ISSN: 2688-9323

Relationship between Mental Health and Coping Style in the Late Period of Coronavirus Epidemic

Mengyao Hao

Class 17150201, Department of psychology, School of Educational Sciences, Shanxi Normal University, 041004, Shanxi, China

psy_haomengyao@163.com

Abstract

To explore novel coronavirus pneumonia in the late stage of mental health and its relationship with coping styles. Methods: 97 people in Fenyang City were investigated with self-designed general information questionnaire, SCL-90 fear and anxiety subscale and Simplified Coping Scale. Results: in the later stage of the epidemic, the public psychology was slightly worse than the national average level in the ordinary period, and the difference was not significant. In the dimension of fear, it is significantly different from the national average level in the ordinary period. (P<0.05). There was no significant difference in the mental health status of the subjects in gender, age and household registration location. Mental health was significantly different from negative coping style in anxiety dimension (P < 0.05), showing moderate positive correlation .(P < 0.05)(0.5>|r| > 0.3) The difference between mental health and negative coping style in fear dimension was obvious at edge(0.05 < P < 0.07) and showed a low positive correlation (0.3>|r| > 0.1). Conclusion: the mental health of the new coronavirus pneumonia is slightly worse than the national average during the epidemic period, and the mental health status is related to coping style.

Keywords

New crown pneumonia; Mental health; Coping style.

1. Introduction

The novel coronavirus pneumonia (corona virus disease 2019, COVID-19) is a new acute infectious pneumonia caused by a new coronavirus, and is generally susceptible to the infection in the population. After infection, some patients may progress to respiratory failure and even cause death. The novel coronavirus pneumonia spread rapidly throughout the country and around the world in early 2020 when the whole nation was looking forward to the Spring Festival. The novel coronavirus pneumonia is widespread and infectious, and is consistent with the characteristics of emergency. In the face of such a major emergency, people's stable internal psychological balance is broken, and the imbalance of cognition, emotion and behavior may occur, which can lead to psychological crisis and reduce the level of mental health. (Ma Li, Wang Xing, Liao Qiyun, 2020)

The novel coronavirus pneumonia epidemic affects the public's mental health. Many scholars have studied it from different angles. The novel coronavirus pneumonia outbreak, urgency, severity, high uncertainty and social harm which will cause group anxiety and panic (Yu Wenlan, Sun Daoyuan, 2020) the research object is mainly in the suspected disease isolation family, the new crown pneumonia patient, the first line medical personnel, the pregnant woman, the student group,etic. (Wei Hua, Li Tingyu, 2020; Pan Xiao.Liu Weizhi et al., 2020). Novel coronavirus pneumonia has been investigated by the public during the epidemic period. The results show that the main stress is the outbreak of the disease which directly threatens the

ISSN: 2688-9323

health and safety of the people. Zhang Jie, Liu Zhaoxia, Yang Qiqi, Liu Dan, 2020); some people have negative emotions such as indignation and depression during the epidemic period (Cheng Peng, 2018); during the epidemic period, people's psychological reaction may experience panic period, defense period, adaptation period and recovery period. The prominent psychological symptoms in panic period are anxiety, depression, compulsion and interpersonal sensitivity directly caused by epidemic situation; the main psychological symptoms in defense period are depression, interpersonal sensitivity and compulsion caused by real pressure such as home isolation (Su binyuan, ye yuanxiu, Zhang Wei, Lin Ma, 2020). However, most of the studies focus on the pre epidemic period or outbreak period. Now the domestic epidemic situation has basically recovered, and few studies pay attention to people's mental health status at this stage. Studies have shown that many people will experience all kinds of stress and loss when the new crown pandemic ends. If we refer to the relevant research results of natural disasters, it is estimated that 10% of people will have serious psychological problems due to the current new coronavirus pandemic, such as mood disorder, anxiety disorder or post-traumatic stress disorder (PTSD) (Taylor, S. & asmundson, g.j.g., 2020). Therefore, the mental health status of the public at this time can not be ignored.

The influencing factors of people's mental health during the epidemic period have also been widely concerned. Previous studies have shown that different gender, age, education level, marital status, occupation and residence place all affect individual mental health status (Zheng Chen, Wu Shuqin, etc.); coping style and social support of middle school students are closely related to their mental health level (Tang Lei, Ying Bin, 2020); whether they have psychological counseling needs is also related to their mental health status (Zhang Xuehui, Ye Tian Tian, et al.,2020) In the face of public health emergencies, people will make different coping styles in cognitive and behavioral aspects in order to reduce the pain, worry and panic of emotional experience. Previous studies have shown that positive coping style is conducive to the maintenance of mental health of medical staff (Xu Yuan, Zhao Mei, 2020). So, for ordinary people, what is the relationship between different coping styles and individual mental health during the epidemic?

To sum up, this study investigated the mental health status and coping style of the people in the late stage of the epidemic through the network research and discussed the relationship between their mental health and coping style, so as to provide important theory and Practice for mental health education and assistance of residents in special period.

2. Research Methods

2.1. Participants

A total of questionnaires were collected from June 20 to June 2020 in Shanxi Province. Among them, 31 were male and 72 were female; 4 were under 18 years old, 78 were 18-44 years old, 19 were 45-60 years old, and 2 were over 60 years old; 66 were registered in urban areas and 37 were in rural areas.

2.2. Measuring Tools

2.2.1. Self-designed Questionnaire

The self-compiled questionnaire included the general demographic data of the subjects, including age, sex, domicile location.

2.2.2. Anxiety and Fear Subscale of Symptom Checklist

The symptom self-rating scale has good reliability and validity. Among them, the anxiety subscale includes 10 questions, and the fear subscale includes 7 questions. Anxiety subscales score between 10-50. Score above 30 points, indicating that individuals are more prone to anxiety, prone to irritability, restlessness and nervousness, extreme may lead to panic attacks.

ISSN: 2688-9323

Score below 20 points, indicating that the individual is not easy to anxiety, easy to show stability. Overall, the higher the score, the more obvious the anxiety performance. The lower the score, the less anxiety. The scores of fear subscale s between 7 and 35. The score above 21 points indicates that the individual terror symptoms are more obvious, often showing social, square and crowd fear, and the score below 14 points indicates that the individual terror symptoms are not obvious. Overall, the higher the score, the more likely the individual is to fear places and objects with obvious physical symptoms. The lower the score, the more difficult the individual is to produce terror, the more normal communication and activities. Combined with the psychological reaction of the people under the new crown pneumonia, the first question of the fear subscale was changed from "fear of open place or street" to "fear of crowded place or street ". (Zhang Jie, Liu Zhao Xia, Yang Qi, Liu Dan ,2020)

2.2.3. Response Questionnaire

The questionnaire is from the simple coping style questionnaire by Xie Yaning, The premise is "novel coronavirus pneumonia may adopt attitude or practice", the questionnaire has 20 entries, including positive coping and negative coping 2 dimensions, positive coping dimensions consist of 1-12 items, mainly reflects the characteristics of positive coping, negative coping dimension is composed of 13-20 items, and it mainly reflects the characteristics of negative coping. According to the frequency of adoption, it was divided into four grades: none, occasionally, sometimes and often, and the corresponding score was 0, 1, 2 and 3. The retest correlation coefficient was 0.89 and α coefficient was 0.90. The α coefficient of positive coping scale was 0.89, and that of negative coping scale was 0.78.

2.3. Statistical Methods

Using SPSS 17.0 statistical software, the measurement data were expressed as mean ± standard deviation (m ± SD). The data were processed by independent sample t test, single factor analysis of variance and correlation analysis. $P < 0.05$ was the difference.There was statistical significance.

The national norm of SCL-90 established by Liu Yuanyuan and others from 12 provinces and cities represents the national average level. According to the classification criteria of correlation degree: $|R| \geq 0.5$ is high correlation, $0.5 > |R| 0.3$ is moderate correlation, $0.3 > |R| 0.1$ is low correlation.

3. Fruit

3.1. Descriptive Statistics of Anxiety, Fear and Coping Style of the Public

From the scores of anxiety and fear (see Table 1), the average score of anxiety dimension is slightly higher than that of fear.

The results of coping style scale show that 87% individuals tend to adopt positive coping style and 13% individuals adopt negative coping style. More individuals adopt positive coping style.

Table 1. Anxiety and fear scores

Factors	N	M±SD
Anxiety	97	1.48±0.74
Fear	97	1.42±0.64

3.2. Analysis of Novel Coronavirus Pneumonia in the Public

It can be seen from table 2 that the public psychology in the late stage of the epidemic is slightly worse than the national average level in the ordinary period, and the difference is not

ISSN: 2688-9323

significant. In the dimension of fear, it is significantly different from the national average level in the ordinary period. (P<0.05).

Table 2. Comparison of anxiety and fear scores between subjects and national norm (M±SD)

Factors	Epidemic trials(n=97)	National norm(n=12160)	t	p
Anxiety	1.48±0.74	1.40±0.48	1.05	0.30
Fear	1.42±0.64	1.23±0.39	2.90	0.01**

3.3. Analysis of Different Dimensions of People's Psychology in New Crown Pneumonia

T-test and ANOVA showed that there were no significant differences in different dimensions of demographic variables.

3.4. Correlation Analysis of Mental Health Status and Coping Style of the Public

As can be seen from the table below, Pearson correlation analysis results show that (Table 3), negative coping style and anxiety factor score difference is significant (P < 0.05), showing a moderate degree of positive correlation (0.5 > | R | 0.3), edge significant difference with fear factor score (0.05 < p < 0.07), low positive correlation (0.3 > | R | 0.1).

Table 3. Results of correlation analysis between mental health and coping style of Fenyang people Negative responses

Factors		Positive responses	Negative responses
Anxiety	r	0.157	0.345
	P	0.124	0.001**
Fear	r	-0.056	0.190
	p	0.584	0.062

4. Discussion

4.1. Characteristics of Mental Health Status of Ordinary People during the Epidemic Period

This study found that novel coronavirus pneumonia during the epidemic period, the general public in the fear and anxiety dimensions were worse than the national average, and the fear dimension was significant difference.

Psychological status in the fear dimension is lower than the national average level, the difference is significant. This is similar to previous studies (Zhang Jie, Liu Zhaoxia, Yang Qiqi, Liu Dan, 2020). This shows that although novel coronavirus pneumonia has been basically recovered, the public still has fear and fear of the epidemic related diseases due to the sudden, urgent, serious, highly uncertain and social hazards of the new crown pneumonia epidemic, and the recent outbreak of small area recurrence in Beijing.

However, the difference is not significant, which is different from previous studies. There are probably two reasons. On the one hand, as it has entered the late stage of the epidemic, the epidemic has basically stopped spreading. With the resumption of work and school, people's living conditions have gradually entered the right track, and their psychological tension and anxiety have been gradually restored. On the other hand, it is because the subjects in this study are all in Fenyang City, Shanxi Province, where there are few confirmed cases, the epidemic prevention and control work is done well, and the epidemic situation has not spread, so the public's anxiety and tension are not very high.

ISSN: 2688-9323

The characteristics of mental health status of the general public during the epidemic period suggest that we should continue to pay attention to the mental health status of the public even in the later stage of the epidemic, and provide corresponding mental health education and psychological assistance services when necessary.

4.2. Characteristics of Common People's Response to Epidemic Situation

This study found that during the epidemic period, about 13% of the people took a negative response, and 87% of the people took a positive response. Novel coronavirus pneumonia can be used to relieve anxiety and effectively regulate the response of new crown pneumonia stress events.

4.3. There is a Correlation between Mental Health and Coping Style of Ordinary People

Studies have confirmed that coping styles of middle school students and medical staff are closely related to their mental health (yuan Lixin, Zeng Lingbin,2007; Xu Yuan, Zhao Mei 2020)Through further analysis of the correlation between people's mental health and coping style, it was found that there was significant difference between negative coping style and the scores of anxiety factors ($P < 0.05$), showing a moderate positive correlation(There was a significant difference ($0.05 < p < 0.07$) with a low positive correlation ($0.3 > R \mid 0.1$).

This shows that the negative coping style of the public is not conducive to the regulation of mental health. Therefore, in the process of psychological health education and psychological assistance, we should guide the public to adopt more positive coping styles and avoid negative coping styles. In order to better regulate the state of mental health.

5. Conclusion

In the later stage novel coronavirus pneumonia, the mental health level of the people was worse than the national average level, and their mental health status was related to coping styles.

References

[1] Jie Yaning (1998).A preliminary study on the reliability and validity of Xie Yaning's Mini coping style scale[J], Chinese Journal of clinical psychology, 6 (2): 114-115.

[2] Liu Yuanyuan, Wu Shengjun, Li Yongqi, et al. (2018). A survey of mental symptoms of Chinese population based on SCL-90.Chinese Journal of mental health, 32 (5): 437-441.

[3] Wang Xing, Liao Qiyun (2020). Effect of stress events of COVID-19 on psychological health of college students[J]. Health research, 40 (03): 257-260.

[4] Pan Xiao, Liu Weizhi, Xu Zhengmei, Zhao Feng, Wang Jiamei, Zhou Hongyu, Bai Yong Hai (2020). Coronavirus disease 2019-related mental health: research progress[J]. Journal of Second Military Medical University, 41 (03): 303-306.

[5] Su Binyuan, Ye Yuanxiu, Zhang Wei, Lin MA (2020). Characteristics of psychological stress of people in the new crown pneumonia epidemic situation in different time periods [J]. Journal of South China Normal University (SOCIAL SCIENCE EDITION), (03).

[6] Wei Hua ,Li Tingyu (2020). Impact of Epidemic of corona virus disease 2019 on Different Populations and Suggestions for Psychological Intervention[J]. Journal of pediatric pharmacy, 26 (04): 6-7.

[7] Yuan Lixin, Zeng Lingbin (2007). Eff ect of Lif e Events, Social Support, Coping Style and General Sel f-efficacy on Psychological Health of Junior Middl e School Students[J]. Chinese Journal of clinical psychology, 15 (1): 33-36.

[8] Yu Wenlan, Sun Daoyuan(2020). Intervention of mental health risks of female nurses engaged in nursing patients wit COVID -19[J]. Occup Health & Emerg Rescue,38(02):106-108+151.

ISSN: 2688-9323

[9] Zhang Jie, Liu Zhaoxia, Yang Caiqi, Liu Dan (2020).Investigation and analysis on mental state of people during the outbreak of coronavirus disease 2019[J]. Chinese Journal of Respiratory and Critical Care Medicine, 19 (03): 219-224.

[10] Zhao Guoxiang, Shan geyan, Li Yongxin (2020).Novel coronavirus pneumonia demand among college students in Henan Province during the epidemic period [J]. Journal of Henan Normal University (PHILOSOPHY AND SOCIAL SCIENCES), 47 (03): 150-156.

[11] Zheng Chen, Wu Shuqin, Wang Cen, Han Yaozheng, He Qiqiang, Wang Peigang (2020). Mental health status among residents in Hubei province during novel coronavirus disease epidemic: an online survey [J]. Chin J Public Health, 36 (05): 657-660.

[12] Zhang Xuehui, ye Tian Tian, Yao Lijuan, Song Langui, Wu Zhongdao(2020).A psychological behavioral survey among medical students during the outbreak of coronavirus disease 2019[J]. Journal of Tropical Medicine,20 (05): 576-580.

[13] Taylor, S. &Asmundson,G.J.G.(2020). Life in a post-pandemic world: what to expect of anxiety-related conditions and their treatment. Journal of Anxiety Disorders, 72, 102231.