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Ethical Dilemmas and Reflections in Traditional Chinese Medicine Nursing

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Abstract

With the rapid development of Traditional Chinese Medicine (TCM) in the modern medical field, medical ethics issues have gradually attracted scholars' attention, and extensive correlational research has yielded some landmark achievements. However, TCM nursing has developed relatively slowly, with relative neglect of nursing ethics, scarce correlational research materials, and a unified disciplinary research paradigm for TCM nursing ethics yet to be established. This paper elaborates on the concept of nursing ethical dilemmas, the development of nursing ethics both domestically and internationally, and the current research status of TCM nursing ethics, summarizes the ethical dilemmas existing in TCM nursing, and provides corresponding reflections, aiming to offer references for finding solutions to the ethical dilemmas in TCM nursing.

Full Text

Ethical Dilemmas in Traditional Chinese Medicine Nursing: A Reflective Analysis

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Abstract

With the rapid development of traditional Chinese medicine (TCM) in modern healthcare, medical ethics issues have gradually attracted scholarly attention, yielding some landmark achievements through extensive research. However, TCM nursing has developed relatively slowly, with nursing ethics comparatively neglected, scarce relevant research materials, and no unified research paradigm for TCM nursing ethics yet formed. This paper elaborates on the concept of nursing ethical dilemmas, reviews the development of nursing ethics domestically and internationally, and examines the current state of TCM nursing ethics research. It summarizes the ethical dilemmas existing in TCM nursing and offers corresponding reflections, aiming to provide references for finding solutions to these dilemmas.

Keywords: TCM nursing; Ethics; Dilemma; Thinking

As the biomedical model continues to evolve and transform, medical ethics has likewise developed and advanced. However, ethical dilemmas encountered in TCM nursing practice have continued to grow. Related studies both domestically and internationally show that ethical dilemmas exist widely across various fields globally, affecting the development of the nursing profession and urgently requiring resolution to protect the rights and interests of both nurses and patients, thereby stabilizing the core of the nursing workforce. Accordingly, based on Western nursing ethics research, this paper conducts in-depth reflection and analysis on ethical dilemmas in TCM nursing to explore a feasible scientific development path for TCM nursing ethics.

A nursing ethical dilemma refers to a situation where nursing staff lack clarity regarding ethical issues, feel at a loss when confronted with them, and cannot formulate satisfactory solutions [1]. The American Association of Colleges of Nursing (AACN) considers nursing ethical dilemmas a significant professional issue that cannot be ignored, as they affect both the quality development of the nursing field and the physical and mental health of nurses [2]. Once nurses fall into ethical dilemmas, they are prone to experience a range of physical and psychological discomforts, typically manifested as headaches, endocrine disorders, nightmares, guilt, self-doubt, and frustration [3, 4].

I. Current Development Status of Nursing Ethical Dilemmas

1. Domestic and International Research Status

A Canadian qualitative study collected data through semi-structured interviews to address ethical dilemmas in community nurses, demonstrating the importance of emphasizing ethical issues in nursing practice [5]. Jennifer Rainer et al. conducted an integrative review of studies published between 2000 and 2017,

analyzing existing evidence on ethical dilemmas among U.S. nursing staff and elaborating on the relevance of Western nursing ethics theory to clinical nursing practice [6]. Nopita Wati et al. employed a hermeneutic phenomenological design, revealing how negative work environments arising from moral issues affect nursing ethical behavior [7]. The study indicated that possessing rigorous and self-disciplined shendu spirit can foster a positive work environment and enhance nurses' ethical literacy. Zhang Jingwei et al. evaluated and analyzed the Moral Distress Scale (MDS), the revised Moral Distress Scale (MDS-R), and specialty-specific nurse moral distress scales, summarizing influencing factors of nursing ethical dilemmas and proposing targeted measures [8]. Wang Mingli conducted a comprehensive analysis of ethical dilemmas between nurses and patients, nurses and medical staff, and among nurses themselves, highlighting the importance of nurses strengthening their own ethical literacy and the necessity for nursing managers to focus on cultivating nurses' ethical decision-making abilities.

2. Current Status of TCM Nursing Ethics Development

The renowned philosopher of science Thomas Kuhn applied the concept of paradigm to form disciplinary research paradigms [10], referring to consensus standards established jointly by professional scholars in a discipline that support the basic theories, perspectives, and methods of that specific field. TCM theory was formed during the Spring and Autumn and Warring States periods, and TCM nursing, like traditional Chinese medicine itself, has a long history with unique theoretical knowledge and operational techniques [11]. TCM nursing technical operations are based on theoretical knowledge, applying traditional treatment methods in nursing work, representing a nursing technology with unique efficacy [12]. Specific techniques include moxibustion, cupping, auricular acupressure, gua sha, massage, and many other modalities. Although some scholars have conducted hierarchical research on the difficulty, professionalism, complexity, and risk of TCM nursing techniques [13, 14], the lack of standardized management protocols for TCM nursing techniques [15] may lead to adverse events in practice due to nurses' lack of shendu spirit. According to relevant survey statistics, the top three adverse events are allergic reactions, scalds, and burns [16].

II. Reasons for Ethical Dilemmas in TCM Nursing

As TCM culture reaches new heights with the progress of the times, TCM nursing science has developed rather slowly. We must clearly recognize the current development status of TCM nursing ethics to guide TCM nursing along the correct path. The author believes that multiple ethical dilemmas exist in the current development of TCM nursing science and intends to explore them from the following four aspects to consider potential solutions.

1. Western-Biased Professional Environment Leading to Low Ethical Decision-Making Ability

Compared with Western nursing ethics, TCM nursing ethics started late, developed slowly, and has limited research [17]. The overall professional environment presents a Western-biased state, with a gap in qualitative research related to TCM nursing ethics, resulting in TCM nursing standards and professional recognition in China needing improvement. Currently, appropriate TCM nursing techniques are generally carried out in TCM hospitals or clinics, creating a relatively narrow professional environment that is quite inconvenient for patients requiring continuous technical operations and in-depth treatment [18]. Relevant surveys show that TCM nursing has high demand among elderly populations [19], but due to the professional environment, TCM nursing and TCM nursing ethics have developed relatively slowly, leaving most elderly patients' TCM nursing service needs unmet. Domestic scholars' research shows that due to this skewed professional environment, TCM nurses have low ethical decision-making abilities. Zhu Haili et al. found through research that disadvantages in the professional environment easily lead to incomplete implementation of appropriate TCM nursing techniques, aging equipment, and low nursing staff technical operation skills [20]. Additionally, some nursing staff in this environment exhibit weaknesses such as unclear ethical concepts, lack of ethical education, and weak ethical awareness, resulting in low ethical decision-making abilities. Shao Yu et al. conducted a multiple linear regression analysis on the current status and influencing factors of ethical decision-making ability among nurses in TCM hospitals, pointing out that their ethical decision-making ability is at a medium-to-low level, which is inseparable from the influence of the overall professional environment [21].

2. Immature Information Management Leading to Privacy Breaches

A mature and standardized legal and regulatory management system is the foundation for constraining and promoting industry progress. With the gradual development of nursing information management research, it holds significant importance in clinical practice, education, and management of TCM nursing [22]. In recent years, TCM has been applied in the treatment and nursing of some chronic end-stage diseases, various tumors, and other conditions with confidentiality requirements. The application of TCM nursing informatization can improve management efficiency for large numbers of patients, but due to immature management systems and related laws and regulations, it not only affects patient safety and leaks patient disease privacy but also makes it difficult for nursing staff to protect their rights, bringing a series of medical ethics, technological development, and intellectual property issues [23]. In TCM nursing informatization management, due to the complexity and diversity of TCM nursing items and the lack of standardized TCM nursing electronic medical record writing protocols and related laws and regulations [24], errors in patient information writing and information leaks easily occur. Xu Shuang et al. used

holistic sampling to investigate 14,375 TCM nursing medical records from 2018-2020, conducting item-by-item reviews with a research team, and found that TCM nursing staff lacked emphasis on and standardization of medical record writing, with an overall defect rate of 37.5% [25]. Zhou Jiaomei et al. showed through research that with the development of TCM nursing informatization, the application of structured TCM nursing electronic medical record systems has promoted TCM nursing clinical practice development, but data export from various aspects of TCM nursing is complex, and without relevant guideline standards and technical guidance, patient information is prone to incompleteness or privacy breaches during statistical processing [26].

3. Insufficient Dialectical Thinking Ability Leading to Incorrect Implementation of Nursing Procedures

Dialectical nursing care is a fundamental characteristic of TCM nursing [27]. Using classroom teaching to develop clinical dialectical thinking training for TCM nursing is an important pathway to help nursing students establish and form correct TCM nursing clinical dialectical thinking as quickly as possible. Wang Xianmei et al. used the Kirkpatrick evaluation model to explore the application effects of theory and practice among TCM nursing students, indicating that while students' theoretical knowledge and technical skills improved using this model, their dialectical nursing care abilities still needed improvement due to insufficient clinical experience [28]. Song Dun et al. retrospectively analyzed 12 cases of low-temperature burns concurrent with TCM technical operations, showing that the occurrence of such events was closely related to nurses' insufficient dialectical thinking abilities [29]. Nursing staff exhibited problems such as inadequate pre-operation assessment, predictive errors during operation, and insufficient post-operation observation. In the TCM nursing dialectical process, due to the complexity of TCM syndrome differentiation types, the large number of acupoints, and the intricate meridian system, insufficient dialectical thinking ability can easily lead to incorrect nursing implementation that violates relevant ethical principles.

4. Lack of Shendu Spirit Leading to Adverse Events

The shendu spirit originates from Confucianism, referring to reverent caution and carefulness of mind [30]. It means being able to follow standards when working alone without supervision, being cautious and conscientious without perfunctory actions, and having no deceptive or concealed behavior. Currently, theoretical knowledge transmission about the shendu spirit in TCM nursing mostly takes the form of rote teaching [31], making it difficult to acquire systematic theoretical knowledge, form a comprehensive and profound shendu spirit, and develop rigorous and self-disciplined work styles. In recent years, due to the rapid development of TCM and gradually increasing demand for TCM treatment, TCM nursing staff have been in short supply overall, leading to heavy workloads and personnel turnover imbalances. Often, one nurse implements pro-

cedures for several patients, easily falling into ethical dilemmas due to lack of shendu spirit. A survey showed that Zhejiang Chinese Medical University investigated adverse events in TCM nursing operation techniques in their neurology department from January 2020 to June 2022, revealing causes including lack of shendu spirit among TCM nursing staff, unskilled operation techniques, and unclear nursing operation thinking [32]. Chi Yu et al. retrospectively analyzed six scald cases caused by improper TCM nursing operations, showing that lack of shendu spirit and weak scald cognition were the main factors [33].

III. Ethical Reflections on TCM Nursing

1. Improve Laws and Regulations for Nursing Information Management

The development of TCM medical care is gradually improving in informatization and ethics management, with some hospitals having launched internet medical systems that conform to ethical values. However, due to the slow development of TCM nursing informatization, ethical issues such as privacy breaches exist in related nursing electronic medical records. Therefore, we should not only enhance nursing staff's ethical literacy but also improve laws and regulations for TCM nursing information management to provide tangible nursing protection for the public and enhance the professional value of TCM nursing. Currently, the construction of TCM nursing informatization mostly relies on scattered provisions in existing regulations [34]. Relevant departments should improve laws and regulations, clarify responsibilities between TCM nursing staff and patients, and establish norms for the application of information management between TCM nursing techniques and diseases. Starting from the characteristics of TCM nursing practice, we should construct standards at all levels, regulate data collection and utilization behaviors in TCM nursing informatization practice, and control the practical scale of technologies such as artificial intelligence, big data, and the Internet of Things in the TCM nursing field [35].

2. Emphasize Education on Shendu Spirit

In recent years, the state has vigorously supported TCM development, and the TCM nursing profession has gradually progressed [36]. As a characteristic of Chinese medicine, TCM nursing should be optimized ideologically first, cultivating the shendu spirit among TCM nursing practitioners to promote discipline development. Compared with traditional rote teaching, anchored instruction is more practical. Anchored instruction involves setting up relevant real-world situations in advance and selecting typical authentic events for analysis, representing a new teaching model that enhances practical hands-on abilities [37]. Foreign studies show that the Netherlands redesigned its postgraduate nursing education structure by increasing flexibility in educational formats [38], greatly improving learning efficiency. TCM nursing education can simulate this design by reducing single-theoretical training time on shendu spirit and strengthening anchored learning models for shendu case simulation training to enhance nursing

staff's shendu awareness. According to surveys, foreign nursing colleges have held profound educational seminars on nursing ethical issues. By evaluating, analyzing, and resolving ethical questions for numerous clinical nursing staff and providing diversified assistance for ethical issues in nursing, they greatly alleviated negative emotions from nursing staff neglecting shendu spirit, thereby substantially improving work quality. Sun Xiaojing et al. used a random number table method to study 120 psychiatric patients admitted to a hospital from January 2018 to October 2019, showing that emphasizing shendu spirit education could directly reduce the incidence of adverse events [39]. In the domestic environment where TCM nursing ethics atmosphere is not strong, nursing managers should take the lead in providing organizational support, assisting nursing staff in recognizing their own value, analyzing key points for improving TCM clinical nursing, and creating an ethical atmosphere conducive to nurse-patient communication and mutual respect. Future improvements in TCM nursing ethics education could draw on the Western model of "ethical discussion atmosphere groups" [40] to form "TCM shendu spirit atmosphere groups." Only under the foundation of proper shendu education and adherence to shendu spirit can a good shendu ethical atmosphere be formed [41], enabling concentrated and excellence-pursuing work attitudes and avoiding a series of adverse events.

3. Enhance Nursing Staff's Dialectical Nursing Care Ability

The nursing field abroad emphasizes the application of critical thinking, while TCM advocates implementing nursing under the guidance of dialectical thinking. Christie Raymond et al. used a constructivist grounded theory approach to explore critical thinking among nurse educators in practice, demonstrating that critical thinking is significant for promoting nursing development [42]. To improve nursing staff's dialectical nursing care ability, Wang Zhaoyan et al. developed a project combining TCM nursing skills with virtual simulation [43]. Using convenience sampling to survey 2017 undergraduate nursing students at a university, although a small portion of respondents felt it occupied too much rest time and pointed out system compatibility issues, the conclusion showed that virtual simulation training could enhance nursing staff's learning interest and ability in dialectical thinking. Wang Xiao used the "structure-process-outcome" theoretical framework, adhering to TCM nursing dialectical thinking and exploring from the perspective of etiology and pathogenesis, to establish a standardized TCM nursing quality evaluation system [44]. This is essential for avoiding incorrect nursing care, improving nursing effectiveness, and strengthening TCM nursing advantages. This suggests that in future TCM nursing clinical practice, we can continuously optimize training processes and modern technological means to enhance nursing staff's dialectical nursing care ability, thereby avoiding a series of nursing ethical issues.

4. Strengthen Promotion of Appropriate TCM Nursing Techniques

Appropriate TCM techniques are gradually becoming known to the public due to their remarkable advantages of being simple, convenient, effective, and inexpensive [45]. However, due to the overall Western-biased nursing professional environment, the promotion of appropriate TCM techniques is not comprehensive enough, and the personal value of TCM nursing staff is not sufficiently recognized. Given that all residents are potential audiences for appropriate TCM nursing techniques, ethical issues may arise due to nursing staff's low ethical decision-making abilities. There is an urgent need to strengthen the promotion of appropriate TCM nursing techniques. We can adopt various flexible promotion models, actively carry out appropriate technique experiences for all people, and improve public awareness and acceptance of appropriate TCM nursing techniques through video health education, offline popular science lectures, and community material distribution [46]. This can optimize deficiencies in the TCM nursing professional environment and contribute to building a career environment conducive to TCM nursing ethics development.

IV. Conclusion

The influence of TCM nursing continues to expand globally, but some ethical dilemmas still hinder its development. Currently, domestic research on TCM nursing ethics is limited. It is recommended that future research be based on evidence to further explore potential ethical issues related to TCM nursing, formulate systematic and scientific guidelines as support, gradually resolve TCM nursing ethical dilemmas, and promote the continuous development of the TCM nursing discipline.

References

- [1] Wu Minjuan. Investigation on the Current Status and Related Factors of Ethical Decision-Making Ability of Clinical Nurses[D]. Hangzhou Normal University.
- [2] AACN A A O C. American Association of Critical Care Nurses Public Policy Position Statement: moral distress[EB/OL]. (2021-06-28)[2023-10-17]. <https://www.aacn.org/clinical-resources/moral-distress>.
- [3] Lamiani G, Borghi L, Argentero P. When healthcare professionals cannot do the right thing: A systematic review of moral distress and its correlates[J]. *J Health Psychol*, 2017,22(1):51-67.
- [4] McCarthy J, Gastmans C. Moral distress: a review of the argument-based nursing ethics literature[J]. *Nursing ethics*, 2015,22(1):131-152.
- [5] Porr C, Gaudine A, Smith-Young J. Ethical conflicts experienced by community nurses: A qualitative study[J]. *Nurs Ethics*, 2023:1548530893.

- [6] Rainer J, Schneider J K, Lorenz R A. Ethical dilemmas in nursing: An integrative review[J]. *J Clin Nurs*, 2018,27(19-20):3446-3461.
- [7] Nopita W N, Juanamasta I G, Thongsalab J, et al. Strategies and challenges in addressing ethical issues in the hospital context: A phenomenological study of nurse team leaders[J]. *Belitung Nurs J*, 2023,9(2):139-144.
- [8] Zhang Jingwei, Li Mingxia, Xu Xiangmin, et al. Research Progress on Nursing Ethical Dilemmas[J]. *Journal of Nursing Science*, 2021,36(23):17-20.
- [9] Wang Mingli. Nursing Ethical Dilemmas and Countermeasures[J]. *Journal of Jilin Medical College*, 2019,40(04):274-275.
- [10] Li Min, Kong Yan, Cui Yan. Kuhn' s Paradigm Theory and Its Enlightenment for the Development of Nursing Discipline in China[J]. *Journal of Nursing (China)*, 2021,28(17):15-19.
- [11] Wang Yali, Wei Yongchun, Dong Yuxia, et al. Evolution and Current Application Status of Traditional Chinese Medicine Nursing Techniques[J]. *Chinese Journal of Integrative Nursing*, 2023,9(6).
- [12] Wang Zhaoyan, Liu Wei, Chen Hui, et al. Development and Application of Virtual Simulation Experiment for Cupping Skills in Integrated TCM Nursing Skills Based on Clinical Dialectical Thinking[J]. *Nursing Research*, 2020,34(20):3701-3704.
- [13] Wang Xian, Xu Jun, Wang Yan, et al. Discussion on the Establishment of Difficulty Grading and Access Mechanism for 18 TCM Nursing Techniques[J]. *Journal of Nurses Training*, 2020,35(04):338-341.
- [14] Zheng Haiyan. Difficulty Grading and Corresponding Access Management of Traditional Chinese Medicine Nursing Techniques[J]. *Journal of Traditional Chinese Medicine Management*, 2018,26(24):65-67.
- [15] Xu Min, Huang Xinrui, Liu Ting, et al. Construction of a Standardized Management Plan for Traditional Chinese Medicine Nursing Techniques in Zhejiang Province[J]. *Chinese Journal of Nursing*, 2023,58(02):217-223.
- [16] Liu Ting. Analysis of Adverse Events in Traditional Chinese Medicine Nursing Operations and Safety Management Countermeasures[J]. *Electronic Journal of Clinical Medical Literature*, 2019,6(44):70-72.
- [17] Liu Suoxia, Li Kun. Exploration of Professional Standards and Due Diligence Ethics for Traditional Chinese Medicine Nursing Personnel from the Perspective of the New Era[J]. *Modern Distance Education of Chinese Medicine*, 2018,16(23):138-139.
- [18] Wang Mengna, Liu Qianru, Deng Xinru, et al. Research Progress on Elderly People' s Demand for Traditional Chinese Medicine Nursing Services Under the Integrated Medical and Elderly Care Model[J]. *Journal of Nursing Science*, 2022,37(21):102-105.

- [19] Du Yu, Li Ping, Wu Han, et al. Analysis of Cognition, Demand, and Satisfaction of Elderly People in Nursing Institutions Regarding Characteristic Traditional Chinese Medicine Services[J]. Chinese Journal of General Practitioners, 2021,20(05):568-574.
- [20] Zhu Haili, Chen Yan, Shi Chunhong, et al. Current Status and Survey Analysis of Traditional Chinese Medicine Nursing Techniques in Integrated Medical and Elderly Care Institutions[J]. Hunan Journal of Traditional Chinese Medicine, 2020,36(05):118-121.
- [21] Shao Yu, Shi Hongjian, Li Dongya, et al. Investigation and Analysis of Factors Related to Ethical Decision-Making Ability of Nurses in Traditional Chinese Medicine Hospitals[J]. Guiding Journal of Traditional Chinese Medicine and Pharmacy, 2022,28(11):210-213.
- [22] Hou Lili. Development and Clinical Application of Nursing Informatization[J]. Shanghai Nursing, 2022,22(05):72-75.
- [23] Chen Yifan, Yi Junru, Luo Yaoyue, et al. Reflections on the Construction and Development of Traditional Chinese Medicine Nursing Informatization in China[J]. Journal of Nursing (China), 2023,30(10):20-23.
- [24] Li Sijun, Wang Yutan, Zhang Yuanyuan, et al. Co-word Clustering Analysis of Research Hotspots in Nursing Informatics in China[J]. Journal of Nursing Science, 2022,37(12):97-100.
- [25] Xu Shuang, Zhang Li. Application of Continuous Quality Improvement Methods in the Management of Traditional Chinese Medicine Nursing Record Writing[J]. Journal of Traditional Chinese Medicine Management, 2022,30(13):76-78.
- [26] Zhou Jiaomei, Zhang Suqiu, Fan Yanmei, et al. Application and Analysis of Structured Electronic Medical Record System for Traditional Chinese Medicine Nursing[J]. Chinese Nursing Management, 2019,19(10):1441-1444.
- [27] Li Yanbo, Zhao Yunhui, Li Ling, et al. On the Similarities and Differences Between Traditional Chinese Medicine Nursing and Western Medicine Nursing[J]. Contemporary Nurse(Late Issue), 2015(03):189-191.
- [28] Wang Xianmei, Mei Li, Chen Fang, et al. Application of Clinical Practice Teaching Program for Traditional Chinese Medicine Nursing Students Integrated with Traditional Chinese Medicine Education[J]. Journal of Anhui Medical College, 2023,22(01):112-115.
- [29] Song Dun, Wu Qiong, Tang Na, et al. Retrospective Analysis of Causes and Management Countermeasures of 12 Cases of Low-Temperature Burns Concurrent with Traditional Chinese Medicine Technical Operations[J]. Guangming Journal of Chinese Medicine, 2021,36(05):837-839.
- [30] Ding Sixin, Zhu Yuan. Mencius Philosophy is a Deepening and Development of Zisi' s Philosophy—Also on the Relationship Between Zisi' s Philosophy and

- “Shendu” with Confucius[J]. Confucian Academy, 2023,10(02):35-44.
- [31] Zhu Minqiang, Xu Yinan. Influence of Shendu Spirit Education on Comprehensive Quality of Pediatric Probationary Nurses[J]. China Higher Medical Education, 2021(03):75-76.
- [32] He Ting, Zhang Xiangyun. Investigation on the Implementation of Traditional Chinese Medicine Nursing Operation Techniques in Neurology Department and Management Countermeasures[J]. Journal of Traditional Chinese Medicine Management, 2023,31(02):34-36.
- [33] Chi Yu, Xiao Lina. Analysis of Adverse Events of Scalds Caused by Traditional Chinese Medicine Nursing in Rheumatology and Immunology Department[J]. Integrative Nursing of Chinese and Western Medicine (Chinese-English), 2018,4(12):38-40.
- [34] Zhang Hongcai. Research on the Current Situation and System Construction of Internet + Health Medical Rule of Law in China[J]. Soft Science of Health, 2022,36(10):12-15.
- [35] Kleib M, Chauvette A, Furlong K, et al. Approaches for defining and assessing nursing informatics competencies: a scoping review[J]. JBI Evid Synth, 2021,19(4):794-841.
- [36] Zhang Jun, Li Hangting, Wang Yun, et al. Practical Research on the Training of Backbone Talents in Traditional Chinese Medicine Nursing[J]. Chinese Journal of Nursing Education, 2020,17(01):28-32.
- [37] Li Yujuan, Lin Heng, Wei Cuihua. Application Effect of Anchored Instruction Combined with Problem-Based Learning in Nursing Students’ Internship Teaching[J]. International Journal of Nursing Sciences, 2019,38(15):2312-2315.
- [38] Pool I A, van Zundert H, Ten Cate O. Facilitating flexibility in postgraduate nursing education through entrustable professional activities to address nursing shortages and career prospects[J]. International nursing review, 2023.
- [39] Sun Xiaojing, Wang Haoyue, Zhou Lei. Application Analysis of Shendu Spirit in Oral Medication Nursing for Psychiatric Patients[J]. Cardiovascular Disease Electronic Journal of Integrated Traditional Chinese and Western Medicine, 2020,8(17):89-91.
- [40] Barkhordari-Sharifabad M, Ashktorab T, Atashzadeh-Shoorideh F. Obstacles and problems of ethical leadership from the perspective of nursing leaders: a qualitative content analysis[J]. J Med Ethics Hist Med, 2017,10:1.
- [41] Liu Conghui, Zhang Mengtong, Zhao Cuicui, et al. Research Progress on Moral Distress of Oncology Nurses[J]. Medicine and Philosophy, 2023,44(07):52-55.
- [42] Raymond C, Profetto-McGrath J, Myrick F, et al. Balancing the seen and unseen: Nurse educator as role model for critical thinking[J]. Nurse education in practice, 2018,31:41-47.

- [43] Tjoflat I, Brandeggen T K, Strandberg E S, et al. Norwegian nursing students' evaluation of vSim(R) for Nursing[J]. *Adv Simul (Lond)*, 2018,3:10.
- [44] Wang Xiao. Construction of Quality Evaluation System for Herpes Zoster Traditional Chinese Medicine Nursing Using “Structure-Process-Outcome” Theory[J]. *Journal of Nursing (China)*, 2020,27(01):12-15.
- [45] Wang Hequn, Wang Li. Review on Community Application of Appropriate Traditional Chinese Medicine Techniques[J]. *Chinese Rural Health Management*, 2019,39(08):545-548.
- [46] Huang Kaiyu, Xu Yongyi, Wei Sheng. Experience and Strategic Recommendations for Promoting Appropriate Traditional Chinese Medicine Techniques in Ningbo City[J]. *Journal of Traditional Chinese Medicine Management*, 2023,31(14):238-240.

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