

## Self-Rated Physiological Health and Psychological Intervention among Residents during Major Public Health Emergencies

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**Abstract:** In the public health emergencies, young and inexperienced residents often face immense physiological, psychological, and social health pressures in their challenging and demanding efforts. Understanding the impact of such an emergency on the health of residents and implementing proactive psychological interventions can enhance the quality of their training. Using a Self-rated Health Measurement Scale (SRHMS), a pre-intervention measurement was conducted among all residents in our hospital. Based on the analysis of the results, targeted psychological intervention measures were implemented, followed by a post-intervention measurement. During the major public health emergencies, the overall SRHMS scores of the residents in our hospital, as well as the scores of various sub-scales, were higher than those of the general population. There was a significant positive correlation between physiological health, psychological health, and social health ( $P<0.01$ ). Prior to intervention, third-year residents had lower scores compared to second-year and first-year residents, with statistically significant differences ( $P<0.05$ ). Those with a history of epidemic epidemiology had lower scores, with statistically significant differences ( $P<0.05$ ). Based on the total scores, there were statistically significant differences between high and low score groups ( $P<0.05$ ). After psychological intervention, there were significant improvements, with scores increasing among low-score groups and residents of different years. The impact of epidemic epidemiology on residents was reduced, leading to increased scores. However, in the dimension of physiological health, there was a decrease in scores for physical condition and organ function sub-scales. During the public

health emergencies, the physiological, psychological, and social health of residents were affected to a certain extent. Implementing proactive and targeted psychological interventions can contribute to the overall recovery of their health, allowing them to engage in clinical work during the epidemic in their optimal state.

**Keywords:** Public Health Emergencies; Residents; Self-rated Physiological Health; Psychological Intervention

### 1. Introduction

On January 30, 2020, the outbreak of COVID-19 was declared as a matter of international concern in the field of public health by the World Health Organization (WHO)[1]. As a designated provincial referral hospital for this public health emergency, our hospital faced the challenges of a highly contagious virus, with a long incubation period and the potential to develop into severe cases, especially among individuals with underlying health conditions. At that time, there was no specific antiviral medication available for this virus[2]. Clinical healthcare workers, particularly resident physicians undergoing standardized training (referred to as “residents”), face immense occupational pressure. In particular, young and less experienced residents handling dangerous and demanding anti-epidemic tasks may experience heightened professional stress. Therefore, it was essential to conduct self-rated health surveys of residents, in order to promptly understand the impact of this public health emergency on their health so that active and targeted psychological counseling was provided to address their needs. By implementing processes such as assessment, individual psychological intervention, psychological health education, infectious disease knowledge dissemination,

cognitive restructuring, focused distraction, emotional regulation and acceptance, as well as behavior modification and stability, it was aimed to help them overcome the psychological crisis, restore their psychological health, actively engage in the new life and work environment, rapidly adapt to the living and working patterns during the epidemic, and fulfill the role of young residents as pillars of medical response, thereby enhancing the structure of the healthcare workforce.

## 2. Objects and Methods

### 2.1. Research Participants

The research participants of this study are residents currently undergoing standardized training at the Affiliated Hospital of Southwest Medical University. All participants are fully informed and have willingly agreed to participate in the survey.

### 2.2. Research Instruments

During the outbreak of the public health emergency, the Self-Rating Health Measurement Scale (SRHMS) for residents undergoing standardized training consists of two main sections. The initial section includes general demographic characteristics and epidemiological history. The subsequent section primarily employs the SRHMS developed by Xu Jun et al., which comprises three subscales: self-assessment of physiological health, psychological health, and social health[3]. Considering the specific circumstances of the epidemic, certain items and expressions in the scale were refined. The revised scale consists of a total of 40 items, including 15 items in the physiological health subscale, 14 items in the psychological health subscale, and 11 items in the social health subscale. The revised scale exhibits favorable internal consistency, with Cronbach's alpha coefficient exceeding 0.80 for each subscale as well as the overall scale. The KMO values for the subscales and the overall scale are all above 0.80, with a significant probability value ( $P=0.000<0.05$ ), signifying the presence of shared factors in the questionnaire's correlation matrix and indicating sound construct validity. The scale adopts a 10-point linear rating format, where a higher score in each dimension signifies a better health status.

### 2.3. Data Collection

Prior to conducting the survey, the purpose and guidelines were communicated to the residents. The survey questionnaire was digitized using the Wenjuanxing platform. The questionnaire was distributed to the residents through a communication group specifically created for them. A total of 1,042 questionnaires were collected, and invalid questionnaires, including those with identical answers, omissions, and high scores on the reverse lie scale, were removed. This resulted in a total of 1,021 valid questionnaires, with an effective response rate of 97.9%. Among the participants, 367 were male (35.9%) and 654 were female (64.1%). In terms of age distribution, 526 participants (51.5%) were between 20 and 25 years old, while 476 participants (46.6%) were between 26 and 30 years old. Regarding the type of training, 264 participants (25.9%) were institutional trainees, 299 (29.3%) were individuals from the community, and 458 (44.9%) were transitional Masters students. After conducting psychological interventions, the participants were once again provided with the survey questionnaire for further analysis.

### 2.4. Statistical Analysis

Statistical analysis was conducted using SPSS Statistics 24. A significance level of  $P<0.05$  was used as the threshold for assessing whether the mean values of the measured variables between the two groups were significantly different, employing independent samples t-tests. For multiple samples, the F-test and one-way analysis of variance (ANOVA) were utilized. The primary methods employed included descriptive statistics analysis and correlation analysis.

## 3. Results

### 3.1. Analysis on Demographic Factors in the SRHMS

Statistical analysis reveals that there were no statistically significant differences in scores based on demographic factors such as age, gender, marital status, parenthood, education level, residential address, standardized training status, and parental occupation, both before and after the intervention. However, before the intervention, there were significant

differences in scores among residents of different grades in terms of psychological, social, and total SRHMS scores ( $P<0.05$ ), indicating statistical significance. Following the intervention, all scores showed significant

improvement compared to the pre-intervention measurements, demonstrating substantial enhancement. Please refer to Table 1 for further details.

**Table 1. SRHMS scores of residents before and after psychological intervention, analyzed based on demographic factors**

Residency level	Physiological health (before)	physiological health (after)	Psychological health (before)	Psychological health (after)	Social health (before)	Social health (after)	Self-rated health score (before)	Self-rated health score (after)
Third-year	133.20±14.72	135.34±10.87	105.81±24.57	120.69±11.16	86.65±17.21	101.63±13.81	325.66±47.30	357.67±29.72
Second-year	134.18±15.10	133.68±11.61	110.60±21.93	119.83±11.03	90.31±16.23	100.17±14.16	335.08±42.72	353.69±30.65
First-year	134.86±12.78	133.75±11.44	111.76±20.83	120.45±11.07	89.81±15.94	100.42±14.10	336.42±41.34	354.63±30.32
P-value	>0.05	>0.05	<0.05	>0.05	<0.05	>0.05	<0.05	>0.05

### 3.2. Analysis of Epidemiological History Factors in the SRHMS

Data analysis based on epidemiological history reveals significant differences ( $P<0.01$ ) in psychological, social, and total SRHMS scores among residents with a history of epidemiological exposure before the psychological intervention. Following the intervention, these differences show remarkable improvement. Additionally, in the pre- and post-intervention measurements, data obtained from residents who experienced exclusion due to factors such as travel to epidemic areas, contact with epidemic situations, and personal work reasons, display significant differences ( $P<0.05$ ) in physiological, psychological, social, and total SRHMS scores when compared to those who were not excluded. Please refer to Table 2 for specific score details.

### 3.3. Overall Scores of SRHMS

During the epidemic period, the SRHMS scores of residents in our hospital, both before and after psychological intervention, were higher than the scores of the general population. Moreover, there were significant differences in scores before and after the intervention. Please refer to Table 3 for a detailed comparative analysis.

### 3.4. Correlation Analysis of Physiological, Psychological, and Social Health of

### Residents before and after Psychological Intervention

The data analysis results before and after psychological intervention reveal a significant positive correlation between the physiological, psychological, and social health of residents in our hospital (pre-intervention  $r=0.510$ ,  $P=0.000$ ;  $r=0.343$ ; post-intervention  $r=0.456$ ,  $P=0.000$ ;  $r=0.387$ ,  $P=0.000$ ). Please refer to Table 4 for the detailed correlation matrix.

### 3.5. Statistical Analysis of the Low SRHMS Scoring Group

The data obtained from summing up the SRHMS total scores from the pre- and post-surveys were categorized into groups based on a certain proportion. The commonly used extreme grouping method assigns the top 27% as the high scoring group and the bottom 27% as the low scoring group. This resulted in 287 individuals in the high scoring group and 281 individuals in the low scoring group. Independent samples t-tests were conducted, and the differences in means were found to be statistically significant (Sig two-tailed=0.000,  $P<0.05$ ). Due to the large population size of residents in our hospital, the number of individuals in the low scoring group cannot be ignored. As a result, further analysis was performed specifically for the low scoring group.

Through descriptive data analysis, it was found that before psychological intervention, the top five disciplines with a higher

proportion in the low scoring group were: Internal Medicine (79 individuals, accounting for 28.1%), general medicine (34 individuals, accounting for 12.1%), Surgery (26 individuals, accounting for 9.3%), Anesthesiology (15 individuals, accounting for 5.3%), and Obstetrics and Gynecology (15 individuals, accounting for 5.3%). Regarding having an epidemiological history, there were 24 individuals with an epidemiological history out of a total sample size of 58, accounting for 41.37% of the total sample. Additionally, there were 25 individuals who were excluded from the sample due to reasons such as job nature, making the total sample size 51 individuals, accounting for 49.02% of the total sample. After psychological intervention,

the disciplines with a higher proportion in the low scoring group were: Internal Medicine (85 individuals, accounting for 30.2%), Surgery (33 individuals, accounting for 11.7%), Anesthesiology (19 individuals, accounting for 6.7%), Oncology (16 individuals, accounting for 5.7%), and Obstetrics and Gynecology (15 individuals, accounting for 5.3%). Regarding having an epidemiological history, there were 10 individuals with an epidemiological history out of a total sample size of 74, accounting for 13.5% of the total sample. Additionally, there were 11 individuals who were excluded from the sample due to reasons such as job nature, making the total sample size 72 individuals, accounting for 15.3% of the total sample.

**Table 2. SRHMS scores of residents before and after psychological intervention, analyzed based on epidemiological history factors**

Have you had any exposure history to epidemic areas, suspected or confirmed cases since the outbreak occurred?	Physiological health (before)	physiological health (after)	Psychological health (before)	Psychological health (after)	Social health (before)	Social health (after)	Self-rated health score (before)	Self-rated health score (after)
Yes	130.76±1.84	127.09±1.48	100.09±2.77	114.33±2.20	83.02±18.93	93.97±16.04	313.86±47.46	335.42±36.98
No	134.37±1.42	134.59±1.09	110.29±2.27	120.70±1.87	89.48±16.23	101.08±13.81	334.13±43.26	356.38±29.36
P-value	>0.05	<0.01	<0.01	>0.05	<0.01	<0.01	<0.01	<0.01
Have you experienced any exclusion due to the following reasons since the outbreak?								
History of entering epidemic areas	118.00±1.56	103.17±1.06	104.50±1.78	100±3.95	100.00±8.49	82.16±12.09	322.50±16.26	285.33±2.94
History of contact with epidemic cases	136.80±8.23	120.12±1.24	104.00±2.44	108.88±1.47	83.80±19.80	89.75±18.51	324.60±48.84	318.75±42.04
Personal job nature	129.39±1.42	129.07±1.36	95.08±2.26	112.61±1.04	81.63±19.20	92.57±15.95	306.11±51.39	334.25±35.31
Other reasons	115.13±2.08	127.12±1.49	70.50±3.98	114.63±8.91	68.88±22.55	98.25±10.42	254.50±67.94	340±26.70
None of the above	134.53±1.39	134.57±1.09	110.65±2.66	120.73±1.88	89.58±16.21	101.04±13.86	334.75±42.31	356.35±29.38
P-value	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

A comparative analysis was conducted between the total score and subscale scores of the SRHMS and the scores obtained from a general population survey test. Prior to psychological intervention, participants in the low scoring group exhibited lower scores in

physiological health, particularly in terms of physical activity function. In terms of psychological health, scores for positive emotions, psychological symptoms, negative emotions, cognitive function, and self-rated psychological health were all lower compared

to the scores of the general population. Regarding social health, scores for social resources and social contact were also on the lower side. After psychological intervention, participants in the low scoring group showed lower scores in physiological health, specifically in terms of bodily condition and organ functioning, with significant differences observed before and after intervention. Although scores for positive emotions and cognitive function improved to some extent in terms of psychological health, they still remained below the scores of the general

population. Comparing the scores of the low scoring group of residents before and after psychological intervention, it was evident that psychological intervention had a significant impact on improving their health status, as indicated by significant differences in multiple scores ( $p < 0.001$ ) and a decrease in the number of subscales with scores lower than those of the general population. The specific scores of the low SRHMS scoring group of residents before and after psychological intervention are presented in Table 5.

**Table 3. Comparative analysis of self-rated health conditions of residents before and after psychological intervention**

Dimensions or subscales:	Items (number)	Theoretical highest score	X±S Before intervention	X±S After intervention		X±S (General population)
physiological health and organ functioning	7	70	56.75±10.74	54.36±11.36***	-4.211	44.70±9.80
Daily life functioning	5	50	48.91±4.61	49.95±0.47***	16.391	47.36±5.39
Bodily activity functioning	3	30	28.51±3.16	29.79±0.51***	23.357	27.39±4.24
Self-assessed physiological health (BTZ)	15	150	134.16±14.16	134.12±11.37***	27.838	121.52±15.48
Positive emotions	4	40	34.86±5.75	37.43±2.49***	-11.407	37.74±10.37
Psychological symptoms and negative emotions	7	70	52.30±15.12	60.46±6.31***	7.206	37.51±8.34
Cognitive function	3	30	22.55±5.53	22.40±4.80***	12.677	20.12±5.42
Self-rated mental health (MZT)	14	14	109.71±22.41	120.30±11.07***	12.969	97.91±19.82
Role activities and social adaptation	4	40	34.47±5.54	34.28±5.17***	17.293	14.48±3.16
Social resources and social contacts	4	40	30.47±8.04	33.72±4.52***	-5.853	28.76±7.29
Social support	3	30	24.17±5.47	24.51±5.08***	-6.374	18.92±5.97
Self-rated social health (SZT)	11	110	89.11±16.45	100.63±14.05***	10.696	63.57±13.92
Self-rated overall health score (ZCZT)	40	400	332.98±43.74	355.06±30.30	-1.685	283.61±35.90

Note: \*\*\*  $p < 0.001$

**Table 4. Correlation matrix of physiological, psychological, and social health of residents during the epidemic period**

	Physiological health before intervention	Physiological health after intervention	Psychological health before intervention	Psychological health after intervention	Social health before intervention	Social health after intervention
BTZ	1	1				

MZT	0.510***	0.456***	1	1		
	(R2 =0.261 )	(R2 =0.21 )				
SZT	0.343***	0.387***	0.617***	0.732***	1	1
	(R2 =0.118 )	(R2 =0.15)	(R2 =0.381 )	(R2 =0.54 )		
		*** P<.001 (coefficients of determination in parentheses)				

**Table 5. Scores of the low SRHMS scoring group of residents before and after psychological intervention**

Dimensions or subscales	Genera population (n=240)	X±S		Value
		Low scoring group (before)	Low scoring group (after)	
Physiological health and organ functioning	44.70±9.80	47.42±9.93	42.75±9.01***	6.473
Daily life functioning	47.36±5.39	47.03±7.93	49.95±0.32***	-6.161
Bodily activity functioning	27.39±4.24	26.74±4.94	29.83±0.47***	-10.395
Self-assessed physiological health	121.52±15.48	121.19±16.4	122.52±9.07	-1.211
Positive emotions	37.74±10.37	29.23±6.75	36.06±2.57***	-15.905
Psychological symptoms and negative emotions	37.51±8.34	34.96±14.18	54.65±4.43***	-22.798
Cognitive function	20.12±5.42	17.29±5.23	17.59±3.07	-.866
Self-rated mental health	97.91±19.82	81.49±16.72	108.30±5.83***	-28.322
Role activities and social adaptation	14.48±3.16	28.59±5.75	28.01±3.57	1.660
Social resources and social contacts	28.76±7.29	24.17±8.07	30.44±3.14***	-11.800
Social support	18.92±5.97	19.49±5.55	19.65±4.54	-.412
Self-rated social health	63.57±13.92	72.25±16.02	84.66±8.39***	-12.985
Self-rated overall health score	283.61±35.90	274.93±28.29	315.49±12.08***	-40.341

Note: \*\*\* p<0.001

#### 4. Discussions

##### 4.1. Summary of Self-rated Health Status of Residents

Following the outbreak of the COVID-19 pandemic, the overall SRHMS scores and subscale scores of our residents were found to be higher compared to the self-rated health scores of the general population as reported by Yang Yunbin et al. This can be attributed to the medical knowledge and infectious disease expertise that residents possess. As “quasi-doctors”, residents undergo comprehensive medical education during their undergraduate studies and subsequently gain admission to standardized training bases for specialized, second-level discipline training, which further enhances their theoretical foundation and clinical thinking. Therefore, in the wake of the pandemic, they are able to comprehend and acknowledge this phenomenon from a professional medical perspective and remain dedicated to their clinical work.

After the outbreak of the COVID-19, relevant

departments quickly coordinated their efforts, mobilizing the entire population to combat the virus and prevent its further spread. The healthcare sector increased financial investment, providing free medical services, and medical teams from different regions supported each other, resulting in a decrease in severe cases and mortality rates.[4] With the development and promotion of vaccines, as the entire population received vaccinations, transmission and infection rates decreased, leading to a better control of the pandemic. As a result, the prevention and control measures of the epidemic have entered a normalized mode, causing minimal impact on the overall physiological, psychological, and social health of our residents. However, after conducting self-assessments, providing psychological education, delivering education on infectious diseases, and implementing epidemic prevention and control measures throughout the hospital, there were noticeable differences in the scores of residents compared to the initial self-assessment. Among these efforts, particular emphasis was

placed on the prevention and control of hospital-acquired infections, providing standardized training on protective measures and treatment behaviors, and enhancing the understanding of protection standards and proper selection and use of protective equipment[5]. Active and effective psychological interventions have played a significant role in adjusting the physiological, psychological, and social health status of residents, helping them quickly adapt to new work and learning environments and fulfill their roles as frontline medical personnel.

#### **4.2. Analysis on Results Based on Demographic Factors**

Based on the analysis of demographic factors, it was found that the psychological, social, and SRHMS scores of third-year residents were lower than those of second-year and first-year residents before psychological interventions. These findings are similar to the self-rated health conditions of medical students in western China, as reported by Liu Haiyan et al. (2012)[6]. The higher the academic year, the lower the scores in BTZ, MZT, MZT, and SRHMS among the students. This can be attributed to the pressures of employment and professional responsibilities. Third-year residents face the dual pressures of graduation and employment. Due to the impact of the pandemic, the standardized training process has been disrupted, and the delay in the release of recruitment information across different regions has prevented them from participating in timely employment and career opportunities. Additionally, as our hospital is a designated provincial treatment center, third-year residents were required to work on separate shifts, dealing with the risks of infection while treating and diagnosing patients, which added to their workload. In comparison, second-year and first-year residents had smaller work pressures and had just arrived at the training base from undergraduate colleges, resulting in a stronger enthusiasm for clinical medicine and a sense of professional identity, hence relatively higher scores. Through our proactive psychological intervention measures, including targeted psychological education, counseling sessions, employment guidance, cognitive restructuring, and professional identity education, the scores of all three

academic years of residents improved, and the differences were mitigated.

#### **4.3. Analysis on Results based on Epidemiological History**

The investigation revealed that a portion of residents who had a history of epidemiological incidents or experienced exclusionary treatment in their hospital work experienced greater social and psychological pressures, accompanied by evident physiological reactions. This phenomenon is closely related to the general public's fear and anxiety towards the epidemic during the pandemic period, as well as the increased difficulty and control measures in the context of normalized epidemic prevention and control. Such circumstances have had a certain impact on the psychological and physiological health of the residents, primarily manifested as heightened tension, difficulty in relaxation, and feelings of fear in the early stages. Following psychological interventions, there were improvements in all scores, and the differences before and after were significant. However, the scores for physiological health decreased and did not reach those of the general population, with noticeable differences before and after. Further analysis revealed that the dimensions with lower scores mainly pertained to the physical condition and organ functioning of the residents, which were consistently lower in the retest data compared to the initial measurement. This was primarily concentrated in the aspects of "easily feeling fatigued" and "sleep quality". During the communication during psychological interventions, it was found that the personal history of epidemiological incidents was only one of the contributing factors and that the main factor was correlated with the sudden outbreak of the COVID-19. Due to the nature of their work as residents, the outbreak resulted in a severe epidemic prevention situation, leading to an increase in the complexity and difficulty of their work. Additionally, the requirements for standardized training continued to rise, imposing higher theoretical, technical, and research demands on residents. Consequently, during this period, residents experienced high-pressure situations, physiological and psychological exhaustion, thereby exerting a

certain influence on their physiological health.

#### **4.4. Analysis of Physiological, Psychological, and Social Health Results**

Physiological health serves as the foundation of psychological health, while psychological health plays an active role in both physiological and social health. These three aspects are interconnected and mutually influential. Data analysis reveals significant positive correlations among physiological health and psychological health, physiological health and social health, as well as psychological health and social health in our hospital's residents before and after intervention. The physical condition and organ functioning of residents during the pandemic period have important effects on their emotions, rational cognition of the social situation and work pressure, as well as their roles as medical professionals and sense of social responsibility, which in turn affect their social activities. Furthermore, if social activities such as medical work and exposure to epidemic situations lead to exclusion from social life for residents, their psychological health may be affected, giving rise to sleep disorders and negative emotions, which further impact their physiological health.

#### **4.5. Analysis on Results for the Low-scoring Group'S Health Status**

The low-scoring group comprises a larger number of individuals with diverse professional backgrounds. According to a study conducted by Liu Bing et al.[7] on medical students' knowledge of COVID-19 prevention and control, the accuracy rate for answering a question about the transmission pathways of the virus was only 72.93%, indicating insufficient knowledge among some medical students regarding infectious diseases. This highlights the need for strengthening medical knowledge dissemination and providing psychological counseling as well. The current pandemic poses a challenge to the psychological endurance of the general population, with some researchers suggesting that its psychological impact may exceed the consequences caused by the disease itself[8]. Additionally, there is a lack of specific attention to the implementation of psychological health work at various levels of

society, inadequate overall planning, and a shortage of professionals specialized in psychological health[9]. Therefore, our hospital has implemented proactive psychological interventions by conducting online psychological health surveys and combining them with offline psychological health education for residents. Special attention has been given to the low-scoring group to prevent the development of psychological barriers such as avoidance, anxiety, and unease. Through surveys, individual health profiles have been established, allowing for precise classification and targeted services. Based on the specific needs identified, targeted psychological interventions have been provided to guide residents in establishing a strong foundation for psychological health and preventing the exacerbation of physiological and social issues caused by psychological barriers. As a result of these interventions, scores across various dimensions have shown varying degrees of improvement, with the number of dimensions scoring below the general population decreasing from six to two.[9-11] From a professional distribution perspective, the top five disciplines in the low-scoring group are internal medicine, general medicine, surgery, anesthesiology, and obstetrics and gynecology. Following psychological intervention, the rankings change to internal medicine, surgery, anesthesiology, oncology, and obstetrics and gynecology. This can be attributed to the nature of their work and the workload they face. Considering that COVID-19 is a respiratory disease, internal medicine residents, particularly those specializing in respiratory medicine and infectious diseases, bear significant stress in various aspects.[12] General medicine residents rotate in community settings, engaging in grassroots screening work alongside the community, which exposes them to greater risks due to their wider range of interactions. Surgery, anesthesiology, obstetrics and gynecology, and oncology are likely related to their routine workload. Obstetrics and gynecology, being a specialty in high demand, already faces the challenge of a large patient volume and shortage of physicians even before the outbreak.[13] With the added pressure from the pandemic, residents in obstetrics and gynecology are



experiencing heightened physiological and psychological burdens. Although surgery and anesthesiology are not frontline disciplines in the fight against COVID-19, professionals in these fields also face occupational exposure risks during this special period. The tasks of patient consultations and the provision of quality services have become arduous in themselves, especially in terms of preoperative preparations, intraoperative isolation measures, postoperative observation and isolation, as well as the preparation of anesthesia equipment[14].

### 5. Conclusions

After the occurrence of a major public health emergency, residents swiftly transition from the roles of “trainees” and “quasi-doctors” to becoming the frontline warriors in clinical treatment and epidemic control efforts. Under the immense pressure of high-risk survival, they face sudden role changes, societal pressure, and a hazardous work environment, all of which inevitably impact their physiological, psychological, and social health. Therefore, it is crucial for us to pay attention to the learning, work, and living conditions of residents and provide timely psychological interventions to alleviate their physiological and psychological stress, ensure the normal progress of standardized training and learning, assist them in adjusting their overall health, and contribute to the battle of epidemic prevention and control.

Previous research has indicated that during unexpected public health emergencies, healthcare workers undergo a shift in emotions, transitioning from destructive negative emotions and immense psychological pressure to constructive and exciting psychological driving forces towards their work. This transformation occurs rapidly as the epidemic is brought under control and plays a positive role in alleviating stress reactions among medical personnel. Therefore, proactive psychological interventions and social care are beneficial in expediting the emotional transformation of residents and subsequently positively influencing their social activities and physiological health. Based on data analysis from surveys and discussions, our hospital has developed a series of psychological intervention activities, including film screenings, interactive analysis

sessions, psychological health seminars, and specialized psychological counseling, to provide targeted psychological interventions to our trainees. Through the interactive sessions, we encourage them to express their anxiety and shift their focus away from it. The psychological health seminars guide them in transforming psychological pressure into motivation and a sense of responsibility towards their work, fostering a sense of mission and dedication as healthcare professionals, and strengthening their professional identity. Specialized psychological counseling activities are conducted for lower-scoring groups and senior residents, delivering additional social support and psychological guidance to help them gradually adjust their physiological, psychological, and social health.

In conclusion, residents, as a crucial addition to our country’s anti-epidemic medical team, not only play a pioneering role in the fight against epidemics but also encounter significant work and study pressures that impact their physiological and psychological health. By ensuring optimal health, a nurturing environment can be created for the cultivation of positive and healthy personality traits. As a result, highly competent clinical doctors with strong capabilities to respond and provide assistance in major public health emergencies can be fostered, thus contributing significantly to epidemic prevention and control. Moreover, the tireless efforts exhibited by today’s youth will be showcased, highlighting their sense of responsibility and dedication.

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