

# The current status and the influencing factors of humanistic care ability among a group of medical professionals in Western China

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## Abstract.

**BACKGROUND:** Previous research regarding the humanistic care ability of Chinese medical professionals was limited to small groups of nurses or students. More systemic analyses involving more general medical professionals are scarce and urgently needed.

**OBJECTIVE:** To survey the sense and ability of humanistic care on medical professionals in China and to identify the potential influencing factors.

**METHODS:** A novel scale of humanistic care indicators was developed. Based on the new scale, a questionnaire was designed, tested and used to survey a total of 928 medical professionals recruited from three hospitals in the Chinese Western city Chongqing. Chi-square test was used for single factor analyses. For multiple factor analyses, multivariate logistic regression was performed.

**RESULTS:** Our selected group of medical professionals scored nearly 4 or above on a 1–5 scale for all our query items related to the sense and ability of humanistic care. The main factors affecting humanistic care ability of medical professionals in Chongqing include gender, nature of department/division, modes of employment and participation in humanistic care ability training and so on.

**CONCLUSIONS:** In general, the participants in our study group had a humanistic care ability score lower than the aimed value, suggesting that the ability of humanistic care of these medical professional was not satisfactory. The study also shows that one effective way to enhance the humanistic care ability is to provide more targeted training.

Keywords: Humanistic care, sense and ability, influencing factor, medical education

## 1. Introduction

The Global Minimum Education Requirements for medical professionals as proposed by the Core Committee of the International Institute for Medical Education in 2002 include seven minimum essential domains, namely, 1) professional values, attitudes, behavior and ethics, 2) scientific foundation of medicine, 3) clinical skills, 4) communication skills, 5) population health and health systems, 6) management of information and 7) critical thinking and research [1]. To make better connection between

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caring and love and human living processes, however, Jean Watson outlined 10 carative factors/caritas processes that include the development of humanistic-altruistic system of values, the development of helping-trusting human-caring relationship, the instillation and the enabling faith and hope, and the provision for a supportive, protective, and/or corrective mental, social, spiritual environment [2]. Going toward a direction of holistic caring, modern medical professionals are not only expected to provide the traditional medical caring to treat the diseased conditions, they are also expected to provide patient-centered humanistic caring by assisting the patients to seek their own value of life and achieve self-actualization and self-healing [3]. Studies have shown that the sense and ability of humanistic caring of medical professional is an important factor capable of influencing the psychological status, the treatment and the recovery of the patients. Meanwhile, humanistic caring is also of vital importance in improving the service levels and the customer satisfaction, the maintenance of a harmonious relationship between the medical professionals and the patients as well as the professional recognition among the medical professionals [4–7]. While the importance of humanistic caring in modern medicine is well recognized worldwide, the medical education sector faces a big challenge [8] of helping the medical professionals to develop the sense and ability of humanistic care. The term “sense of humanistic caring” here refers to the sound practical judgement of medical professionals concerning matters of humanistic caring. And the term “ability of humanistic caring” here refers to the ability of the medical professionals to provide humanistic caring for the patients.

To better prepare the medical professionals for the practice of humanistic care and to allow the synchronous development of medicine and medical humanities, medical humanities has been incorporated into the curriculum of medical education by the medical education sectors in many developed countries such as the United States and the United Kingdom as well as some Asian countries [9,10]. In China, advances in the study of the medical humanities and medical humanities education have been made over the past few decades. In comparison with its rapid economic development, however, the advancement in medical humanity education and medical humanity practice is relatively slow [11]. As a matter of fact, humanistic care training was virtually absent from the curriculum of medical education in most Chinese medical schools. Recently, a few studies were conducted to evaluate the ability of humanistic care among small groups of nurses and students in China [12,13]. A more systematic evaluation of the current status and the identification of the influencing factors of humanistic care, however, are still urgently needed.

In the current study, we developed a novel scale of humanistic care indicators, utilizing a Delphi technique. Based on the scale we have developed, we further designed a questionnaire and used it to survey the sense and ability of humanistic care in a relatively large group of medical professionals in Chongqing, a major Western Chinese city. The results are expected to allow better understanding of the current status of the sense and ability of humanistic care among the Chinese medical professionals and the identification of the influencing factors. The findings might also help the policy-makers and the medical educators to better design the medical educational programs.

## **2. Materials and methods**

### *2.1. Development of a scale for humanistic care indicators*

Following a literature review, colleague consultation, group discussions and two rounds of expert panel review, a preliminary set of humanistic care indicators was formulated using the Delphi technique [14–16]. The expert approval rates were 93.4% and 94.7% respectively in the first two rounds of expert review, with the mean of importance valuation being 4.4 and 4.5 respectively. The Kendall’s

W tests showed that the coordination coefficients in the first two rounds were both statistically significant ( $p < 0.01$ ) [17]. In the third round of expert review, an analytic hierarchy process was used to rank the indicators, calculate the weight and to reach a consensus. The recovery rates of three rounds of expert review were 100, 93 and 100% respectively, with the expert authority coefficient being 0.9. Focusing on respecting the dignity of life, sharing the decision making with the patients and assisting the patients with improving the quality of life and extending the duration of life with all the knowledge, passion and positive attitude of the medical professionals, this scale encompasses 4 dimensions (Respecting the independence of the personality and the initiative of the patients, Meeting the diagnostic and therapeutic needs of the patients, Meeting the special needs of the patients, Practicing humanistic care), 10 sub-dimensions and 37 indicators (see Appendix 1).

## 2.2. *Design and validation of the humanistic care questionnaire*

Based on the humanistic care indicators developed above, we further designed a questionnaire for the evaluation of the sense and the ability of humanistic care among medical professionals. The actual questionnaire consists of three parts. The first part contains an introduction explaining the study and its goals, in addition to a brief survey of the general personal information such as age, gender, education, marital status and whether has been trained with humanistic care courses and so on. The second part contains the scale for humanistic care that was largely based on the 37 indicators developed above. Certain indicators, however, were further split or expanded and certain indicators were combined, giving rise to a final of 42 query items, which included 8 items for the dimension of respecting the independence of the personality and the initiative of the patients, 11 items for the dimension of meeting the routine needs of the patients, 12 items for the dimension of meeting the special needs of the patients and 11 items for the dimension of practicing humanistic care (see Appendix 2). To ensure the validity of the questionnaire, 4 inverse questions were included. Each item is scored by a 1–5 Likert-type ranking. The higher the score, the better the sense and ability in humanistic care (see Appendix 3). In the preliminary tests, the overall Cronbach's  $\alpha$  for the questionnaire was 0.93 and the dimensional Cronbach's  $\alpha$  ranged between 0.93 and 0.95, with a good internal consistency.

## 2.3. *The survey*

This study was approved by the Institutional Medical Ethics Committee of the Third Military Medical University. The investigators explained the purpose and the goals of the study but no hints or suggestions were given to the participants before the survey. The participants were also assured of the confidentiality of personal information.

A total of 1050 participants for the study were purposely recruited from three hospitals (Southwestern Hospital, Xinqiao Hospital and Daping Hospital) in the Chinese Western city Chongqing from various departments/divisions including the internal medicine, the surgery and the specialized medicine division (including departments such as Ophthalmology, Stomatology, Plastics and Cosmetics), with each department/division having 15 medical professionals. The criteria for the enrollment were: 1) Being formally employed; 2) Having professional qualifications; 3) Knowing the purpose of the study and consenting on the study. The study was conducted between May and June 2017. Immediately before the survey, the investigators explained the purpose and the goals of the study and the questionnaire to the participants. A total of 1050 questionnaire forms and 1012 anonymously completed forms were returned, of which 928 were valid. The effective recovery rate thus was 91.7%.

Table 1  
General characteristics of the participants ( $n = 928$ )

Variable	$n$ (%)	Variable	$n$ (%)
Gender		Division association	
Male	282 (30.4)	Internal medicine	197 (21.2)
Female	646 (69.6)	Surgery	333 (35.9)
Age, y		Specialized medicine division	280 (30.2)
< 20	7 (0.8)	Medical technology division	118 (12.7)
20–29	408 (44.0)	Employment mode	
30–39	428 (46.1)	Tenured	77 (8.3)
40–49	77 (8.3)	Term-contracted	851 (91.7)
> 50	8 (0.9)	Job duration	
Education		< 5	365 (39.3)
Junior college	152 (16.4)	6–10	317 (34.2)
Bachelor	570 (61.4)	11–15	154 (16.6)
Master	206 (22.2)	16–20	49 (5.3)
Professional title		≥ 21	43 (4.6)
Physician	374 (40.3)	Training in life appreciation	
Nurse	463 (49.9)	Yes	79 (8.5)
Technician	74 (8.0)	No	849 (91.5)
Assistant	17 (1.8)	Training in humanistic care	
Professional rank		Yes	95 (10.2)
Junior	551 (59.4)	No	833 (89.8)
Intermediate	322 (34.7)		
Senior	55 (5.9)		

#### 2.4. Data analyses

Microsoft Excel 2007 and SPSS 19.0 were used for the data processing and analyses. The numerical data were expressed as mean  $\pm$  SD. Pair-wise comparison was performed by the Student's  $t$  test. Chi-square test was used for single factor analyses. For multiple factor analyses, multivariate logistic regression was performed.  $p < 0.05$  was considered to be statistically significant,  $p < 0.01$  and  $p < 0.001$  more so.

### 3. Results

#### 3.1. Participant characteristics

The statistical analyses of 928 valid returns showed that the average age for the group of participants was  $36.6 \pm 5.7$ . Among the 928 participants, 282 were male (30.4%) and 646 were female (69.6%). Other characteristics are shown in Table 1.

#### 3.2. The self-assessed scores of the participants' humanistic care sense and ability

Among the 42 query items, our selected group of medical professionals scored the highest on Item 24 (trying best to protect the privacy of the patients,  $4.38 \pm 0.77$ ), Item 14 (trying best to avoid or minimize the pains or hurts to the patients throughout the process of diagnosis and treatment,  $4.30 \pm 0.75$ ) and Item 25 (trying best to create effective and loving communications with the patients and their family members,  $4.27 \pm 0.81$ ). Meanwhile, our selected group of medical professionals scored the lowest on Item 40 (trying best to provide age and gender-based care,  $3.99 \pm 0.92$ ), Item 41 (trying best

Table 2  
Self-assessed scores on the sense and ability of humanistic care among the selected group of medical professionals

Factors	Dimensional and overall scores on the sense and ability of humanistic care (mean ± SD)				
	A*	B*	C*	D*	Overall
Gender					
Male	4.25 ± 0.62	4.28 ± 0.59	4.23 ± 0.63	4.21 ± 0.67	4.25 ± 0.59
Female	4.14 ± 0.66	4.14 ± 0.63	4.11 ± 0.67	4.08 ± 0.72	4.12 ± 0.62
<i>F</i>	0.082	0.820	0.132	0.958	0.291
<i>P</i>	0.000	0.002	0.014	0.010	0.002
Professional rank					
Junior	4.16 ± 0.63	4.15 ± 0.59	4.13 ± 0.62	4.13 ± 0.64	4.14 ± 0.57
Intermediate	4.18 ± 0.70	4.19 ± 0.66	4.11 ± 0.72	4.06 ± 0.81	4.13 ± 0.68
Senior associate	4.51 ± 0.56	4.48 ± 0.57	4.52 ± 0.56	4.45 ± 0.58	4.49 ± 0.54
Senior	4.74 ± 0.38	4.71 ± 0.30	4.15 ± 0.66	4.12 ± 0.71	4.53 ± 0.35
<i>F</i>	6.200	6.099	6.159	4.328	5.934
<i>P</i>	0.000	0.000	0.000	0.005	0.001
Employment mode					
Tenured	4.51 ± 0.54	4.44 ± 0.54	4.43 ± 0.61	4.42 ± 0.64	4.44 ± 0.55
Term-contracted	4.16 ± 0.65	4.16 ± 0.62	4.12 ± 0.66	4.09 ± 0.71	4.13 ± 0.61
<i>F</i>	2.957	1.137	0.338	0.624	0.314
<i>P</i>	0.000	0.000	0.000	0.000	0.000
Division association					
Internal medicine	4.44 ± 0.57	4.41 ± 0.58	4.32 ± 0.62	4.33 ± 0.65	4.37 ± 0.57
Surgery	4.23 ± 0.59	4.24 ± 0.53	4.21 ± 0.57	4.17 ± 0.61	4.21 ± 0.53
Specialized medicine division	4.02 ± 0.73	4.03 ± 0.68	3.99 ± 0.73	3.95 ± 0.82	3.99 ± 0.70
Medical technology division	4.06 ± 0.63	4.03 ± 0.62	4.04 ± 0.65	4.05 ± 0.68	4.04 ± 0.61
<i>F</i>	18.609	19.064	12.763	12.573	17.328
<i>P</i>	0.000	0.000	0.000	0.000	0.000
Training in life appreciation					
Yes	4.56 ± 0.55	4.47 ± 0.58	4.45 ± 0.59	4.46 ± 0.58	4.48 ± 0.54
No	4.15 ± 0.65	4.16 ± 0.62	4.12 ± 0.66	4.09 ± 0.71	4.13 ± 0.61
<i>F</i>	1.653	0.222	0.698	1.832	0.814
<i>P</i>	0.000	0.000	0.000	0.000	0.000
Training in humanistic care					
Yes	4.55 ± 0.54	4.46 ± 0.56	4.44 ± 0.58	4.43 ± 0.62	4.46 ± 0.55
No	4.15 ± 0.65	4.15 ± 0.62	4.11 ± 0.66	4.09 ± 0.71	4.12 ± 0.61
<i>F</i>	1.693	0.872	0.991	0.599	0.529
<i>P</i>	0.000	0.000	0.000	0.000	0.000

\*A, the dimension of respecting the independence of the personality and the initiative of the patients; B, the dimension of meeting the diagnostic and therapeutic needs of the patients; C, the dimension of meeting the special needs of the patients; D, the dimension of practicing humanistic care.

to provide region-based, nationality-based and religion-based care,  $3.99 \pm 0.93$ , and Item 29 (Trying best to mobilize social support for the patients,  $4.00 \pm 0.93$ ). Some important dimensional and overall scores on the sense and ability of humanistic care of the selected group of medical professionals are as tabulated in Table 1. Further, those from the division of Internal Medicine scored a higher overall score ( $4.37 \pm 0.57$ ,  $n = 197$ ) than those from other divisions, and those tenured participants ( $4.44 \pm 0.55$ ,  $n = 77$ ) also scored a higher overall score ( $4.13 \pm 0.61$ ,  $n = 851$ ) than those term-contracted participants. Moreover, the male participants scored a higher overall score ( $4.25 \pm 0.59$ ,  $n = 282$ ) than the female participants ( $4.12 \pm 0.62$ ,  $n = 646$ ). Also noteworthy is that previous training in both life appreciation ( $4.48 \pm 0.54$ ,  $n = 79$  for those with previous training in life appreciation versus  $4.13 \pm 0.61$ ,  $n = 849$  for those did not) and humanistic care ( $4.46 \pm 0.55$ ,  $n = 95$  for those with previous training in humanistic care versus  $4.12 \pm 0.61$ ,  $n = 833$  for those did not) appeared to be helpful in enhancing the sense and ability of humanistic care among our selected group of medical professionals.

Table 3

Multivariate regression analyses on the sense and ability of humanistic care among the selected group of medical professionals ( $n = 928$ )

Factors	B	SE	$\beta$	$t$	$p$ -value
Constant	4.383	0.054	–	80.803	0.000
Division association	–0.127	0.020	–0.196	–6.203	0.000
Training in humanistic care	0.271	0.065	0.133	4.146	0.000
Employment mode	0.215	0.073	0.096	2.949	0.003
Gender	0.085	0.043	0.064	1.972	0.049

B, unstandardized coefficient; SE, standard error of the unstandardized coefficient;  $\beta$ , standardized coefficient;  $t$ , validity coefficient of the regression.

### 3.3. Single factor analyses of factors that might affect the sense and ability of humanistic care among the medical professionals

Single factor analyses were performed with categories of the general information of the participants. The results identified gender, professional rank, employment mode, division association, training in life appreciation and training in humanistic care as factors that might influence the sense and ability of humanistic care among the selected group of medical professionals ( $p < 0.05$ , Table 2). Other categories including age, marital status, education, duration in job and professional title did not appear to be potential influencing factors.

### 3.4. Multivariate regression analyses of factors that might affect the sense and ability of humanistic care among the medical professionals

We performed multivariate regression analyses using the potential influencing factors identified by the single factor analyses described above. The results largely confirmed the finding of single factor analyses. Gender, employment mode, division association, and training in humanistic care were all shown to be potential factors that might influence the sense and ability of humanistic care among the selected group of medical professionals ( $R^2 = 0.08$ ,  $F = 20.95$ ,  $p = 0.000$ , Table 3), with the exception of professional rank and training in life appreciation.

## 4. Discussion

The original intention and the essence of medicine are to serve life, through extending sympathy, respect and empathy to all individuals and with the ultimate goal of maintaining the health of all individuals [18]. As suggested, humanistic care is characterized by a respectful and compassionate relationship between all members of the health-care team, and their patients and family members [19]. Humanistic care is not simply to meet the clinical needs of the patients, it requires the medical professionals to pursue the excellence in many aspects of caring, especially with the spiritual, philosophical, ethical and moral dimensions [20].

Practicing humanistic care requires altruism, integrity, and empathy, as well as a dedication to service and sensitivity to the values and backgrounds of the patients [21]. The practice of humanistic care by the medical professionals through extending respect, understanding, sympathy and empathy to the patients on one hand might be very helpful in patient's fight with the diseases. On the other hand, it will also be helpful in the mutual understanding and the maintenance of a harmonious relationship between the medical professionals and the patients [22], which appears to be of particular importance in China

currently. A systematic understanding of the current status of the sense and ability of humanistic care of the medical professionals is thus of vital importance in this country.

In previous studies investigating the humanistic care ability of medical professionals in China, a scale named Caring Ability Inventory (CAI), originally developed by Nkongho [21], was often used to measure an individual's ability to care when involved in a relationship with others [23–26]. The CAI consists of 37 items, grouped under three sub scales: Knowing (CAI\_K; 14 items), Courage (CAI\_C; 13 items), and Patience (CAI\_P; 10 items) [24]. The CAI scores were derived based on a 1–7 Likert-type ranking, with the range of the scores being 37–259 and the higher the scores, the higher the caring ability. In a later study using CAI, Watson proposed that those scored at the 85<sup>th</sup> percentile or higher ( $\geq 220$ ) being can be regarded as having good humanistic care ability and those at the 78<sup>th</sup> percentile or lower ( $\leq 202$ ) being as having poor humanistic care ability [27]. These Chinese studies, however, suffered from a number of the limitations including small groups of nurses or students.

In the current study, we have developed a new set of humanistic care indicators and a new questionnaire that differs from the CAI scale in many ways including query content, query items and query numbers. Our new set of humanistic care indicators consists of 42 items, grouped under four dimensions, namely, Respecting the independence of the personality and the initiative of the patients, Meeting the diagnostic and therapeutic needs of the patients, The special needs of the patients and Practicing humanistic care. Further, the scores were ranked by a 1–5 Likert-type ranking instead of a 1–7 Likert-type ranking, with the ranges of the scores being 42–210. For these reasons, it is therefore difficult for us to compare the scores of our study directly with those conducted with the CAI scale. Considering these limitations, the only thing we can do is calibrate our scores with the highest expectation of the scale, that is, the highest possible score of 5, taking into the account of the 85<sup>th</sup> percentile adopted in the CAI scale [25]. We therefore consider those scored 4.25 or higher (85<sup>th</sup> percentile or above) as having good humanistic care ability and those scored 3.9 or lower (78<sup>th</sup> percentile or lower) as having poor humanistic care ability.

In the current study, we found that our selected group of participants scored nearly 4 or above in all the queried items, suggesting that this group of medical professionals mostly have certain levels of the sense of humanistic care and are probably competent in practicing it, although not satisfactory. In particular, our selected group of participants scored relatively high on Items 14, 24 and 25, suggesting that this group of medical professionals more likely will try their best to avoid or minimize the pains or hurts to the patients throughout the process of diagnosis and treatment, to protect the privacy of the patients and to create effective and loving communications with the patients and their family members [28]. Multivariate regression analyses of factors that gender, employment mode, division association, and training in humanistic care were all shown to be potential factors that might influence the sense and ability of humanistic care among the selected group of medical professionals.

Surprisingly, male participants scored a higher overall score on the ability of humanistic care than the female participants, which is in conflict with a previous finding that female medical students scored a higher overall score on the ability of humanistic care than male medical students [25]. The reason for male participants scored a higher overall score on the ability of humanistic care than the female participants in current study is not completely clear right now but this probably has something to do with the fact that there were much more females (646) than males (282) among our participants. In China in general and in the current study, the nurses were mostly females and the doctors were mostly males. Since in general nurses were given relatively less responsibility and powers in dealing with matters related to patient care than the doctors, this might result in the lack of motive and power in providing humanistic care to the patients among the nurses. In our view, this at least in part explain why male participants scored a higher overall score on the ability of humanistic care than the female participants.

Similarly, we found that the mode of employment appeared to affect the sense and ability of humanistic care significantly among the selected group of medical professionals. This on one hand could be due to the bias that those tenured (permanent, 77) were much less than those term-contracted (temporary, 851). It is well known that in China the permanent employees are more advantageous than the term-contracted employees in many ways including the salary compensation, the promotion and the life insurance. These discrepancies to a certain degree might affect the attitude and enthusiasm and performance of the term-contracted employees. Fortunately, with current on-going reform on the human resource regulations in Chinese hospitals, more medical professionals will be employed via the tenure track system, which might be helpful in the promotion of the practice of humanistic care among the medical professionals.

Importantly, our results (Table 2) show that those participants received either training in life appreciation or training in humanistic care invariably scored higher scores on the dimension of respecting the independence of the personality and the initiative of the patients, the dimension of meeting the diagnostic and therapeutic needs of the patients, the dimension of meeting the special needs of the patients and the dimension of practicing humanistic care as well as the overall scores than those did not, suggesting these trainings appeared to be effective in the promotion of the practice of humanistic care. Also noteworthy is that seniority also appeared to results in higher scores. Together these results, to a certain degree, seem to suggest the feasibility of improving the humanistic care ability of medical professionals through proper training.

Overall, to better prepare the medical professionals for the practice of humanistic care in China, systemic efforts from both the hospitals and the medical professions themselves probably will be needed [29,30]. For example, training in humanism and humanistic care should probably be included into the formal curriculum of medical education or in the continuing medical educational programs. The practice of humanistic care should also be considered to be included the evaluation systems of the medical professionals. Meanwhile, more training should be provided to encourage all medical professionals to enhance the awareness and self-motivation and capability in the practice of patient-center humanistic care.

## **5. Conclusions**

This systemic study found that the humanistic care ability of Chinese medical professionals needs to be improved. It also shows that the main factors affecting the humanistic caring ability of Chinese medical professionals include gender, nature of the department, employment modes and humanistic care ability training of relevant experience. Most importantly, targeted trainings appear to be very effective in improving the humanistic care ability among Chinese medical workers or medical professionals.

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## Conflict of interest

None to report.

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## Appendix 1

A scale for the indicators of the sense and ability of humanistic care among medical professionals.

Dimension (primary)	Sub-dimension (secondary)	Indicator (tertiary)
A Respecting the independence of the personality and the initiative of the patients	A1 Respecting the independence of the patients and their family members	A11 Encouraging the patients to fully express their feeling and emotion
		A12 Encouraging the patients to question about their illness and the treatment
		A13 Considering and adopting the opinions and suggestions from the patients and their family members
	A2 Enhancing the ability of self-care of the patients	A21 Assisting the patients with correct understanding of their illness and health problems
B Meeting the diagnostic and therapeutic needs of the patients	B1 Meeting the medical service needs of the patients	A22 Helping the patients with the formulation of self-care
		A23 Helping the patients with the practice of self-care
		B11 Being kind, friendly, compassionate and loving to every patient
		B12 Explaining the status of the illness and the treatment plan in a way easy to understand by the patients
		B13 Discussing the charges in details and providing receipts to the patients
		B14 Being cost effective and trying best to avoid excessive treatment
	B2 Meeting the medical needs of the patients	B21 Obeying the procedures of diagnosis and treatments strictly
		B22 Avoiding or minimizing the pains or hurts to the patients throughout the process of diagnosis and treatment
		B23 Trying best to formulate a optimal therapeutic protocol
		B24 Paying attention to the progression of the illness and dealing with it in a timely manner
C Meeting the special needs of the patients	C1 Meeting the physiological needs of the patients	B25 Trying best to avoid unnecessary hurts and to sustain life
		B26 Trying best to improve the quality of life for the patients
		C11 Trying best to alleviate the un-comfort or pain of the patients in a timely manner
	C2 Meeting the psychological needs of the patients	C12 Trying best to meet the needs for nutrition, resting, sleeping and exercise
		C13 Trying best to create a comfortable, safe and convenient environment
		C21 Trying best to protect the privacy of the patients
		C22 Trying best to create effective and loving communications with the patients and their family members
	C3 Meeting the societal needs of the patients	C23 Trying best to earn the trust from the patients and their family members
		C24 Trying best to assist with the adaptation and to alleviate the negative feeling or psychological burden of the patients
C31 Advising the patients with ways and methods of seeking help from the professionals or the society		
	C32 Paying attention to the emotional status and the effects of the social relations	
	C33 Encouraging the interactions between the patients and their family members	

Dimension (primary)	Sub-dimension (secondary)	Indicator (tertiary)
<i>D</i> Practicing humanistic care	<i>D1</i> Enhancing your empathy through assuming yourself being a patient instead of a doctor	<i>D11</i> Sensing the emotional changes of the patients in a timely manner
		<i>D12</i> Understanding the circumstantial and emotional alterations of the patients and their family members to have the confidence in the fight with the illness
		<i>D21</i> Encouraging the patients to seek for the spiritual sustenance that will be helpful with the recovery
		<i>D22</i> Encouraging the companion support during the treatment and the recovery
	<i>D2</i> Encouraging the patients mobilize their potentials	<i>D23</i> Providing the platform for communication among the patients
		<i>D24</i> Encouraging the mutual understanding and love between the patients and their family members
		<i>D31</i> Respecting the culinary habits, values, the traditions and the taboos of the patients
		<i>D32</i> Providing age and gender-based care
	<i>D3</i> Providing individualized care	<i>D33</i> Providing region-based, nationality-based and religion-based care
		<i>D34</i> Providing institution-based care

## Appendix 2

The correspondence of 37 indicators and 42 query items.

<i>A11</i> Encouraging the patients to fully express their felling and emotion	<i>1</i> Trying best to encourage the patients and the family members to fully express their felling and emotion
<i>A12</i> Encouraging the patients to question about their illness and the treatment	<i>2</i> Trying best to encourage the patients to question about their illness and the treatment and trying best to endorse their selections of treatments
<i>A13</i> Considering and adopting the opinions and suggestions from the patients and their family members	<i>3</i> Trying best to consider and adopt the opinions and suggestions from the patients and their family members
<i>A21</i> Assisting the patients with correct understanding of their illness and health problems	<i>4</i> Trying best to assist the patients with correct understanding of their immediate illness
	<i>5</i> Trying best to assist the patients with correct understanding of other health problems
<i>A22</i> Helping the patients with the formulation of self-care	<i>6</i> Trying best to help the patients with the formulation of self-care
<i>A23</i> Helping the patients with the practice of self-care	<i>7</i> Trying best to help the patients with the practice of self-care
	<i>8</i> Trying best to help the patients with other activities
<i>B11</i> Being kind, friendly, compassionate and loving to every patient	<i>9</i> Being kind, friendly, compassionate and loving to every patient
<i>B12</i> Explaining the status of the illness and the treatment plan in a way easy to understand by the patients	<i>10</i> Trying best to explain the status of the illness and the treatment plan in a way easy to understand by the patients
<i>B13</i> Discussing the charges in details and providing receipts to the patients	<i>11</i> Trying best to discuss the charges in details and providing receipts to the patients
<i>B14</i> Being cost effective and trying best to avoid excessive treatment	<i>12</i> Being cost effective and being able to avoid excessive treatment
<i>B21</i> Obeying the procedures of diagnosis and treatments strictly	<i>13</i> Trying best to obey the procedures of diagnosis and treatments strictly
<i>B22</i> Avoiding or minimizing the pains or hurts to the patients throughout the process of diagnosis and treatment	<i>14</i> Trying best to avoid or minimize the pains or hurts to the patients throughout the process of diagnosis and treatment
<i>B23</i> Trying best to formulate a optimal therapeutic protocol	<i>15</i> Trying best to formulate a optimal therapeutic protocol
<i>B24</i> Paying attention to the progression of the illness and dealing with it in a timely manner	<i>16</i> Trying best to observe the irregularities of the patients and making the accurate judgment
	<i>17</i> Being sensitive to clinical situations and able to deal with them in a timely and decisive manner
	<i>18</i> Being experienced in clinical emergencies

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<i>B25</i> Trying best to avoid unnecessary hurts and to sustain life	<i>19</i> Trying best to avoid unnecessary hurts and in sustaining life and improving the quality of life for the patients
<i>B26</i> Trying best to improve the quality of life for the patients	
<i>C11</i> Trying best to alleviate the un-comfort or pain of the patients in a timely manner	<i>20</i> Trying best to alleviate the un-comfort or pain of the patients in a timely manner
<i>C12</i> Trying best to meet the needs for nutrition, resting, sleeping and exercise	<i>21</i> Trying best to meet the needs for nutrition, resting, sleeping and exercise of the patients
<i>C13</i> Trying best to create a comfortable, safe and convenient environment	<i>22</i> Trying best to make the patients to feel comfortable
<i>C21</i> Trying best to protect the privacy of the patients	<i>23</i> Trying best to create a safe and convenient environment
<i>C22</i> Trying best to create effective and loving communications with the patients and their family members	<i>24</i> Trying best to protect the privacy of the patients
<i>C23</i> Trying best to earn the trust from the patients and their family members	<i>25</i> Trying best to create effective and loving communications with the patients and their family members
<i>C24</i> Trying best to assist with the adaptation and to alleviate the negative feeling or psychological burden of the patients	<i>26</i> Trying best to earn the trust from the patients and their family members
<i>C31</i> Advising the patients with ways and methods of seeking help from the professionals or the society	<i>27</i> Trying best to assist with the physiological adaptation and to alleviate the negative feeling or psychological burden of the patients
<i>C32</i> Paying attention to the emotional status and the effects of the social relations	<i>28</i> Trying best to advise the patients with ways and methods of seeking help from the professionals or the society
<i>C33</i> Encouraging the interactions between the patients and their family members	<i>29</i> Trying best to mobilize social support for the patients
	<i>30</i> Trying best to encourage the interactions between the patients and their family members
<i>D11</i> Sensing the emotional changes of the patients in a timely manner	<i>31</i> Trying best to encourage the interactions between the patients and the society
<i>D12</i> Understanding the circumstantial and emotional alterations	<i>32</i> Trying best to understand the psychological and emotional needs of the patients
<i>D13</i> Encouraging the patients and their family members to have the confidence in the fight with the illness	<i>33</i> Trying best to understand the circumstantial and emotional alterations
<i>D21</i> Encouraging the patients to seek for the spiritual sustenance that will be helpful with the recovery	<i>34</i> Trying best to encourage the patients and their family members to have the confidence in the fight with the illness
<i>D22</i> Encouraging the companion support during the treatment and the recovery	<i>35</i> Trying best to encourage the patients to seek for the spiritual sustenance that will be helpful with the recovery
<i>D23</i> Providing the platform for communication among the patients	<i>36</i> Trying best to encourage the companion support during the treatment and the recovery
<i>D24</i> Encouraging the mutual understanding and love between the patients and their family members	<i>37</i> Trying best to provide the platform for communication among the patients
<i>D31</i> Respecting the culinary habits, values, the traditions and the taboos of the patients	<i>38</i> Trying best to encourage the mutual understanding and love between the patients and their family members
<i>D32</i> Providing age and gender-based care	<i>39</i> Trying best to respect the culinary habits, values, the traditions and the taboos of the patients
<i>D33</i> Providing region-based, nationality-based and religion-based care	<i>40</i> Trying best to provide age and gender-based care
<i>D34</i> Providing institution-based care	<i>41</i> Trying best to provide region-based, nationality-based and religion-based care
	<i>42</i> Trying best to provide institution-based care

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### Appendix 3

A questionnaire regarding humanistic care among medical professionals (translated from a Chinese version)

May 22, 2017

Dear sir,

We are conducting a research project regarding the sense and the ability of humanistic care among medical professionals in China. This project was supported in part by Humanity and Social Sciences Fund (2015XRW06) from the Third Military Medical University, Chongqing, China.

The goals of this project include the setting-up of a practical scale for the indicators of humanistic care among medical professionals and the evaluation of the current status of the practice of humanistic care in medical institutions, utilizing the scale. The results are expected to allow better understanding of the sense and the ability of humanistic care among Chinese medical professionals as well as the identification of the influencing factors. To ensure the validity of the investigation, please complete the attached questionnaire as accurate and truthfully as possible and we guaranteed that the information will be kept as confidential and private and used solely for the research purpose.

Thank you very much for your cooperation and assistance!

Yu Luo, Professor of Nursing

Jing Deng, Research assistant

**Part 1 General Information** (Please check the items that apply, give explanation if necessary)

A. Gender: Male Female

B. Age (years): ≤ 20 21–29 30–39 40–49 ≥ 50

C. Education: Junior college Bachelor’s Master’s Doctoral degree

D. Professional title: Physician Nurse Technician Assistant

E. Division: Internal medicine Surgery Specialized medicine Medical technology

F. Employment mode: Permanent Term-contracted

G. Duration in job (years): ≤ 5 6–10 11–15 16–20 ≥ 21

H. Professional rank: Junior Intermediate Senior associate Senior

I. Participation in life appreciation: Yes (explain if yes) No

J. Participation in humanistic care training: Yes (explain if yes) No

**Part 2 The sense and ability in humanistic care.** All items are rated by a five-point Likert-type scale, with the core 5 being the best practice and the score 1 being the poorest practice in the humanistic care. Please select a score that best describe your performance for each of the 42 items in the table.

Item	Self-assessed core				
	5	4	3	2	1
1 Trying best to encourage the patients and the family members to fully express their felling and emotion					
2 Trying best to encourage the patients to question about their illness and the treatment and trying best to endorse their selections of treatments					
3 Trying best to consider and adopt the opinions and suggestions from the patients and their family members					
4 Trying best to assist the patients with correct understanding of their immediate illness					
5 Trying best to assist the patients with correct understanding of other health problems					
6 Trying best to help the patients with the formulation of self-care					
7 Trying best to help the patients with the practice of self-care					
8 Trying best to help the patients with other activities					
9 Being kind, friendly, compassionate and loving to every patient					
10 Trying best to explain the status of the illness and the treatment plan in a way easy to understand by the patients					
11 Trying best to discuss the charges in details and providing receipts to the patients					
12 Being cost effective and being able to avoid excessive treatment					
13 Trying best to obey the procedures of diagnosis and treatments strictly					
14 Trying best to avoid or minimize the pains or hurts to the patients throughout the process of diagnosis and treatment					
15 Trying best to formulate a optimal therapeutic protocol					
16 Trying best to observe the irregularities of the patients and making the accurate judgment					
17 Being sensitive to clinical situations and able to deal with them in a timely and decisive manner					

Item	Self-assessed core				
	5	4	3	2	1
18 Being experienced in clinical emergencies					
19 Trying best to avoid unnecessary hurts and in sustaining life and improving the quality of life for the patients					
20 Trying best to alleviate the un-comfort or pain of the patients in a timely manner					
21 Trying best to meet the needs for nutrition, resting, sleeping and exercise of the patients					
22 Trying best to make the patients to feel comfortable					
23 Trying best to create a safe and convenient environment					
24 Trying best to protect the privacy of the patients					
25 Trying best to create effective and loving communications with the patients and their family members					
26 Trying best to earn the trust from the patients and their family members					
27 Trying best to assist with the physiological adaptation and to alleviate the negative feeling or psychological burden of the patients					
28 Trying best to advise the patients with ways and methods of seeking help from the professionals or the society					
29 Trying best to mobilize social support for the patients					
30 Trying best to encourage the interactions between the patients and their family members					
31 Trying best to encourage the interactions between the patients and the society					
32 Trying best to understand the psychological and emotional needs of the patients					
33 Trying best to understand the circumstantial and emotional alterations					
34 Trying best to encourage the patients and their family members to have the confidence in the fight with the illness					
35 Trying best to encourage the patients to seek for the spiritual sustenance that will be helpful with the recovery					
36 Trying best to encourage the companion support during the treatment and the recovery					
37 Trying best to provide the platform for communication among the patients					
38 Trying best to encourage the mutual understanding and love between the patients and their family members					
39 Trying best to respect the culinary habits, values, the traditions and the taboos of the patients					
40 Trying best to provide age and gender-based care					
41 Trying best to provide region-based, nationality-based and religion-based care					
42 Trying best to provide institution-based care					

### **Part 3 Your suggestions regarding humanistic care?**