(67.8%)	(8.2%)	(17.7%)	(6.3%)	
Diagnostic guide	0.000	189	103	127	44	212	93			0.001	528	67	126	47	
		(24.6%)	(13.4%)	(16.5%)	(5.7%)	(27.6%)	(12.1%)				(68.8%)	(8.7%)	(16.4%)	(6.1%)	
Quality management system	0.005	157	95	108	46	184	78	0.035	224	444	0.000	465	61	106	36
		(23.5%)	(14.2%)	(16.2%)	(6.9%)	(27.5%)	(11.7%)		(33.5%)	(66.5)		(69.6%)	(54.1%)	(15.9%)	(5.4%)
Clinical pathway	0.009	161	104	125	44	187	71								
		(23.4%)	(15%)	(18.1%)	(6.4%)	(27%)	(10.3%)								
Medical frontier literature	0.044	131	78	96	37	146	71				0.003	390	48	94	27
		(23.4%)	(14%)	(17.2%)	(6.6%)	(26.1%)	(12.7%)					(69.8%)	(8.6%)	(16.8%)	(4.8%)

## 2.5 Cognitive Status of the Content of the Obligation to Inform.

In general, medical students choose “diagnosis measures”, “conditions”, “charges”, “medical risks and alternatives for surgery”, “configuration of medical staff”, “special inspections and alternatives”, accounting for 86.94%, 78.74%, 75%, 82.89%, 61.44%, and 79.55% of the total number, respectively. Students have differences in the grades and internship hospitals in the “charge situation” and “disposition of medical staff” after the chi-square test. See Table 3 for details.

Table 3 Medical students' cognition survey on the content of notification obligations

Inform the content of the obligation	Grade				Train hospital				
	<i>P</i> graduate	freshmen	sophomore trainee	junior	senior	<i>P</i> Three A	Three B	Two A	Two B
Charge situation	0.023	200	112	126	49	185	69		
	(27%)	(15.1%)	(17%)	(6.6%)	(25%)	(9.3%)			
Medical staff configuration	0.028	162	87	105	42	157	54	0.042	405 53 116 33
	(26.7%)	(14.3%)	(17.3%)	(6.9%)	(25.9%)	(8.9%)		(66.7%)	(8.7%)(19.1%)(5.%)

## 3. Discussion

The main basis for the resolution of medical disputes in China is the General Principles of Civil Law, the Regulations on the Handling of Medical Accidents, the Tort Liability Law, and the Regulations on the Prevention and Treatment of Medical Disputes. In particular, the promulgation of the Tort Liability Law and the Regulations on the Prevention and Treatment of Medical Disputes established the medical damage liability system and clarified the “dualization” identification system, which played an important role in the regulation of the doctor's practice environment. Medical students are the doctors in the future. As a prerequisite for qualified doctors, they must have good legal literacy. Through this survey, it is found that medical students have unclear understanding of the basic medical legal system, which is reflected in the following aspects:

### 3.1 Unclear Concept of Medical Malpractice and Medical Damage.

In this survey, only 28.24% of students believe that the scope of medical malpractice and medical damage is broader. When asked if there is no medical accident, but there is a medical error, whether it is responsible, 32.29% of the students think that they need to take responsibility. It can be seen that most medical students still have "accident thinking [1]", and believe that as long as they do not constitute a medical accident, they do not need to take responsibility. This kind of cognition is obviously inconsistent with the current medical environment, and in the future career. It is easy to fall into the dispute between doctors and patients, which are very unfavorable to personal development. Therefore, in the later school education, it should be integrated into the education of the medical legal system to help medical students develop into qualified doctors.

### 3.2 Insufficient Cognitive Coverage of Possible Rights Violations.

In this survey, medical students only accounted for 25.81% of the rights that may infringe the patient's portrait. However, in order to promote the treatment effect, the actual Chinese medicine hospital often inadvertently infringes on the patient's portrait right. It can be seen that medical students generally have insufficient knowledge of the patient's personality right, and there is a lack of understanding of the damages caused by the violation of the patient's personality right.

In addition, freshmen (actual value of 171, expected value of 151.8, 29.1%) are more inclined to

think that privacy is one of the rights of patients, but senior students hold the opposite view. It indicated that lower-grade medical students have a more comprehensive understanding of privacy rights, which may be related to today's medical environment that fully respects individual rights.

In addition, for patients' autonomy and other civil rights, clinical medicine and medical imaging students are more inclined to think that they belong to the patient's rights, while Chinese medicine and Chinese and Western medicine clinical medicine students hold the opposite view. This may be because clinical medical professionals and medical imaging specialists are involved in invasive treatments in the treatment of patients. Therefore, students in these two majors are more inclined to respect patients' autonomy.

Due to the difference in the internship hospitals, the intern students of the Three A hospitals tend to think that the autonomy is a patient's right, and the interns of the non-third hospitals hold the opposite view. This may be because the number of patients in the top three hospitals is large and there are many treatment options. The students who are in their internships will naturally be affected by the environment and will consider the patients' autonomy.

In summary, medical students have a poor understanding of the scope of patients' rights, and the patient's personality rights are vaguely recognized. Due to the internship environment and professional differences, there are differences in the perception of patients' autonomy. In the later studying, education in these areas should be strengthened.

### **3.3 There are Cognitive Differences in the Diagnosis and Treatment Norms.**

At present, the definition of medical treatment norms is not clear in legislation [2]. Therefore, in this survey, medical students of different grades, genders, and internship hospitals have different understandings of medical treatment norms. Affected by the environment of the internship hospital, the interns of the Three A and Three B hospitals are more inclined to incorporate technical specifications and standards, diagnostic guidelines, quality management systems, and medical frontier literature into the diagnosis and treatment specifications. The cognitive differences between medical students and the standard of diagnosis and treatment are also the reaction of the current medical quality management standards.

### **3.4 Difference in the Perception of the Content of the Informing Obligation.**

Since the implementation of the Tort Liability Law, the doctor's obligation to inform has been clarified, and it is stipulated that the breach of the obligation to inform will bear legal responsibility. In practice, there are many cases in which medical institutions are liable for breach of the obligation to inform [3]. In this survey, the interns of the Three A, Three B, and Two A hospitals are more inclined to inform the patients about the configuration of the medical staff. The interns of the Two grade Hospital have the opposite view. This may be because of higher-level hospitals, where high-quality medical resources are abundant, and patients are more concerned about the configuration of medical staff. Therefore, students affected by the environment are more likely to choose to inform the staff of the configuration.

In summary, medical students generally have a vague understanding of the medical tort liability system [4], and the perception of the medical tort liability system is different by the social environment, the current medical environment, and the environmental impact of the internship hospital. In the follow-up process of cultivating medical students' legal literacy, it is necessary to strengthen the medical students' sense of tort liability and respect the rights of patients to improve the quality of medical services [5].

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