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A study on the correlation between emotional intelligence and moral distress in oncology nurses

Zhang Qiaoling[1,a], Li Xiaowei[1,b], Gao Siyu[1,c] , Liu Fang[1,d,*]

[1]Department of School of Nursing, Shaanxi University of Chinese Medicine, 712046, Xianyang, Shaanxi, China
[a]3235377172@qq.com, [b]576921842@qq.com, [c]601744375@qq.com, [d]1106812349@qq.com
**Corresponding author*

Abstract: *Objective To investigate the current situation of oncology nurse moral distress and the influence of the emotional intelligence on moral distress. Methods The emotional Intelligence Scale (WLEIS) and moral distress Scale-Revised (MDS-R) were used to investigate 350 oncology nurses from 6 tertiary hospitals in Xi'an city from February to March in 2022. Results Nurses' emotional Intelligence Scale Score was 62.10±16.06, which was in the middle level. Nurses' moral distress Scale-Revised Score was 54.40±30.29, which was at the medium and high level. The total score of emotional intelligence and its dimensions are negatively correlated with moral distress (P<0.05).Regression analysis showed that age, working hours , title and dimensions of emotional intelligence affected the moral distress, which could explain 42.6% of the moral distress (P<0.05). Conclusions The moral distress level of oncology nurses is higher, emotional intelligence has a certain predictive effect on moral distress, suggesting that nursing managers can improve the emotional intelligence of nurses to reduce moral distress level, and maintain the stability of nursing staff.*

Keywords: *oncology nurses; emotional intelligence; moral dilemmas; correlation analysis*

With the rapid development of medical technology and social civilization, the complex clinical environment, limited health resources, and the ever-increasing service requirements of nursing practice, medical practitioners are widely faced with ethical issues and often moral distress [1]. Moral distress were introduced by Jameton [2] in 1984 and are psychological imbalances or distressing experiences that arise from external factors that do not allow the individual to act in accordance with deeply rooted moral beliefs [3]. Oncology nurses, as front-line personnel, witness the tragedy of physically and mentally fragile cancer patients, and are often required to inform patients of their illnesses and make treatment decisions for critically ill patients in a long-term heavy and high-stress work environment, and they may have different positions from family members and physicians and may have different opinions, thus becoming a high-risk group for moral distress [4]. A related study [5] showed that continuous moral distress negatively affects nurses, patients, and teams, producing mental harm such as anxiety, depression, anger, and helplessness and somatic harm such as headache, insomnia, and loss of appetite; causing nurses to lose motivation to care for patients and affecting the quality of patient care; and causing burnout and turnover of nurses, which is detrimental to the structural stability of nursing teams.

According to Mayer and Salovey's [6] theory of emotional intelligence, it refers to the ability of individuals to identify and control their own emotions and to guide their thinking and actions accordingly, mainly in terms of the awareness and ability to feel, understand, express, control and sublimate their emotions and feelings, as well as the ability to perceive and manage relationships with others. The use of emotional intelligence has an important role in promoting communication and teamwork among colleagues in the healthcare field, and is central to nursing [7]. Several studies [8, 9] have shown that emotional intelligence is closely related to moral dilemmas and that emotions play an important role in the communication between nurses, physicians, and families regarding treatment decisions for critically ill patients. Therefore, this study will investigate the correlation between emotional intelligence and moral dilemmas among oncology nurses to provide a theoretical basis for nursing managers to reduce the level of moral dilemmas among nurses and maintain the stability of the nursing team.

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1. Objects and methods

1.1 Study Subjects

Nurses from oncology departments of Shaanxi Cancer Hospital and five other level A hospitals in Xi'an were selected for the study and convenience sampling was performed. According to the sample size calculation formula n=[maximum dimension×(15~20))]×[1+(15%~20%)], a sample size of 288 cases was obtained, and considering 20% of invalid questionnaires, 350 cases were finally determined. Inclusion criteria: (i) serving registered nurses; (ii) working continuously in the oncology department for more than 1 year; (iii) informed consent and voluntary participation in the study. Exclusion criteria: (i) internship and advanced training nurses; (ii) nurses engaged in non-clinical nursing work; (iii) those who were on leave or studying away and unable to participate in the study.

1.2 Research tools

1.2.1 General Information Questionnaire

Designed by the researcher, including gender, age, marital status, length of employment, highest level of education, title, etc.

1.2.2 Chinese version of the Moral Distress Scale-revised (MDS-R)

A culturally debugged moral distress scale by Sun Xia [10] in a group of nurses in China was used. The scale includes 4 dimensions of individual responsibility, failure to uphold the best interests of patients, value conflict, and harm to patients' interests, with a total of 22 entries. a Likert 5-point scale was used, with each entry including two aspects of moral distress: frequency of occurrence and degree of distress, with level 0 indicating never occurring or no distress, and level 4 indicating frequent occurrence or extremely serious distress, and the score of each entry was obtained by multiplying the two, and the total score of the scale was the The total score of the scale is the sum of the scores of each item, ranging from 0 to 352, and the higher the total score, the more serious the moral distress is.

1.2.3 The Wong and Law emotional intelligence scale (WLEIS)

This scale was developed by Wong and Law [11], a Hong Kong scholar, and has been widely used in the nursing community in China as an emotional intelligence scale. It includes 4 dimensions of self-emotion assessment, emotion assessment of others, emotion regulation and emotion use, with 16 items in total. The higher the score, the higher the emotional intelligence, and the Cronbach's alpha coefficient in this study was 0.913.

1.3 Survey Methodology

The study was conducted through the "Questionnaire Star" platform. Before the official survey, the person in charge of each unit was trained with a uniform guideline to inform them of the purpose, significance and precautions of the survey, and then the link to the questionnaire was sent to them via the WeChat platform. The data were kept strictly confidential. A total of 365 questionnaires were collected in this study, and 350 valid questionnaires were collected after screening out those with obvious logical confusion and regular answers, with a valid recovery rate of 95.89%.

1.4 Statistical analysis

The database was created and analysed using SPSS 26.0. Count data were statistically described using frequencies and percentages, and measurement data conforming to normal distribution were statistically described using $\bar{x} \pm s$. One-way analysis of variance was used for comparison, Pearson for correlation analysis and multiple linear stratified regression for analysis of influencing factors, with differences considered statistically significant at $P<0.05$.

2. Results

2.1 General demographic information on oncology nurses

In this study, most of the oncology nurses were under 40 years old, including 337 women (96.29%);

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most of them were married, 264 (75.43%); most of them had worked in the specialty for more than 10 years, 137 (37.11%); most of them had the title of nurse practitioner, 159 (45.42%); most of them worked 1-2 night shifts per week, 164 (46.86%); most of them were employed under contract, 249 (71.14%); most of them had the education level of bachelor's degree, 291 (83.14%). See Table 1 for details.

Table 1: One-way analysis of moral distress among oncology nurses (n=350)

Projects	Number of examples	MDS score ($x\pm s$)	*t/F*	*P*
Age (years)				
18~30	133(38.00)	45.38±30.66	5.209	0.006
31~40	189(54.00)	56.47±35.43		
≥40	28(8.00)	61.39±37.28		
Working hours (years)				
1~2	41(11.71)	37.05±30.26		
3~5	66 (18.86)	39.98±30.66	10.466	0.000
6~10	106 (30.29)	53.80±30.35		
＞10	137 (39.14)	62.53±36.48		
Title				
Nurse	72 (20.57)	45.03±38.37		
Nurse practitioner	165 (47.14)	43.55±29.79	18.724	0.000
Charge Nurse	102 (29.14)	69.37±30.54		
Deputy Chief Nursing Officer and above	11(3.14)	84.00±28.42		
Highest qualification				
Specialties	52 (14.86)	41.40±32.16	3.965	0.020
Undergraduate	291 (83.14)	54.27±34.26		
Master and above	7(2.00)	68.71±34.78		

2.2 Oncology nurses' emotional intelligence and moral distress scores

The total score of emotional intelligence for this group of nurses was 62.10±16.06, which was at a moderately high level. The highest score was for the self-emotional assessment dimension 18.31±4.28 and the lowest was for the emotional assessment dimension of others 13.53±7.16.Emotional Control score was 16.07±6.16, Emotional use score was 15.33±6.93.The total score of moral distress was 54.40 ±30.29, which was at a high level, the value conflict score was 18.91±11.98, the individual responsibility score was 15.19 ± 9.37, the failure to maintain the patient's best interests was 12.93 ± 8.98, and the detriment to the patient's interests was 5.62 ± 4.01.

2.3 One-factor analysis of moral distress among oncology nurses

The results of the study showed that there was a statistically significant difference ($p<0.05$) in the total ethical dilemma scores of oncology nurses when compared in terms of age, title, length of service and highest level of education, as shown in Table 1.

2.4 Analysis of the correlation between emotional intelligence and moral distress among oncology nurses

The results of Pearson correlation analysis showed that the EI scale were negatively correlated with the total score and dimensions of the MDS-R scale ($p<0.05$), as detailed in Table 2.

Table 2: Correlation between emotional intelligence and moral distress in oncology nurses (r-value)

Projects	Individual responsibility	Not in the patient's best	Conflict of values	Damage patients'	Moral distress
Self-emotion appraisal	-0.157*	-0.191*	-0.155*	-0.178*	-0.163*
Others'emotionl appraisal	0.144*	0.134**	0.131**	0.151*	0.138*
Regulation of emotion	-0.324*	-0.358*	-0.324*	-0.344*	-0.340*
Use of emotion	-0.324*	-0.335*	-0.312*	-0.315*	-0.323*
Emotional Intelligence	-0.259*	-0.283*	-0.254*	-0.262*	-0.265*

Note: *$P<0.01$; **$P<0.05$.

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2.5 Analysis of the factors influencing the moral distress of oncology nurses

To further analyze the effect of emotional intelligence on the moral dilemma of oncology nurses, this study used the total moral dilemma score as the dependent variable, the statistically significant demographic variables (age, title, highest education, and duration of work), and the dimensions of emotional intelligence as independent variables in a multiple linear regression, which are shown in Tables 3 and 4.

Table 3: Assignment of independent variables

Independent variable	Assignment
Age	18-30 years = 1; 31-40 years = 2; ≥40 years = 3
Highest qualification	Specialist = 1; Bachelor = 2; Master and above = 3
Title	Nurse = 1; Nurse Practitioner = 2; Supervising Nurse Practitioner = 3; Associate Director and above = 4
Years of specialist work	1 to 2 years = 1; 3 to 5 years = 2; 6 to 10 years = 3; 10 years on = 4

Table 4: Multiple linear stratified regression of factors influencing moral distress in oncology nurses

Independent variable	B-value	β-value	t-value	P-value
Constants	43.442	—	4.836	0.000
Years of specialist work	5.497	0.208	3.596	0.001
Title	7.276	0.230	3.254	0.001
Age	4.504	0.162	2.255	0.017
Other people's emotional assessment	-1.125	-0.097	-2.098	0.037
Self-emotional assessment	-2.235	-0.102	-2.140	0.033
Emotional Control	-4.142	-0.117	-2.343	0.021
Emotional use	-2.782	-0.109	-2.227	0.025

Note: R^2=0.439; adjusted R^2=0.426, F=33.397; p=0.000.

3. Discussion

3.1 Current status of emotional intelligence of oncology nurses

The total score of emotional intelligence of oncology nurses in this group was 62.10±16.06, which was at a moderate level, lower than the findings of Fang Xiaoxia et al [12], indicating that the level of emotional intelligence of oncology nurses was lower than that of general clinical nurses, and there was more room for improvement. It was slightly higher than the findings of Li Honghe et al [13] on oncology nurses, probably due to the different measurement instruments. The highest score is the self-emotion assessment dimension and the lowest others' emotion assessment dimension, which indicates that nurses in this group can pay better attention to the real emotional changes within themselves and are relatively insensitive to others' emotional changes and lack the ability to use and control emotions. The main reason may be that oncology nurses face the suffering of patients and families for a long time, and the experience of complex emotions and storage of negative emotions are not handled correctly, which leads to emotional exhaustion of nurses, and the perception of emotional states of others is gradually blunted, using methods of emotional shielding such as avoiding eye contact and changing the subject to reduce harm [14].

3.2 Current status of moral distress of oncology nurses

This study found that the total moral distress score of oncology nurses was 54.40±30.29, which was a higher level, higher than the findings of Tan Kaiyu [15] and Zhang Wenwen et al [16] and lower than the findings of Wu Chenxi et al [17]. It is suggested that the level of moral dilemma of oncology nurses during the regular epidemic prevention and control is higher than that of clinical general nurses and oncology nurses during the non-epidemic period, but lower than that of clinical nurses in sentinel hospitals. The main reasons may be that (i) oncology is mostly for long-term chemotherapy patients, who are physically and mentally fragile and have a high rate of uncertain recurrence, and face more ethical conflicts in informing prognostic information and making decisions on palliative care, making their moral dilemma level higher than that of general departments. (ii) During the regular prevention

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and control period, due to the implementation of the epidemic prevention and control policy, hospital restrictions on chaperones and visitors lead to a lack of support from patients' relatives and friends, causing nurses to feel a lack of humanization generating moral distress. In order to support the epidemic prevention and control, hospital human resources were tilted to the epidemic prevention department, and the shortage of staff in clinical departments was also an important cause of nurses' moral distress. (iii) In addition to the front-line nurses in the designated hospitals for neoconiosis who faced the problem of limiting chaperones, some nurses had the experience of caring for patients with neoconiosis and feared that being infected while rescuing patients would pose a risk to their families, resulting in a higher level of moral distress than in other hospitals during the epidemic [18]. In summary, oncology nurses have mor emoral distress in practice, and nursing managers should ensure adequate staffing during the regular prevention and control of the epidemic and encourage patients to use more online platforms to communicate with their loved ones to reduce the moral dilemmas caused by the epidemic prevention policy.

3.3 The impact of multiple factors on the moral distress of oncology nurses

The results of this study showed that rising age, working time, and job title aggravate the degree of nurses' moral distress, which is consistent with the findings of Wuning et al [19]. It may be because the older the age, the longer the working time, and the higher the job title, nurses accumulate rich clinical experience and are more likely to recognize unethical phenomena in the clinical setting, while more senior nurses serve as responsible team leaders and assume more responsibility when making decisions about patients, and patients have higher expectations of highly qualified nurses, generating stronger distress when they provide care that they perceive to be unethical. With longer working hours and prolonged exposure to ethical conflicts without good solutions, distress accumulates, which validates Epstein's [20] asymptotic effect of ethical distress.

3.4 Correlation analysis of nurses' emotional intelligence and moral distress

Correlation analysis showed that emotional intelligence was negatively correlated with the total moral distress score and each dimension, and regression results showed that age, and specialty work time, job title, and emotional intelligence together explained 42.6% of the variance in moral dilemma, similar to the results of related studies [21, 22], poor health care cooperation is a key factor in nurses' moral dilemma when facing disagreement about patients' treatment decisions, and mutual trust, respect, and open communication can promote effective communication between health care professionals, a deeper understanding of the decision-making opinions of people with different positions, and in-depth communication about patients' decision-making issues to strive for agreement and reduce the level of moral dilemmas.

Foreign studies [23] have argued that empathy, i.e., the understanding of the feelings and perspectives of others' emotions, which leads to emotional experiences similar to others' emotions, falls within the connotation of emotional intelligence. According to the moral distress theoretical framework of Rushton et al [24, 25], when faced with a situation in which a nurse cannot care for a patient according to his or her own moral code, emotions such as sadness and anger are activated, and low empathic ability allows the nurse to integrate others with self-feelings, while conversely high empathic ability allows the nurse to identify the feelings of others while having good insight into self-emotions and clearly analyzing the boundaries between self and others. At the same time, mobilizing emotional control ability and inhibiting the expression of negative emotions help nurses maintain a rational attitude and give appropriate compassion to patients. Good ability to use emotions motivates nurses to respond positively to ethical conflicts, to communicate tactfully with family members, physicians, and interprofessional collaborators, to understand others' perspectives in depth, to express themselves appropriately, to increase nurses' participation in patient care decisions [26], and to communicate and reflect with peers to obtain more emotional support and solutions to reduce the level of moral distress [27]. In addition, the emotional intelligence of health care workers is related to patient safety and quality of care, and high emotional intelligence can avoid errors and accidents arising from poor communication and reduce nurses' moral distress [28].

The above study suggests that nursing managers should develop the emotional intelligence of oncology nurses to increase their ability to cope with moral distress. Through training in interpersonal communication skills and emotion management, nurses are helped to understand the meaning and benefits of emotional intelligence, and then they are encouraged to deeply experience its application in various conflicts by simulating situations in the "Batlin group model" to enhance their emotional

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intelligence [29]. Through positive thinking training, nurses can improve their emotional intelligence, perception and regulation of emotions, and find balance in their emotional involvement with patients to reduce anxiety and depression [30].

4. Summary

In conclusion, the moral distress of nurses in this group is at a medium level, and the distress degree is significantly higher than that of ordinary departments, which is affected by age, professional title, working hours, emotional control and emotional application. It is suggested that hospital managers pay attention to the moral dilemmas of oncology nurses, take various measures to improve the level of emotional intelligence, promote the solution of moral conflicts and the evacuation of troubled emotions, reduce the turnover intention of nurses, and maintain the stability of nursing team.

The author declares that there is no actual or potential conflict of interest in this article.

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