

# Investigation and Education Practice on Nurse Mental Health

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**Abstract:** Mental health is a dynamic balance. Generalized mental health is a kind of status that is efficient and satisfactory to the environment with the rapid development of science and technology and the continuous improvement of social material living standard, mental health is getting more and more attentions extensively. The characteristics of the nursing work causes high intensity stress state, not only induce to fatigue but also affects mental health. Objective: To understand the clinical nurses' mental health condition, and perform different forms of mental health education practice accordingly. Method: The symptom self-assessment scale (SCL-90) was used to investigate among 704 clinical nurses. Results: Except interpersonal sensitivity factor, the somatization, force, depression, anxiety, fear, hostility, paranoid, psychotic factor, and total average score of SCL-90 of nurse were higher than that of domestic norm and the female norm ( $P < 0.01$ ). The positive statistical indicators of force, interpersonal sensitivity and depression factor were relatively high. Conclusion: The high strength work pressure have serious impact on the clinical nurses' mental health, managers must attach great importance to it and actively take countermeasures. Nurses also need to strengthen self-consciousness of mental health and learn self-management methods. The overall mental health level in nurse group is very important in hospital. To receive this target, hospitals should establish an external operating mechanism to allow nurses to accept continuous psychology health education and counseling.

**Keywords:** Nurse, Mental Health, Education

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## 1. Introduction

Psychological health indicated a dynamic balance psychological process [1]. Generalized mental health is a kind of status that is efficient and satisfactory to the environment [2]. With the rapid development of science and technology and the continuous improvement of social material living standard, mental health is getting more and more attentions extensively [3]. The characteristics of the nursing work causes high intensity stress state, not only induce to fatigue but also affects mental health [4]. Since 2010, we have successively visited five tertiary hospitals in Xi'an city and survey the mental health status of 704 clinical nurses, followed by targeted development mental health education.

## 2. Methods

### 2.1. Survey Object

704 clinical nurses in 5 tertiary hospitals (3 comprehensive hospitals and 2 specialist hospitals) in Xi'an, all female, 20~53 aged, average age  $28.32 \pm 7.31$  years old, working age from 1~33 years, average age is  $10.87 \pm 6.52$  year.

### 2.2. Research Tools

Survey scale using SCL-90 symptom checklist, including 10 symptom factors (2. 1 somatization, obsessive-compulsive, sensitive interpersonal relationship, depression, anxiety, hostile, terror, paranoia, psychosis, others) and 90 checkpoints.

By subject based on their recent 1 week or nearly 10 days of conditions and symptoms. The degree is 1-5. The index for analysis includes 10 symptom factor scores, numbers of positive items and total average score. Survey method was group investigation. Unified introduction was used by question master who explained the purpose and significance of the investigation briefly and all questionnaires were handed in within 20 minutes. 760 questionnaires were issued, 704 valid questionnaires were returned, the recovery efficiency is 93%.

### 2.3. Data Analyses

All data were analyzed with SPSS17.0 using frequency statistics and t test for data analysis.

## 3. Results

Compared with the domestic norm [5], various symptom scores in SCL - 90 are higher except the factor of sensitive interpersonal relationship ( $P < 0.01$ ), as shown in table 1.

**Table 1.** Comparison of Scl-90 Score of Various Symptom Factors in Clinical Nurses and Domestic Norms.

Symptom	Nurse (n=704)	Normal (n=1388)	t
Somatization	1.44 ±0.43	1.37 ±0.48	4.41*
Obsessive-compulsive	1.75 ±0.53	1.62 ±0.58	6.64*
Interpersonal relationship	1.64 ±0.51	1.65 ±0.61	0.45**
Depression	1.63 ±0.55	1.50 ±0.59	6.11*
Anxiety	1.55 ±0.49	1.39 ±0.43	8.47*
Hostile	1.59 ±0.57	1.46 ±0.55	5.88*
Terror	1.37 ±0.48	1.23 ±0.41	7.70*
Paranoia	1.53 ±0.48	1.43 ±0.57	5.48*
Psychosis	1.39 ±0.40	1.29 ±0.42	6.65*
Mean ± SD	1.54 ±0.42	1.44 ±0.43	6.71*

\* $P < 0.01$ , \*\*  $P > 0.05$ .

Compared with the women domestic norm [5], various symptom scores in SCL - 90 are higher except the factor of sensitive interpersonal relationship ( $P < 0.01$ ), as shown in table 2.

**Table 2.** Comparison of Scl-90 Scores of Various Symptom Factors among Clinical Nurses and Female Norms.

Symptom	Nurse (n=704)	Normal (n=664)	t
Somatization	1.44 ±0.43	1.37 ±0.47	4.41*
Obsessive-compulsive	1.75 ±0.53	1.59 ±0.54	8.13*
Interpersonal relationship	1.64 ±0.51	1.61 ±0.58	1.63**
Depression	1.63 ±0.55	1.49 ±0.56	6.59*
Anxiety	1.55 ±0.49	1.37 ±0.42	9.55*
Hostile	1.59 ±0.57	1.45 ±0.52	6.34*
Terror	1.37 ±0.48	1.30 ±0.47	3.84*
Paranoia	1.53 ±0.48	1.41 ±0.54	6.59*
Psychosis	1.39 ±0.40	1.26 ±0.49	8.63*
Mean ± SD	1.54 ±0.42	1.44 ±0.43	6.79*

\* $P < 0.01$ , \*\*  $P > 0.05$ .

Nurse SCL-90 statistical indicator positive rate and the rank of SCL - 90 index positive rate

According to statistical results, the top 3 factors are

obsessive-compulsive (28%), sensitive interpersonal relationship (24.1%) and depression (22.4%) respectively as shown in table 3.

**Table 3.** Positive Rate and Rank of the Statistical Indicators of Scl-90 for Clinical Nurses.

Symptom	People (n=704)	Positive Rate (%)	Rank
Somatization	85	12.1	7
Obsessive-compulsive	197	28.0	1
Interpersonal relationship	170	24.1	2
Depression	158	22.4	3
Anxiety	124	17.6	6
Hostile	141	19.9	4
Terror	69	9.7	8
Paranoia	127	18.0	5
Psychosis	63	8.9	9

\* $P < 0.01$ , \*\*  $P > 0.05$ .

## 4. Discussion

Symptom scores in clinical nurse SCL-90 are higher when compared with the women domestic norm, except the factor of sensitive interpersonal relationship. The top 3 factors are obsessive-compulsive (28%), sensitive interpersonal relationship (24.1%) and depression (22.4%) respectively. This survey was not completed at the same time. The investigation lasted nearly one year. That indicates clinical nurses' mental health is continuing to be low, not only lower than the normal population, the female population is also at a lower level.

### 4.1. Influencing Factors of Clinical Nurse Mental Health Analysis

#### (1) Gender

Most of the clinical nurses are women, so the survey samples are all female. In the process of social transformation, under the challenges of traditional culture and modern ideas, women play dual roles and responsibilities in social and family. Due to multiple roles, the female mental health level is low [6].

#### (2) Age

The average age of the test subjects was  $28.32 \pm 7.31$  years old. Studies have shown [7] that the crowd who age from 20 to 30 has the highest pressure. Shu Zhou et al [8] investigated 364 low-age nurses (average age is 26.5 years old). The survey also showed that the mental health of low-grade nurses is significantly lower than that of the general population. The factors which lead to nurses' low mental health might be: 1 Low professional identity, low willingness and ability to adapt the environment; 2 Labor intensity; 3 Deteriorated patient-nurse relationship; 4 Unstable emotion during love and marriage; 5 Pregnancy and economic burden, etc.

#### (3) Hospital

In recent years, with implementation of the National Health Insurance Comprehensive Treatment Policy, more and more patients influx into the city's major hospitals, the tertiary

hospitals are full of patients and the workload of nurses has increased dramatically.

#### (4) Profession

On the one hand, patient care is a highly integrated work of knowledge and skill. On the other hand, medical care service requires "zero error". This is a big challenge for mentality and stability of the working state.

(5) Strict requirements for certain caregivers such as nosocomial infection prevention and control, sterility technology, check system and so on, it also plays an unknowable role. Now, forced inspection and hand washing and other enforced symptom cases in the nurse group is obvious higher than normal people. In this investigation, the positive proportion of the forcing factor ranks first, it also supports this view.

(6) Interpersonal sensitivity factor positive ratio is in the second place. The possible reasons are: First, legal awareness of nurse is weak and easy to fall into the dispute of doctor-patient disputes, although mastered communication skills and methods, because of the weak willingness to communicate, the communication effect is not ideal. Second, the nurse being given the image of an angel, this requirement seems to be general, but because it is everlasting, it is difficult to achieve, and high emotional labor may form the high-stress potentially.

(7) Analysis from psychological perspective, the reason why depression is a main reason that score is higher, is that they were influenced by medical environment and nursing work characteristics. Nurses face patients and their families every day, their anxiety and anger, depression and pessimism, helplessness and powerlessness are affecting them every moment. Through meta-analysis, Chen Hui et al [9] analysis the mental health of clinical nurses in China, they found the level of nurses' mental health was lower than the general population. The results also confirmed by this study.

### **4.2. Mental Health Education Practice**

Clinical nurses' low mental health directly affects nurses' physical health [10], occupational satisfaction and sense of achievement, but also reduces work efficiency and quality [11]. Consequently, it can induce patient's negative emotions to treatment and the quality of service of hospital [12]. According to the survey results, we designed 3 different methods of mental health education practice activities for exploring different effects of the methods of scientific technology intervention in a wide range among audiences.

### **4.3. Large Scale Lectures for All Clinical Nurses**

According to the main occurrence of clinical nursing staff including obsessive-compulsive, sensitive interpersonal relationship and depression, in each of the 5 hospitals we surveyed, we gave nurses 3 lectures named "Psychology Changes Life". Through real examples, to enhance the

awareness of mental health among nurses, help them to establish the mental health concept and self-feeling, at the same time help them seeking professional assistance in a timely manner, when they falls into psychological crisis or their psychological emotional changes.

### **4.4. Self-Psychological Adjustment Methods**

Choose 50 nursing leaders in a hospital and give them 5 times (15 hours totally) structured lectures about psychology education combined with lessons and music therapy experience.

#### **4.4.1. Pressure Release**

Teaching what is pressure, the main source of pressure for nurses and psychological body manifestations under the pressure. Sharing the method for decompression, doing decompression experience in music.

#### **4.4.2. Negative Emotion Management**

Lectures about what are the emotions, what are the common negative emotions? Clarifying the mental health is no negative emotion, understanding the concept that balance and management of emotions. To experience the anxiety, fear, anger, grievance, sadness, loneliness, inferiority in the music and eliminate the negative emotions also give energy support.

#### **4.4.3. Values**

To teach and apply Chinese music psychological drama named Mei Lan Zhu Ju, understand what is the values, the meaning of values and life, clarify self-values and so on.

#### **4.4.4. Personality**

Teaching what is personality and sub-personality, factors that influence personality formation. Self-portrait and HTP projection in the music.

#### **4.4.5. Interpersonal Interaction**

Expounding the significance of interpersonal relationships for mental health, stress the will and motivation of communication could influence the communication behavior through the physical and social characteristic analysis. To learn more human-computer interaction patterns respectively in music.

#### **4.4.6. Psychotherapy Treatment Group**

In order to protect the homogeneity of the group, we chose clinical frontline nurses from 25 to 35 years old in the hospital, all were voluntary. 30 nurses were interviewed by telephone before the activity for understanding the basic situation, the concept of the psychotherapy group and the intensity of change oneself, finally screened out 24 people. Because the activity is close-ended, so 3 times consecutive absences was regarded as fall off. So by the end of the group treatment, there were 16 people left.

According to Owen group basic principle of psychotherapy, we focused on the real life and emotional experience among the group member under the framework of theoretical psychoanalysis and existentialism.

Semi-structured group activities make members know the psychological content including: (1) the general techniques of psychotherapy, such as listening, open-ended ask, encourage and repeat, content, emotional reaction, materialization, explanation, guide, emotion expression, content expression, self-opening, etc.; (2) reasonable emotion therapy and emotional imaging techniques in cognitivism; (3) breathing and relaxation in behaviorist treatment, etc.; (4) helping and be helped in humanistic; (5) self-defense mechanism, projection and projective identity and the principle of subconscious work in psychoanalysis; (6) the most important thing is to make members learn in group activities and experience group therapy techniques through observation groups behavior of other members, experience mutual help, providing a safe experimental environment to each other. (7) Learning social communication skills from each other, trying to imitate the adaptive behavior and rebuilding rationality cognition.

#### 4.5. Experience

In order to improve the mental health of nurses, The following measures should be implemented [13, 14]. First, the nursing school should add relevant mental health education in nursing courses to help nurse have clear mental health awareness before work, and use psychological methods for self-psychological care and adjustment proficiently [15-17]. Second, when recruit new nurses, the department in addition to assess the necessary theories and expertise, should also assess the basic knowledge of psychology and do related psychological examinations and measurements, such as EPQ, 16 PF and other personality measurements to understand the psychology health level and stress ability [15]. Third, relevant mental health knowledge and skills are taught annually, to give the ability for nurses to adapt self-psychological adjustment and management. Fourth, establish the nurse mental health file, pay attention then track and intervene in high-risk and sensitive nurses promptly to prevent accidents. Fifth, reference enterprise EAP (Enterprise Assistance Plan), establish a long-term operational structure and mechanism for nurse mental health management system.

## 5. Conclusion

Mental health is a dynamic balance. The activity process and changes in psychology are mainly controlled by subconscious and the solidified behavior pattern in early life, so that sometimes even thinking is completely understood, that does not change the emotional experience or behavior habits. The overall mental health level in nurse group is very important in hospital. To receive this target, hospitals should establish an external operating mechanism to allow nurses to accept continuous psychology health education and counseling.

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