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Narrative Competence Among Chinese Medical Students: A Necessary Step in Developing a Narrative Medicine Module

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Abstract

Background: Understanding medical students' narrative competence is critical as it could provide the basis for the development of narrative medical education in clinical and medical universities. **Objective:** This study sought to investigate the current situation of narrative competence among medical students in Jiangxi Province, China. **Methods:** An online questionnaire (Narrative Competence Scale, NCS) survey was conducted among 388 medical undergraduates in eight universities from different cities in Jiangxi Province with stratified sampling and convenient sampling. **Results:** The findings revealed a low level among medical students. There were statistically significant differences between students with different levels of exposure to narrative medicine on the dimensions of narrative competence and overall scores. However, there was no significant difference in the scores on the dimensions of narrative competence and overall gender and grade level. **Conclusions:** There was little difference in the level of narrative competence between medical school students and experienced medical and health staff, suggesting that clinical experience without a focus on narrative medicine does not have a large impact on narrative competence. Participating in training related to narrative medicine helps to strengthen the narrative competence of medical students. **Implications:** This study implied that the exposure of narrative medicine is an effective way for medical students to improve their level of narrative competence. **Suggestions for future research:** Future research should focus on the development of narrative medicine curriculum that incorporate the cultures of different countries and

implement them in medical universities to improve the level of narrative competence of medical students.
Keywords: Medical Students, Narrative Competence, Narrative Medicine, Chinese.

Introduction

According to the proverb attributed to Edward Livingston Trudeau, "To cure sometimes, to relieve often, to comfort always," the practice of medicine is not only associated with the provision of physical recovery, but also with the provision of psychological satisfaction to patients. Medical students are expected to develop the skills required to become physicians who possess narrative competence in addition to their expertise while working in hospitals. Specialized knowledge can aid medical students making the correct diagnosis for their patients in the future. Additionally, the capacity to understand the patient's history can be beneficial to medical students in the future, as it can help them develop a medical plan from the patient's perspective. Narrative competence can aid medical students in comprehending the patient's history.

Research Background

Charon (2008), defines narrative competence as the capacity to comprehend, assimilate, perceive, and be affected by narratives of illness. Charon (2008), has proposed that narrative competence is crucial for both health care providers and patients. It has the potential to enhance the psychological connection between physicians and their patients, thereby fostering a more favorable environment for medical care and enhancing the sense of belonging that physicians have to their profession. The utilization of narrative competence in clinical practice is essential for the enhancement of clinical performance, as well as the diagnosis and treatment of diseases (Daryazadeh et al., 2020).

Narrative competence has been extensively documented in a multitude of countries (Nash et al., 2023; Chu et al., 2020; Awdish et al., 2022). In recent years, there has been an increase in the number of studies on narrative competence conducted in China (i.e., Hou et al., 2021; Huang et al., 2022; Liang et al., 2022; Yang et al., 2021). The current cohort of medical students will serve as the bedrock of the medical profession in the future. The complete system that will be utilized by the future medical profession will be constructed by them, and they will be responsible for elucidating the future trajectory of the medical structure. It is imperative to conduct a status survey of narrative competence among medical students, as it can provide valuable information that can be used to inform the implementation of narrative medicine education that is more feasible and sustainable for medical universities in the local area.

The current state of narrative competence among healthcare providers in China, with a particular concentration on nurses, was the subject of an investigation by researchers in response to the increasing popularity of narrative competence. Nine of the ten studies (Table 1) were reserved for nursing or medical personnel, while only one was reserved for medical students or late-stage interns who had internship experience in the medical profession. A search of CNKI for studies on the current state of narrative competence in China from 2019 to 2023 yielded a total of ten studies. Furthermore, the majority of the studies were conducted in cities situated in the western and coastal communities, with respect to their

geographical distribution. One study was conducted in Nanchang; however, it was exclusively intended for nursing personnel and limited to Nanchang city, rather than Jiangxi province. The Narrative Competence Scale (NCS) devised by Wanzhen (2019), was employed as a study instrument by the majority of researchers. According to the results of previous research, the sole survey conducted on the current condition of narrative competence in the entire province of Jiangxi was conducted among newly recruited nurses in Nanchang. Jiangxi Province, situated in the heart of China, has a population of 45.17 million individuals and 381.7 thousand healthcare personnel(National Bureau of Statistics, 2022). Numerous medical institutions in Jiangxi province do not offer medical students and practitioners any form of intervention support or curriculum for narrative medicine education. Intervention and educational initiatives that emphasize narrative medicine for medical students and practitioners are scarce in Jiangxi Province. The modules that are available are primarily imitations of Western narrative medicine modules. In order to identify and develop more locally pertinent organizational supports and education for medical students, it is imperative to conduct further research and gain a more comprehensive understanding of the local conditions of narrative competence in Jiangxi Province. This will provide medical students with additional opportunities to engage in the field.

Table 1
Studies on the current state of narrative competence in China from 2019-2023 (Zhou et al., 2022; Wang et al., 2022; Huang et al., 2022; Liang et al., 2022; Hou et al., 2021; Zheng et al., 2021; Su., 2022; Yang et al., 2021; Yang et al., 2022; Xie et al., 2023)

No.	Research Subjects	Location	Instrument
1	181 nursing staff in pediatric unaccompanied wards	Chongqing (Western area)	Narrative Competence Scale Self-Efficacy Scale
2	692 late-stage medical internships	Changsha (Central area)	Not clear
3	205 Guangzhou Psychiatric Hospital Nursing Staff	Guangzhou (Coastal area)	Narrative Competence Scale Human Care Competence Scale Jefferson Empathy Scale
4	422 newly recruited nurses from a tertiary grade-A hospital	Nanchang (Central area)	Narrative Competence Scale Family Care Scale Workplace Adaptation Scale
5	292 clinical nurses	Not clear	Narrative Competence Scale
6	1338 clinical nurses	Zunyi (Western area)	Narrative Competence Scale
7	450 clinical nurses	Changchun (Southeastern area)	Narrative Competence Scale Caring Competence Scale

8	345 medical and nursing oncology staff	Nanning (Western area)	Narrative Scale Human Care Scale	Competence Competence
9	155 clinical nurses	Shanghai (Coastal area)	Not clear	
10	995 medical and nursing staff	Foshan (Coastal area)	Narrative Scale	Competence

Research Objective

The objective of this study is to conduct a comprehensive survey of medical students in Jiangxi Province to ascertain the current state of medical students' narrative competence in three dimensions: Listening and Acceptance Competence (LAC), Understanding and Response Competence (URC), and Reflection and Interpretation Competence (RIC). It is a part of analysis to develop a suitable narrative medicine module for Chinese medical students according to ADDIE model. Moreover, the study will investigate the factors with the goal of enhancing the narrative competence of Chinese medical students.

Methods

Research Design

This study employed an online survey to investigate the current level of narrative competence among undergraduate medical students in Jiangxi Province, China, using the Narrative Competence Scale (NCS) questionnaire that was initially developed by (Ma, 2020). The objective of the research was to examine the current state of narrative competence of medical students. The online survey form, which was distributed through Questionnaire Star, was circulated to teachers at colleges that offer medical-related degrees. The researchers opted to employ an online survey due to the impracticality of conducting a survey using paper and pen during the pandemic period during which this study was conducted. Throughout the design and implementation of this specific online survey, the guidelines for the design of online surveys were strictly followed within the framework of (Hlatshwako et al., 2021).

Instrument

The Narrative Competence Scale (NCS) was employed in this investigation. It was composed of 27 items that were categorized into three dimensions. The Cronbach's alpha value of the scale was 0.950, with a half reliability of 0.935, a retest reliability of 0.717 after one month ($p<0.01$), and a content validity index of 0.89. The scale and the total score, as well as the dimensions of the Jefferson Empathy Scale and the Humanistic Care Competence Scale, exhibited a significant positive correlation ($p<0.01$). The scale is a suitable instrument for assessing the level of narrative competence of Chinese healthcare personnel, as it has good reliability and validity. In addition, it has been applied by numerous researchers to evaluate the degree of narrative competence that healthcare professionals possess (Hou et al., 2021; Huang et al., 2022; Liang et al., 2022; Yang et al., 2021).

The researcher was granted permission to utilize the questionnaire for the research project by Ma Wanzhen, the questionnaire designer, via email correspondence. Subsequently, she provided the researcher with the initial version of the questionnaire. The following modifications were implemented:

i) The term "patients" was replaced with "people" or "narrators," and the term "healthcare professionals" was replaced with "medical students." This modification was implemented due to the transition of the target demographic from medical professionals to medical students.

ii) The phrase "the act of treatment" should be eliminated from the sentence. It is now more appropriate to refer to "the relevant key person" rather than "the patient's family." It is advised that the term "treatment document" be replaced with "the material," and the term "occupation" be replaced with "profession".

(iii) Add basic information about the respondent, including their gender, age, major, grade, and the duration of their exposure to narrative medicine, among other things.

Demographics (including gender, age, major, location of origin, grade level, involvement in training, and knowledge of current status) and narrative competence constitute the final version of the Narrative Competence Scale (NCS) that was employed in this investigation. The narrative competence was assessed using three dimensions (see Table 2). The responses to the questions are categorized into 7 degrees, with each degree being assigned a value between 1 and 7 points according to the Likert scale. The mean score and narrative competence exhibit a positive correlation. The research team conducted a preliminary test on a lesser scale using the amended official questionnaire in light of the modifications. The SPSSPRO software was employed to assess the questionnaire's reliability and validity. The Cronbach's alpha coefficient for this questionnaire, which consisted of 27 questions, was 0.943, suggesting that the questionnaire's reliability is quite satisfactory. The KMO test analysis yielded a value of 0.945. In the interim, the results of Bartlett's spherical test indicated a p-value that was statistically significant at the 0.000*** level, showing significance at the level, the correlation between the variables, and valid factor analysis to the extent appropriate.

Table 2
Dimensions of Narrative Competence

Dimensions	Definitions
Listening and Acceptance Competence(LAC)	Listening competence means the ability to listen actively and attentively to what others are saying, without interrupting or imposing one's agenda or judgments. Acceptance competence is the ability to accept and appreciate the stories of others without judgment, criticism, or rejection.
Understanding and Response Competence(URC)	Understanding competence involves the ability to analyze the narrative, and identifying its underlying themes, messages, and values. Response competence refers to the ability to respond appropriately and effectively to the narrative, which may involve providing feedback, offering support, or taking action.
Reflection and Interpretation Competence(RIC)	Reflection competence involves the ability to examine a narrative and identify its themes, meanings, and implications.

	Interpretation competence can involve applying different theoretical perspectives to a narrative to gain a deeper understanding of its meaning.

Sample and Sampling Design

Sampling is the process of selecting a restricted number of students to conduct a study in a manner that ensures they are representative of the larger group from which they were selected. In order to furnish the status survey with precise and valuable data, this investigation implemented a combination of stratified sampling and convenient sampling. The sample size was stratified according to the proportion of medical students distributed in different cities within Jiangxi Province, and the data was collected in the same proportion for each city (Table 3).

Table 3
The Number of Medical Students and Samples in Each University in Jiangxi Province, China

Name of Universities	Total number of medical students	The number of the sample students
Nanchang University	14708	104
Jiangxi University of Chinese Medicine	11279	93
Nanchang Medical College	5978	54
Gannan Medical University	10680	70
Yichun University	2920	12
Jinggangshan University	2297	8
Jiujiang University	3413	16
Fuzhou Medical University	5570	31

The current data was gathered from 388 medical students who participated in the research in 2022 and were from a diverse range of cities in the province of Jiangxi in China. In accordance with the notification provided by the medical major instructors at each participating university, each participant was recruited voluntarily. The results of this investigation were employed to create a module on narrative medicine. A effective authorization was obtained from the researcher's university to conduct the research in accordance with human ethical standards.

Results

The SPSS software version 22 was employed to calculate the means and standard deviations of the seven-scale responses during the analysis of the quantitative data obtained from the survey. This was conducted to examine the current state of medical students' narrative competence in Jiangxi Province, China. The means and standard deviations were compared to those of prior researches. The researcher employed a one-way analysis of variance (ANOVA) and an independent sample t-test to analyse the data to ascertain whether there are significant differences between different groups, including genders, grades, and the number of interactions with narrative medicine.

Female students comprised 52.6% of the medical students who participated in the study. This accounts for more than half of the total participants. The majority of the students (60.3%) of them were from the fresh year and sophomore year. The low prevalence of narrative medicine is evident in the fact that seventy-two percent of the students were unfamiliar with the term and had never even heard of its definition. In general, the medical students had a limited comprehension of narrative medicine to begin with. Somewhat less than three percent (2.6%) of the students were able to exhibit their understanding of narrative medicine and their capacity to apply it.

Demographics

The school population is comprised of two categories of educational institutions: comprehensive universities and medical universities. These students, who range from first-year students to those in their fifth year of study, are listed in Table 4. The narrative competence, which encompasses Listening and Acceptance Competence(LAC), Understanding and Response Competence(URC), and Reflection and Interpretation Competence(RIC), must be compared among individuals of varying genders, grades, and levels of acquaintance with narrative medicine. This comparison is crucial.

Table 4
Demographic Variables of the Study Population
Values are presented as numbers (%). NM, narrative competence.

Variable		Total（n=388）
Sex	Male	184 (47.4)
	Female	204 (52.6)
Grade	Fresh year	89 (22.9)
	Sophomore year	145 (37.4)
	Junior year	74 (19.1)
	Senior year	64 (16.5)
	Fifth year	16 (44.1)
Exposure to NM	Never touch	131 (33.8)
	Not very familiar, only heard or browsed	150 (38.6)
	Be familiar, having attended training	11 (2.8)
	Be familiar, having read books and literature	86 (22.2)
	Very familiar with and able to apply it clinically	10 (2.6)

The Narrative Competence of Medical Students

The narrative competence of medical students was analyzed and presented in Table 5, which encompassed both the total scores and the item scores. The medical narrative competence of medical students was assessed with a total score of 144.35±22.62. The scores for each dimensions were as follows: (47.04±6.97), (64.57±11.35), and (32.73±5.58). The study's results indicated that medical students possessed a low level of narrative competence, with a mean of 5.35 and a standard deviation of 0.84.

Table 5
Description of different dimensions of narrative competence
Values are presented as numbers or means ± standard deviations.

Dimension	N	Min	Max	Items average	aggregate score
Listening and Acceptance Competence (LAC)	9	9	63	5.23±0.77	47.04±6.97
Understanding and Response Competence (URC)	12	12	84	5.38±0.95	64.57±11.35
Reflection and Interpretation Competence (RIC)	6	6	42	5.46±0.93	32.73±5.58
Total scale	27	27	189	5.35±0.84	144.35±22.62

Association between Narrative Competence and Participants' Demographic Characteristics

The objective of this study is to examine the relationships between demographic factors, including gender, grades, and the degree of familiarity with narrative medicine, and narrative competence. Independent sample t-tests and ANOVA were implemented. There were statistically significant differences in the scores of students with different levels of exposure to narrative medicine on the dimensions and overall scores of narrative medicine ($p < 0.01$) (Table 6). These discrepancies were determined to be statistically significant. Conversely, there was no statistically significant correlation between the educational levels and the different genders ($P > 0.05$).

Table 6
Association Between Narrative Competence and Demographic Characteristics

Exposure to NM	N	LAC	URC	RIC	aggregate score
Never touch	131	5.07±0.78	5.16±0.93	5.24±0.93	5.14±0.82
Not very familiar, only heard or browsed	150	5.22±0.77	5.34±0.94	5.43±0.91	5.32±0.84
Be familiar, having attended training	11	5.52±0.46	5.97±0.44	5.97±0.41	5.82±0.30
Be familiar, having read books and literature	86	5.41±0.70	5.64±0.75	5.72±0.73	5.58±0.68
Very familiar with and able to apply it clinically	10	5.48±1.25	6.07±1.89	5.92±1.91	5.84±1.65
F		3.399	6.311	5.251	5.681
P-value		0.01	＜0.01	＜0.01	＜0.01

Discussion

This is the first study in Jiangxi Province, China in which the narrative competence of a sample of medical students (N =388) in Jiangxi was profiled and investigated. To ascertain the

narrative competence of medical students in this study, the mean score of narrative competence were compared with the mean scores of populations from past narrative competence studies (Hou et al., 2021; Huang et al., 2022; Liang et al., 2022; Yang et al., 2021). This was conducted to ascertain the extent of narrative competence that medical students enrolled in this particular study possessed. The findings were similar with the studies on healthcare providers samples in China, the level of narrative competence was at a low level. The low level of narrative competence makes it easy for medical students to discriminate against patients and ignore their emotional needs when they enter the profession in the future (Del Olmo-Romero et al., 2019). It is impossible for patients and physicians to maintain a positive relationship while simultaneously empowering one another (Chu et al., 2020). In comparison, there was little difference in the level of narrative competence between medical school students and experienced medical and health staff, suggesting that clinical experience without a focus on narrative medicine does not have a large impact on narrative competence.

The results of this study indicated that the narrative competence of medical students was significantly influenced by a variety of levels of exposure to narrative medicine. Consequently, the data indicated that there are favourable impacts associated with having narrative medicine education that are related to the development of narrative competence (Hou et al., 2021). Those that were discovered in previous investigations were comparable to the new discovery.

In addition, there were no significant differences in the scores on the dimensions of narrative competence and overall by gender and grade level, which implies that gender and grade level do not have an impact on medical students' narrative competence. Diverse discoveries have been made in recent years. Yang (2021) conducted a study that exhibited a statistically significant relationship ($P<0.05$) between the narrative competence of clinical nurses and physicians and their age and working years. Conversely, the subjects of this investigation are distinct. Consequently, further research is necessary in the future to ascertain whether the impact of age and years of experience on narrative competence is contingent upon the specific job content. In order to ascertain whether or not the narrative competence of medical students is contingent upon the duration of their internship participation, further research is required. This is an additional limitation of the investigation that was conducted.

It is crucial to emphasis that the more narrative-related content that students are exposed to, the more likely they are to effectively implement it in their future clinical practice. This serves as a side note regarding the necessity of narrative medicine education in medical universities. The engagement of medical students in training that is associated with narrative medicine enhances their understanding of narrative medicine, familiarize them with the process of narrative medicine during their training, and enhances their capacity to empathize with and comprehend the illness narratives of patients, thereby enhancing their narrative competence.

The findings have important implications for the practice of medical education. Narrative medicine is an effective tool in the landing of medical humanities and a way to spread the knowledge of narrative medicine to medical students, improving their narrative competence (Guo, 2020).

The results have substantial implications for the global delivery of medical education. Narrative medicine is an effective instrument in the landing of medical humanities and a method to spread the knowledge of narrative medicine to medical students, improving their narrative competence (Guo, 2020). Narrative medicine education is an effective means of improving the narrative competence of medical students, and there have been studies combining narrative medicine education with professional education in the form of close reading, reflective writing, public performing, and dramas (Remein et al., 2020; Nash et al., 2023; Childress et al., 2022; Rueb et al., 2022; Zhao et al., 2023; Xue et al., 2023). These investigations have demonstrated that narrative medicine education is an effective approach to improving the narrative competence of medical students. However, few medical universities offer courses specifically in narrative medicine, and medical humanities courses are far less prominent than specialist courses. Therefore, this suggests that narrative medicine courses can be incorporated into the curriculum of medical students in the course of education, and a systematic pathway for the development of narrative competence can be established to help students understand and build the theoretical foundation of narrative medicine and master the necessary narrative competence, focusing on the development of narrative competence such as listening and acceptance competence, understanding and response competence and reflection and interpretation competence, to lay a good foundation for clinical practice.

Conclusion

The findings from this study contributed evidence to prove the notion that the hypothesis that medical students possessed a relatively low level of narrative competence. Additionally, it concludes that there is a positive correlation between narrative competence and familiarity with narrative medicine. It can be implied that the exposure of narrative medicine is a necessity for medical students to improve their level of narrative competence.

It is also a necessary step of the analysis phase to develop a narrative medicine module according to ADDIE module. The study shows that the narrative competence will not be improved with the increase of clinical experience without an exposure on narrative medicine. Therefore, in order to enhance the narrative competence, both for medical students and medical staff, it is feasible to develop a narrative medicine module that integrates Chinese traditional culture in medical universities or hospitals to increase the exposure medical students or medical staff to narrative medicine. It offers a pathway to improving the narrative competence of medical students by providing intervention in narrative medicine.

Conflicts of interest

The authors declare no financial or other conflicts of interest.

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