

# Analysis of the Mental Health Status and Influencing Factors of Community Health Service Personnel under the Normalization of Epidemic Prevention and Control

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## ABSTRACT

**Objective** To understand the mental health status and influencing factors of community health service personnel under the normalization of epidemic prevention and control, and to provide reference for the formulation of psychological intervention programs in the later stage. **Methods** 200 community health service workers in Guangdong Province were selected by convenient sampling method, and the general situation questionnaire and symptom self-assessment scale (SCL-90) were used. **Results** The total score of SCL-90 was  $112.39 \pm 33.31$ ; univariate analysis showed that the position was statistically significant for SCL-90 scores ( $P < 0.05$ ); regression analysis showed that the position was an important factor affecting the mental health status of community health service personnel ( $P < 0.05$ ). **Conclusion** Under the normalization of epidemic prevention and control, community health service personnel have a certain degree of psychological distress, and the psychological conditions of medical staff with different characteristics are different. Therefore, high attention should be paid to the mental health status of medical staff, and their psychological support and counseling should be strengthened.

## KEYWORDS

Novel Coronavirus Pneumonia; The Community; Medical Personnel; Mental Health; Influencing Factor.

## 1. INTRODUCTION

At the end of 2019, COVID-19 broke out and spread rapidly, with the spread of fast speed, wide coverage and difficult prevention and control. In China, communities are the front line of epidemic prevention and control, and have played an important role in winning the battle against the epidemic. Under the normalization of epidemic prevention and control, community medical workers, in addition to routine work, are also responsible for home medical isolation, personnel screening, disinfection and disinfection, vaccination, and nucleic acid collection[1]. Community medical workers have a high workload, high intensity, and the risk of disease exposure. They are in a sub-health state for a long time, which poses great challenges to their physical and mental health, and the mental health problems of medical workers directly affect the effect of epidemic prevention and control[2]. During the period of regular epidemic prevention and control, the COVID-19 epidemic prevention and control work has increased the work pressure of medical staff[3]. In addition, the literature found that there has been a survey on the mental health status of hospital medical staff during the epidemic[4], But there is a lack of mental health analysis for community medical staff. Therefore, understanding and exploring the mental health status of community medical workers to strengthen psychological counseling and psychological intervention is crucial to continue to build the defense line of epidemic prevention and control in the community, or to continue to protect peoples health. This study aims to

investigate the mental health status of community medical staff in the context of COVID-19, and explore the influencing factors, so as to provide a scientific basis for reducing the occupational tension of community medical staff, improving their mental health and mental health repair, and continuously strengthening the defense line of epidemic prevention and control in the community.

## **2. OBJECT AND METHOD**

### **2.1. Study Subjects**

Using the convenient sampling method, 2 00 staff members from the community health service center in Dongguan Guancheng District, Songshan Lake High-tech Industrial Park, Dalingshan Town and Dalang Town were selected for the questionnaire survey. Inclusion criteria: ① current, active community medical staff; ② informed consent to participate in this survey. Exclusion criteria: ① community medical staff on leave and study abroad; ② community medical staff on internship.

Most scholars believe that the sample size of the questionnaire is directly related to the variables of the scale, and the sample content is 5 to 10 times that of the study variables[5]. The study variables in this study were 11 general demographic data, 10 dimensions of symptom self-rating scale, 21 statistical analysis variables, and the sample size ranged from 105 to 210 cases. Considering that there were invalid questionnaires and the sample size was expanded by 20%, the final reference range of the sample size was 126 to 252 cases and the median was 189 cases, and the sample size of 200 cases was selected in this study.

### **2.2. Research Tools**

1) General Situation questionnaire is made according to previous investigation and research, including gender, age, position, professional title, educational background, marital status, birth status, working years, live with the elderly, post, and weekly exercise frequency.

2) SCL-90 SCL-90 scale was compiled by Derogatis LR in 1973, which is the most widely used screening scale for mental disorders and mental disorders, which is widely used in China[6]. SCL-90 mental health survey, SCL-90 scale including somatization, compulsive symptoms, interpersonal sensitivity, depression, anxiety, hostility, terror, paranoia, mental 9 factors, a total of 90 items, each item was selected by 1~5 level score (1: never had; 2 points: very light; 3: medium; 4: heavy; 5 points: serious), the higher the score, the worse the mental health status. The reliability and validity values of this scale in this study were 0.934 and 0.916, respectively, indicating good internal consistency between the items.

### **2.3. Investigation Method**

This survey used a cross-sectional survey method and followed the principle of informed consent. The general situation questionnaire and SCL-90 were made into an electronic questionnaire, generating the QR code, and the respondents scanned the QR code to participate in the survey. Before the study, the investigator will record the purpose, significance and precautions of the survey. Study subjects of the center were included by the community health service center managers according to the inclusion and exclusion criteria. After receiving the trust and cooperation of the respondents, the managers sent the questionnaire QR code and the video of research notes to the research object for anonymous questionnaire survey through Wechat. The questionnaires were collected and verified by the investigation team members in the background, and the unqualified questionnaires were eliminated. Quality control shall be carried out throughout the survey. A total of 200 questionnaires were issued, and 200 valid questionnaires were issued, and the effective recovery rate was 100%.

## 2.4. Statistical Analysis

The SPSS 22.0 statistical software package was used. Metric data are presented as mean  $\pm$  standard deviation. The test of variance, and the counting data. Factor of effect analysis was performed using multiple stepwise regression.

## 3. RESULTS

### 3.1. General Data

Among the 200 respondents, 43 were male and 157 were female (Table 1).

**Table 1.** General demographic characteristics of community health service personnel

Project classification	Group	Number of people	Constituent ratio(%)
Sex	Man	43	21.5
	Woman	157	78.5
Age	Age 30 and under	95	47.5
	And was 31-50 years old	93	46.5
	Age 51 and over	12	6.0
Position	Have	144	72.0
	Not have	56	28.0
Professional ranks and titles	Elementary	136	68.0
	Middle rank	52	26.0
	Senior	12	6.0
Record of formal schooling	Special school	45	22.5
	College or undergraduate	148	74.0
	Postgraduate	7	3.5
Marital status	Unmarried	66	33.0
	Married	134	67.0
Fertility circumstance	Married and unbred	76	38.0
	Married has been bred	124	62.0
Working life	10 years and below	115	57.5
	10-20 years	56	28.0
	20 years and more	29	14.5
Live with the old man	Yes	68	34.0
	No	132	66.0
Post	Doctor	50	25.0
	Nurse	27	13.5
	Laboratory staff	29	14.5
	Pharmacy	28	14.0
	Other	66	33.0
Frequency of exercise per week	Do not exercise	59	29.5
	Take exercise	141	70.5

### 3.2. The Mental Health Status of Community Health Service Personnel under the Normalization of Epidemic Prevention and Control

The SCL-90 scores and the scores of various factors of community health service personnel under the normalization of epidemic prevention and control are shown in Table 2.

**Table 2.** The overall mental health status of community health service personnel under the normalization of epidemic prevention and control

Dimension	SCL-90 score / $\bar{X}\pm s$
Somatization	1.28±0.41
Enforce	1.35±0.44
Interpersonal relation	1.23±0.38
Depressed	1.29±0.44
Anxious	1.23±0.42
Hostile	1.24±0.39
Fear	1.16±0.39
Bigoted	1.18±0.36
Psychiatric sex	1.16±0.34
Total points	112.39±33.31

### 3.3. Univariate Analysis of Influencing Factors of Mental Health of Community Health Service Workers under the Normal Epidemic Prevention and Control

Gender, age, professional title, educational background, marital status, fertility, working years, whether to live with the elderly, position, weekly exercise frequency had no statistical significance on the mental health of community health service workers ( $P > 0.05$ ), while position had statistical significance on the mental health of community health service workers ( $P < 0.05$ ) (F value 4.177, P value 0.042).

### 3.4. Multivariate Analysis of Influencing Factors of Mental Health of Community Health Service Workers under the Normal Epidemic Prevention and Control

The multiple stepwise regression analysis was conducted with the SCL-90 total mean dependent variable, the SCL-90 score, and the position between the demographic characteristics and the SCL-90 score as the independent variable, and the position finally entered the regression model. The results showed that the position that affected the mental health of community health service workers under the normalization of epidemic prevention and control ( $P < 0.05$ ) (Table 3).

**Table 3.** Results of mental health regression analysis of community health service personnel under the normalization of epidemic prevention and control

Influencing factor	<i>B</i>	$S_{\bar{x}}$	<i>B'</i>	<i>T</i>	<i>P</i>
Constant	126.004	7.095		17.850	0.000
Position	-10.636	5.204	-0.144	-2.044	0.042

## **4. DISCUSSION**

### **4.1. Current Status of the Mental Health Level of Community Health Service Personnel under the Normalization of Epidemic Prevention and Control**

During the COVID-19 pandemic, a large number of health care workers not only had to overload clinical work, but also faced a series of problems brought by the epidemic, causing medical workers to have psychological problems such as exhaustion, anxiety, depression and even fear[7,8]. In China, communities are the front line of epidemic prevention and control, and have played an important role in winning the battle against the epidemic. A survey of the mental health status of different types of workers in the isolation sites during the COVID-19 outbreak found that the total score of community health workers was significantly higher than that of volunteers and health care workers. Under the normalization of epidemic prevention and control, the phenomenon of "one person holding multiple jobs" for community health service personnel is normal. There are still problems such as high workload, high intensity and disease exposure risk. They are in a sub-health state for a long time, which will inevitably cause great challenges to their physical and mental health. This survey shows that the mental health level of community health service workers under the COVID-19 outbreak is generally acceptable, which is comparable to the overall level of mental health of medical workers during the COVID-19 outbreak in Shanxi Province[9]. Under the normalization of epidemic prevention and control, the work of community health service personnel has not decreased, but increased. Therefore, their mental health status needs the common attention of the whole society.

### **4.2. Factors Affecting the Mental Health of Community Health Service Personnel under the Normalization of Epidemic Prevention and Control**

This study showed that the position is a factor affecting the mental health of community health service personnel under the normalization of epidemic prevention and control, which is similar to related studies[4,10]. Community health service personnel with positions need to coordinate the prevention and control work, and face decision-making pressure and responsibility, such as resource allocation and personnel scheduling, etc. Once problems occur, they may blame themselves and guilt and affect their mental health. At the same time, they also have to deal with the superior inspection and residents feedback, heavy psychological burden. However, ordinary community health service personnel mainly undertake specific implementation tasks. Although the work intensity is high, the responsibility is relatively concentrated, and the source of psychological pressure is relatively single. Therefore, the availability of positions can affect the mental health level of community health service personnel.

### **4.3. Suggestions on Improving the Mental Health of Community Health Service Personnel under the Normalization of Epidemic Prevention and Control**

#### **4.3.1. Work Guarantee Optimization and Reasonable Allocation of Work Tasks.**

The workload of medical staff is scientifically allocated according to the community size, personnel density and epidemic risk level. Use information means to accurately arrange tasks such as nucleic acid testing, health follow-up, to avoid overwork. Strengthen the supply of protective materials. Ensure adequate reserve of masks, protective clothing, goggles and other protective equipment, regular update and supplement.

#### **4.3.2. Strengthen Psychological Support and Provide Professional Psychological Counseling Services.**

Professional psychological counselors are hired to provide one-to-one consultation, group counseling and other services for community health service personnel. Carry out regular psychological assessment to find out the potential psychological problems and intervene in time. Carry out

psychological training and popular science. Carry out training courses on psychological adjustment skills to popularize the identification and coping methods of common psychological problems. Psychological experts can be invited to teach online, covering emotional management, stress response, etc., to improve their self-mental health care ability.

#### 4.3.3. Improving Social Recognition Calls for Positive Publicity by the Media.

Mainstream media have stepped up efforts to report on the stories of community health service workers in fighting the epidemic, showing their persistence and dedication. Through news reports, short videos and other forms, to build a positive image of their dedication and dedication, and enhance their social identity. Promote community interaction and feedback. The community organizes the residents to carry out gratitude activities, such as giving handmade thank-you letters and comfort goods, so that the staff can truly feel the value of their work and enhance their sense of professional honor.

#### 4.3.4. Self-regulation Promotes a Healthy Lifestyle.

Advocate the staff to keep a regular work and rest, have a balanced diet, and take moderate exercise. Develop interests and hobbies. Support them to use their spare time to develop music, reading and other interests, transfer work pressure.

To sum up, the mental health level of community health service personnel needs to be paid continuous attention to, especially the problem of people with positions. This study had a small sample size, and future studies could include more samples of community health service centers to further explore the influencing factors of public health emergencies on the mental health of community health service personnel.

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