Study on the Resilience of Hospital Nurses and Related Factors

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Abstract: Objective: To explore the psychological resilience of nurses and its influencing factors. Methods from April 2019 to March 2022, 1000 nurses were selected from 17 comprehensive hospitals in our district by cluster sampling. Resilience Scale (CD-RISC), Symptom Checklist-90 (SCL-90), Self-efficacy Scale (GSES) and Simple Coping Style Questionnaire (SCSQ) were used to evaluate the resilience, mental health status, self-efficacy and simple coping style of all the enrolled nurses. Record the psychological resilience score of nurses in this group; Observe the scores of psychological resilience of nurses with different social indicators such as different age intervals, different working years and different educational levels; According to the nurses' SCL-90 scale score, the total score of 160 was divided into two groups: mental health group and psychological problem group, and the scores of nurses' psychological resilience in different psychological states were counted. Pearson correlation statistical method was used to analyze the correlation between various factors and nurses' psychological resilience. Results: The average score of self-improvement dimension, tenacity dimension and optimism dimension were (3.57 0.63), (3.53 0.59) and (3.36 0.84) respectively. The average score of nurses' SCL-90 was (127.94 39.45), and there were 234 nurses (23.4%) with a total score greater than 160. The score of GSES scale for nurses was (24.67 7.06); The score of positive coping style and negative coping style in nurses' SCSQ was (25.01 7.49) and (10.15 4.68) respectively. Resilience of nurses is negatively correlated with age, mental health status (SCL-90 scale score) and negative coping style, and positively correlated with education level, professional title and self-efficacy (GSES scale score). Conclusion: The scores of nurses' psychological resilience in hospitals are generally low. By analyzing the psychological resilience of nurses and the influence of related factors, it can provide scientific basis for hospital nursing managers to take effective measures to improve nurses' psychological resilience, which is of great benefit to promoting nurses' mental health level, thus improving the quality of clinical nursing work and promoting the vigorous development of nursing industry.

1. Introduction

Nurses are an important group in the construction and development of medical system. Their main duties are to carry out various nursing work in combination with clinical treatment and patients' needs and provide service support for clinical treatment. Therefore, nurses have a complex audience, high work intensity and disordered work and rest. In practical work, because nurses face patients directly, they will be more cautious in their work because of their bad emotions caused by illness, and they will suffer from long-term pressure both physically and psychologically, which will have adverse effects on their physical health and mental health. In the long run, nurses' work enthusiasm is weakened, their work efficiency is reduced, and even they leave their jobs, which leads to the brain drain of nursing talents, which hinders the healthy development of clinical medical nursing industry [1]. Therefore, it is urgent to attach importance to the mental health of nurses. Resilience refers to the psychological adaptation of an individual after suffering from stress, which is an index reflecting the individual's psychological resistance to stress. Individuals with high psychological resilience can face setbacks and adversities directly, and can seek solutions or gain coping ability from daily accumulated experience, so as to keep their minds from being hurt and maintain their mental health level. Resilience can be improved through training. Studying individual resilience and its influencing factors can help us to improve resilience, enhance adversity quotient, improve stress resistance and maintain mental health by formulating scientific and effective intervention measures [2].

2. Data and methods

2.1. Basic data

From April 2019 to March 2022, 1, 000 nurses were selected from 17 comprehensive hospitals in our district by cluster sampling. The inclusion criteria are as follows: (1) Serve for more than one year; (2) Inform consent to the research; (3) pass the nursing post occupation; (4) Clinical nurses. It does not include nurses who are in the vocational training stage and are on maternity leave. In this group, 985 nurses are female and 15 are male, ranging in age from 22 to 37. The age range is: 232 cases within 25 years old, 411 cases from 26 to 30 years old, 227 cases from 31 to 35 years old and 130 cases over 35 years old. Education level: 643 cases in junior college, 256 cases in undergraduate course and 101 cases above undergraduate course; Working years: 597 cases in 1-3 years, 326 cases in 4-7 years and 77 cases over 8 years; Title: 301 nurses, 478 nurses, 113 nurses in charge and 108 nurses in charge [3].

2.2. Method

The resilience scale (CD-RISC) was used to investigate the resilience of all nurses. The scale is a self-reported scale, which contains 25 items, including three dimensions: self-improvement, patience and optimism. Each item has 0-4 points, and nurses can choose the answer that suits them according to their own situation. The scale has a full score of 0-100 points, and the higher the score, the higher the psychological resilience. (3) Self-confidence of all nurses was assessed by General Self-efficacy Scale (GSES). The scale is also a self-reported scale, with 10 items, each with a score of 0-4. Subjects should set out from reality and choose appropriate options according to their own situation. The higher the total score, the better their sense of self-efficacy. (4) The simple coping style questionnaire (SCSQ) was used to investigate the attitudes and practices of the nurses in this group when they suffered setbacks, blows or difficulties in life and work. The questionnaire is a self-rated questionnaire with 20 questions, which is scored by 0-3 points and 4 grades, and

corresponds to four attitudes: not taking, occasionally taking, sometimes taking and often taking. There are two dimensions: positive coping and negative coping [4].

2.3. Observation Indicators

The elasticity scores of nurses in this group were recorded, and the average scores of each dimension were calculated. The psychological resilience scores of nurses with different social indicators such as different age intervals, different working years and different education levels were observed. According to the SCL-90 scale score of nurses, the total score of 160 points was divided into mental health group and psychological problem group, and the psychological resilience scores of nurses in different psychological states were counted. Pearson correlation statistical method was used to analyze mental health status, self-efficacy and coping style.

2.4. Statistical Analysis

The research data were entered into Epi data3.1 software, checked and checked repeatedly, and then imported into SPSS 23.0 statistical system for descriptive statistical analysis, variance analysis and Pearson correlation analysis. The mean standard deviation of measurement index, t test, counting index rate, X2 test, P<0.05 were statistically significant [5].

3. Results

3.1. The Scores of Nurses in this Group in Each Scale

The average score of self-improvement dimension, tenacity dimension and optimism dimension of nurses in this group were (3.57 0.63), (3.53 0.59) and (3.36 0.84) respectively. The average score of nurses' SCL-90 was (127.94 39.45), and there were 234 nurses (23.4%) with a total score greater than 160. The score of GSES scale for nurses was (24.67 7.06); The score of positive coping style and negative coping style in nurses' SCSQ was (25.01 7.49) and (10.15 4.68) respectively[6].

3.2. Relationship Between Sociological Indicators and Nurses' Psychological Resilience

Table 1: Resilience scores of nurses with different sociological indicators

Sociological indicators		number of people	number of people	tough and tensile	optimistic	Total score of CD-RISC
Age	≤25 years old	232	3.67±1.04	3.61±1.18	3.45±0.85	3.59±1.08
	26-30years old	411	3.38±0.85	3.85±0.84	3.29±0.82	3.42±0.83
	31-35years old	227	3.52±0.69	3.46±0.77	3.28±0.73	3.49±0.75
	＞35years old	130	3.29±0.89	3.59±0.91	3.30±0.41	3.37±0.81
Degree of education	college for professional training	643	3.51±0.90	3.49±0.85	3.23±0.75	3.47±0.79
	undergraduate course	256	3.59±0.88	3.57±0.87	3.49±0.86	3.57±1.08
	Bachelor degree or above	101	3.52±0.76	3.55±0.61	3.41±0.81	3.50±0.73
Working life	1-3years	597	3.55±0.86	3.52±0.87	3.43±0.85	3.53±0.82
	4-7years	326	3.41±0.73	3.52±0.83	3.37±0.79	3.46±0.85
	Bachelor degree or above	77	3.72±0.74	3.59±0.81	3.31±0.96	3.55±0.83
Professional title	nurse	301	3.54±0.87	3.49±0.86	3.36±0.84	3.50±0.88
	primary nurse	478	3.49±0.86	3.69±0.89	3.44±0.83	3.59±0.86
	Nurse-in-charge	113	3.29±0.82	3.34±0.81	3.39±0.86	3.31±0.82
	Nurse-in-charge	108	3.70±0.73	3.60±0.72	3.73±0.91	3.67±0.85

As can be seen from the data in Table 1, nurses' resilience score has a nonlinear relationship with age, education level, working years and professional titles. See Table 1 for details[7].

3.3. Resilience Scores of Nurses with Different Mental Health Status

According to the data in Table 2, the total score of CD-RISC and the scores of all dimensions of nurses in mental health group were significantly higher than those in patients with mental problems, and there was a significant difference between the two groups (P<0.05).

Table 2: Comparison of Resilience Scores of Nurses with Different Psychological Conditions

group	strive to be stronger	tough and tensile	optimistic	Total score of CD-RISC
Mental health group (n=234)	3.58±0.86	3.55±0.87	3.43±0.84	3.56±0.85
Nurses with psychological problems (n=766)	3.29±0.77	3.41±0.91	3.19±0.81	3.31±0.83
t	20.153	5.604	13.076	2.409
P	<0.05	<0.05	<0.05	<0.05

3.4. Correlation Analysis Between Nurses' Resilience and Several Influencing Factors

Nurses' resilience is negatively correlated with age, mental health status (SCL-90 scale score) and negative coping style, and positively correlated with education level, professional title and self-efficacy (GSES scale score), as shown in Table 3.

Table 3: Correlation analysis results of nurses' psychological resilience and various influencing factors

factor	strive to be stronger	tough and tensile	optimistic	CD-RISC aggregate score
age	-0.261	-0.101	-0.158	-0.183
Degree of education	0.084	0.101	0.128	0.108
professional title	0.029	0.024	0.071	0.064
SCL-90 scale score	-0.226	-0.301	-0.258	-0.281
GSES scale score	0.521	0.601	0.425	0.602
Respond positively	0.487	0.513	0.431	0.530
Negative coping	-0.170	-0.111	-0.008	-.0.124

4. Conclusion

Resilience is an individual's psychological stress level when coping with adversity, which can be improved through his own knowledge reserve and experience ability. As an important group in the development of medical industry, nurses' psychological resilience level is directly related to their adaptability, stress resistance and effective coping ability at the present stage of increasing work intensity and increasing dispute rate between doctors and patients [8]. Good psychological resilience is an important factor for nurses to maintain their enthusiasm for work. Therefore, it is of great significance to pay attention to the present situation of hospital nurses' psychological resilience and understand the related factors [9].

In this study, 1000 nurses were selected, and the results showed that their scores of psychological resilience were not ideal, which reflected that clinical nurses in hospitals in China generally had different degrees of negative emotions and lacked happiness in their jobs and daily life. Through the investigation of social indicators, mental health status, self-efficacy and coping style of nurses, it

was found that nurses' resilience was negatively correlated with nurses' resilience and age, mental health status (SCL-90 scale score) and negative coping style, and positively correlated with education level, professional title and self-efficacy (GSES scale score)[10]. The analysis shows that the nurses in the younger stage will actively adapt to the hospital environment in order to gain a sense of professional identity and social identity, and have high expectations for career planning in nursing work, so they will devote themselves to nursing work with the most full mental state, and their mental state is positive at this time, so their psychological elasticity is high. In recent years, due to the influence of the aging population in China, the medical load is serious and the supply of nursing talents is in short supply [11]. Nurses are in a state of high-intensity work for a long time, which makes them feel anxious, depressed, anxious and hostile. Improving individual's self-symptoms can improve their mental health and psychological resilience. This study also suggests that nurses who take a positive coping style after encountering difficulties or problems have high psychological resilience. This is because positive coping style can help individuals find solutions and ways to problems quickly, so as to minimize the influence of negative factors on themselves in a short time, which is very important for the protection and improvement of psychological resilience[12].

Based on the above research results, the mental health level of hospital nurses cannot be ignored. According to the results of relevant influencing factors, the author thinks that the hospital nursing department should pay attention to the improvement of nurses' self-awareness level and comprehensive ability. It is necessary to provide nurses with more opportunities and platforms for basic knowledge training and skills upgrading training, optimize the scheduling system, formulate reasonable and transparent career promotion rules, improve the working environment, reduce nurses' work pressure and enhance nurses' occupational happiness index [13].

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