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Emotional states and coping methods in nursing and non-nursing students responding to COVID-19: a cross-sectional study in China

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ABSTRACT

Objectives To evaluate the emotion, coping strategy, dealing methods and their correlation in the COVID-19 outbreak among nursing and non-nursing students.

Design and setting A cross-sectional online survey.

Participants Full-time nursing and non-nursing undergraduate students.

Main outcome measure The Generalized Anxiety Disorder 7 (GAD-7) and Patient Health Questionnaire-9 (PHQ-9) were used to determine the emotional status in the COVID-19 pandemic among nursing and non-nursing students. Emotion Regulation Questionnaire (ERQ) was used to measure the emotion regulation strategies and the Simplified Coping Style Questionnaire (SCSQ) was used to evaluate the coping methods among nursing and non-nursing students.

Results In total, 746 students including 366 nursing students and 380 non-nursing students participated in the survey. Compared with the non-nursing students, a significant decrease was noticed in GAD-7 score (p<0.01) and PHQ-9 (p<0.01) in the nursing students. The cognition re-evaluation score in the nursing students was significantly lower than that of the non-nursing students (p<0.05). In the nursing students, the score of anxiety was positively correlated with ERQ expression inhibition (p<0.01) and SCSQ negative coping (p<0.01), while the score of depression was also positively correlated with ERQ expression inhibition (p<0.01) and SCSQ negative coping (p<0.01). There was a negative correlation between SCSQ and the scores of anxiety (p<0.05) and depression (p<0.05). In the non-nursing students, the anxiety score was positively correlated with the SCSQ negative coping (p<0.01), while the depression score was positively correlated with the ERQ expression inhibition (p<0.01) and SCSQ negative coping (p<0.01).

Conclusions COVID-19 affected the emotional status of nursing and non-nursing students. The emotional status was correlated with the emotional regulation and coping methods. Staff involved in the nursing professionals should pay attention to the psychological status of the nursing and non-nursing students, and give moderate psychological interference in the presence of COVID-19.

INTRODUCTION

COVID-19 is a new type of acute respiratory syndrome that emerged in Wuhan City, Hubei

Strengths and limitations of this study

► This survey was performed at the early stage of COVID-19 pandemic, and it is really a challenge for the questionnaire collection.
► The number of male nursing students was lower, which may lead to bias in the demographic information.
► We can further illustrate the stress pathway of nursing students in cases of severe public health events and then establish a model for the psychological health service.
► The data obtained in the setting of COVID-19 could be applied in the specific conditions cautiously.

Province in China in late December 2019. On 30 January 2020, COVID-19 was listed as the Public Health Emergency of International Concern by WHO.[1] It has caused the outbreak of acute infectious pneumonia as it is highly epidemic, spreading to southern Asia (India, Nepal and Sri Lanka), eastern Asia (Japan and Korea), southeast Asia (Thailand, Singapore, Malaysia, Vietnam, Philippines and Cambodia), western Asia (United Arab Emirates), Europe (Germany, France, Italy, UK, Russia, Finland, Spain and Sweden), North America (USA and Canada) and Australia.[2 3] According to the survey, about 13% of the patients with confirmed 2019-novel coronavirus (nCoV) infection were reported to present severe respiratory symptoms, among which 2% died.[4] In a recent study, patients with COVID-19 usually present severe psychological stress, anxiety and depression.[5] Gupta et al proposed a novel emotion care scheme to analyse multimodal textual data contained in the real-time tweets related to COVID-19. Besides, the authors investigated 8-scale emotions (ie, anger, anticipation, disgust, fear, joy, sadness, surprise and trust) induced by COVID-19. Adaptation

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reactions are helpful to the individuals when facing infectious diseases, which then contribute to the response to stress events. However, excessive emotional response may lead to somato-psychic disturbance in their daily lives.

In the presence of public health emergency, the doctors and nurses fulfilling the responsibility for helping the infected individuals by a certain disease are facing a huge physical and psychological stress. In a previous study that investigated the effects of SARS on the psychosocial behaviours in Toronto in 2003, Nickell *et al* focused on the respondents who were allied healthcare professionals, nurses and doctors serving as representatives of the hospital staff population as a whole.[6] About 29% of the respondents reported SARS-related concern for their own or their families' health, while that rate among nurses was up to 45%. According to the report by the National Health Commission of the People's Republic of China, more than 14 000 doctors and nurses volunteered to manage the patients infected by the COVID-19 from all over China.[7] They faced intensive treatment and nursing and bore a heavy occupational and psychological pressure. Up to now, a total of 1716 doctors and nurses were infected by COVID-19, accounting for about 3.8% of the total number of infected patients. In a recent survey on the psychological state of 207 nurses working in the COVID-19 designated hospital in Hangzhou, Zhang *et al*[8] reported that most of the nurses showed psychological disorders. This should raise our attention on the psychological state of the staff involved in public health. COVID-19 could affect the emotion of the staff involving in medical and nursing professionals, and their response strategies would change under different emotions.[9] The adults with anger and fear are more likely to respond positively to pressure events, while those with sorrow and depression had a greater tendency to choose a negative response.[10] On this basis, more attention has been paid to the investigation on the relationship between individual response and psychological health.

Since the outbreak of COVID-19, more attention has been paid to the psychological health of nursing students. As the major reserve force of nursing professionals, nursing students are at a learning stage of their fields. Their inadequate understanding of COVID-19 and lack of clinical experiences would bring complex emotions. Although they have received professional nursing education and are well educated in the medical fields, they are indeed affected by emotions just like the non-nursing students.[11] In colleges, nursing students are more likely to be trained on how to manage the infection, which is beneficial to the prevention of infectious diseases.[12] Patel *et al* showed that a complete understanding on the cause, prevention and treatment of a certain disease would reduce the fear to the disease. Nevertheless, in a study investigating the psychological state of nursing students studying at a university located within the Wenchuan earthquake zone, it indicated that nursing students in areas affected by the Wenchuan earthquake suffer from anxiety and depression disorders. Participants most often employed basic problem-solving approaches to cope with psychological conflicts arising from their earthquake experience.[13] In a cross-sectional study in Egypt, undergraduate university students were very prone to choose the problem-focused coping strategies during the COVID-19 pandemic.[14] As COVID-19 is sudden onset with a rapid infection rate and a high mortality coexisting with unpredictability, little is known about the differences between nursing students and non-nursing counterparts in the emotional and coping strategies.

In this study, we aimed to investigate the emotion, coping strategy, dealing methods and their correlation in nursing and non-nursing students during the COVID-19 pandemic. In addition, we investigated the differences of the psychological status between nursing and non-nursing students, which contributed to the construction of psychological supporting system and coping strategies during the COVID-19 pandemic.

MATERIALS AND METHODS
Patient and public involvement
No patient involved.

Subjects
Each subject was well informed about the questionnaire and signed the informed consent online. In this study, we distributed our questionnaire to 770 students in a full-time university located in Hangzhou (Zhejiang Province, China) between 4 February and 10 February 2020. The questionnaire was distributed by online visiting to the undergraduate students in our university. All the subjects participated in the questionnaire voluntarily. For the quality control of the questionnaire, each online IP was only allowed to fill in one questionnaire. For the privacy of the subjects, their privacy information was not presented in it. On distribution of the questionnaire, automatic monitoring was performed to monitor the time duration each subject used on the questionnaire. Questionnaires accomplished in less than 180 s or in a long time were excluded from the subsequent analysis. Before setting the items in the questionnaire, we needed to find out whether the subjects showed mental illness and COVID-19. In order to exclude the effects of the COVID-19 pandemic on psychological status, we excluded the subjects located in Wuhan City (Hubei Province, China). The inclusion criteria were as follows: (1) full-time undergraduate students; (2) those willing to participate in this survey; (3) those with no psychological illness or not infected by COVID-19. Those with the following conditions were excluded from this study: (1) those with severe psychological problems or diseases; (2) infected by COVID-19; (3) those with an internet position at Wuhan City (Hubei, China).

Questionnaire
The questionnaire consisted of the following aspects: the generation information of the students, including gender, age and profession.

Generalized Anxiety Disorder 7 (GAD-7) scale was used for the evaluation. A score range of 0–3 was set for each item, and the total score was 21 for the seven items. A score of 5, 10 and 15 was considered the threshold score for the slight, moderate and severe anxiety, respectively. In this study, the Chinese version of the GAD-7 scale was used.[15] A total of 366 nursing students participated in the survey. The Cronbach α coefficient was 0.858. In total, 380 non-nursing students participated in the survey, and the Cronbach α coefficient was 0.904.

The Patient Health Questionnaire-9 (PHQ-9) consisted of nine items with a score range of 0–3 for each item (total score, 27). A higher score demonstrated a higher depression state. A score of 5, 10 and 15 was considered the threshold score for the slight, moderate and severe depression, respectively. The Chinese PHQ-9 version was adopted in this study.[16 17] In total, 366 nursing students participated in the survey, and the Cronbach α coefficient was 0.880. The Cronbach α coefficient was 0.894 in the 380 non-nursing students.

Emotion Regulation Questionnaire (ERQ) consisted of 10 items involving two rating scales. The Chinese version of ERQ was adopted.[18] Among the 366 nursing students, the Cronbach α of the two dimensions of the ERQ scale was 0.849 and 0.764, respectively. Among the 388 non-nursing students, the Cronbach α of the two dimensions of the ERQ scale was 0.890 and 0.812.

Simplified Coping Style Questionnaire (SCSQ) initially proposed by Xie in 1998 consisted of 20 items. Positive and negative coping was available in the Chinese version of SCSQ.[19] The Cronbach α of the two dimensions of the SCSQ scale was 0.880 and 0.764 in the 366 nursing students, and 0.886 and 0.739 in the non-nursing students, respectively.

Statistical analysis
SPSS Statistics V.22.0 was used for the data analysis on collection of the questionnaire. All the measurement data were presented as mean±SE. Independent sample t-test was used for the comparison of the GAD-7, PHQ-9, ERQ and SCSQ score between the nursing and non-nursing students. The gender difference between the non-nursing students was compared using the independent sample t-test. Pearson correlation analysis was conducted to analyse the correlation between anxiety, depression, regulatory strategy and coping methods. A $p<0.05$ was considered to be statistically significant.

RESULTS
Demographics and description of quarantined persons
In total, we distributed 770 questionnaires, and 746 (96.9%) were finally collected, including 366 questionnaires collecting from nursing students and 380 from non-nursing students. Among the 366 nursing students, there were 20 men (5.5%) and 346 women (94.5%). The mean age for the respondents in the nursing students was 22.4±1.5 years. Among the 380 non-nursing students,

there were 93 men (24.5%) and 287 women (75.5%). The mean age was 22.1±1.2 years.

The GAD-7 score for the students in the nursing profession was 2.12±2.63. The PHQ-9 score was 3.34±4.13. The ERQ score and SCSQ score was 43.45±6.61 and 30.39±8.96, respectively. For the non-nursing students, the GAD-7 score was 2.65±3.48, and the PHQ-9 score was 3.74±4.79. The ERQ score and SCSQ score was 44.10±7.59 and 31.00±9.41, respectively. Student's t-test indicated that the number of nursing students with a mean GAD-7 score and PHQ-9 score of 5 or more was significantly lower than those of the non-nursing students ($t_1=-2.101$, $p<0.01$; $t_2=-1.372$, $p<0.01$). Moreover, no statistical differences were noticed in the GAD-7 score and PHQ-9 score in the nursing students and non-nursing students with mild, moderate and severe anxiety or depression, respectively (table 1, $p>0.05$). Student's t-test revealed the cognition re-evaluation score in the nursing students was significantly lower than that of the non-nursing students ($t=-0.117$, $p<0.05$). For the comparison of SCSQ between the non-nursing students and nursing students, no statistical differences were noticed between them ($p>0.05$, table 2).

Difference of non-nursing profession students of different genders in each scale
For the non-nursing profession students, the score of anxiety and recognition re-evaluation of the male students was significantly lower than that of the female counterparts (anxiety: $t_1=-3.494$; $p<0.01$; recognition re-evaluation: $t_2=-1.250$, $p<0.05$). The expression inhibition in the male students was significantly higher than that of the female counterparts ($t=3.569$, $p<0.05$, table 3). As the proportion of male students in the nursing profession was very small, there was no correlation analysis before the nursing profession students.

Correlation between emotion, regulatory strategy and coping style
Pearson regression analysis indicated a positive correlation between anxiety and depression of the nursing profession students and the ERQ expression inhibition and SCSQ negative coping ($p<0.01$). Meanwhile, there was a negative correlation between anxiety and depression of the nursing profession students and the positive coping of SCSQ ($p<0.05$). For the non-nursing profession students, the depression was positively correlated with the expression inhibition of ERQ ($p<0.01$). In addition, anxiety and depression were positively correlated with the negative coping style of the SCSQ ($p<0.01$, table 4).

DISCUSSION
It has been well acknowledged that there is a significant increase in the anxiety and depression among nursing or non-nursing students when facing severe stress events such as SARS and COVID-19.[20] Anxiety is the most common emotional stress. Compared with anxiety, depression is

Table 1 Detection rates of anxiety and depression of different levels and comparisons of Generalized Anxiety Disorder 7 (GAD-7) and Patient Health Questionnaire-9 (PHQ-9) scores between the nursing students and non-nursing counterparts

	Nursing students (n=366)		Non-nursing students (n=380)		T/z value	P value
	Rate	Score	Rate	Score		
Anxiety according to GAD-7						
No anxiety	84.7%	1.21±1.28	81.1%	1.30±1.28	−0.864	0.472
Mild anxiety	12.8%	6.26±1.17	13.4%	6.24±1.18	0.084	0.926
Moderate anxiety	2.2%	11.50±1.51	3.4%	11.69±1.70	−0.270	0.388
Severe anxiety	0.3%	15.00±0.00	2.1%	17.13±1.96	−1.192	0.444
Anxiety overall	56 (15.3%)	7.16±2.45	72 (18.9%)	8.43±3.97	−2.101	<0.001
Depression according to PHQ-9						
No depression	72.4%	1.25±1.40	70.8%	1.30±1.35	−0.408	0.423
Mild depression	18.8%	6.74±1.48	17.9%	6.40±1.28	1.445	0.119
Moderate depression	6.6%	11.50±1.22	5.8%	11.82±1.30	−1.009	0.888
Severe depression	2.2%	18.88±2.23	5.5%	18.05±3.57	−0.857	0.809
Depression overall	101 (27.6%)	8.83±3.87	111 (29.2%)	9.68±4.96	−1.372	0.003

more likely to induce social dysfunction. In this study, the incidence of anxiety and depression among the nursing profession students was 15.3% and 27.6%, which were higher than the incidence of the counterparts at normal conditions. In a previous study, Feng *et al* indicated the detection rate of anxiety and depression based on the SAS and SDS scale was 12.94% and 19.53%, respectively.[21] Meanwhile, in another study, the incidence of depression in the nursing students was 21.22%.[22] In this study, the proportion of non-nursing students with anxiety and depression was 18.9% and 29.2%, which was significantly higher than the rate of anxiety (15.3%) and depression (27.6%) in the nursing students. These indicated that severe stress events cause great threats to the psychological state of the nursing and non-nursing students, respectively. In this study, 2.5% of the nursing students showed moderate and severe anxiety, while 6.9% showed moderate and severe depression. For the non-nursing students, 6.9% showed moderate and severe anxiety, and 7.4% showed moderate and severe depression. For these students, further evaluation was required, together with drugs and psychological interference. Particularly, there were some students who presented thoughts of suicide, and immediate interferences were required. The campus is recommended to educate the students to adopt appropriate emotional regulation strategy and coping methods in the presence of public crisis. Besides, regular education on the COVID-19–related information including

the onset, progression, outcome and prevention. The students with mild and moderate anxiety and depression should be educated to adapt to the anxiety and depression, together with positive communication with others and appropriate catharsis. Moreover, the students are recommended to obtain support from the hotline of the psychological stress, psychological counselling and training. Those with severe anxiety and depression are recommended to receive treatment in hospitals.

Interestingly, unlike the non-stress condition, the anxiety and depression score and incidence in the students of the nursing profession were significantly lower than that of the non-nursing students. The decline in the incidence and depression score may be related to the solid background of the nursing professions, which allows them a better understanding on the infectious disease. Meanwhile, these students were likely to receive education on the emotional management in campus, which contributed to their adaptation reaction of the emotion in the presence of COVID-19. This indeed is a positive feedback to the regulation of mental sources.[12]

The score of recognition re-evaluation in the nursing and non-nursing students was much higher than the expression inhibition score. Besides, the recognition re-evaluation score in these students was similar, which indicated that the undergraduate students showed a higher education level and a positive psychological state. These contributed to the generation of a well adaptation

Table 2 Comparison of Emotion Regulation Questionnaire (ERQ) and Simplified Coping Style Questionnaire (SCSQ)

	Nursing students (n=366)	Non-nursing students (n=380)	T value	P value
Recognition re-evaluation, ERQ	29.58±5.13	29.65±5.77	−0.177	0.04
Expression inhibition, ERQ	13.87±3.89	14.45±4.21	−1.940	0.39
Positive coping, SCSQ	21.74±6.54	21.71±7.09	0.060	0.20
Negative coping, SCSQ	8.65±4.36	9.29±4.43	−1.984	0.97

Table 3 Comparison of scale in different genders among the non-nursing students

Variable	Male (n=93)	Female (n=287)	T value	P value
Anxiety	1.57±2.47	3.00±3.67	−3.494	0.003
Depression	2.53±4.17	4.14±4.92	−3.093	0.052
Recognition re-evaluation	29.00±6.70	29.86±5.44	−1.250	0.040
Expression inhibition	15.78±5.23	14.02±3.74	3.569	0.018
Positive coping	20.41±7.92	22.13±6.76	−1.887	0.135
Negative coping	9.05±4.68	9.37±4.36	−0.574	0.766

capacity to the COVID-19. As is known to all, a positive strategy for the recognition re-evaluation and a positive attitude towards stress such as frequent hand-washing and wearing a mask are helpful to keep a healthy state. Re-evaluation on the stress situation such as quarantine at home would promote the family relationship and attempt to recover the negative emotion. On this basis, anxiety was considered as a normal response to the crisis. In a previous study, Gross considered that emotional regulation was an essential part for the internal psychological capital, which meant the regulation involving multiple experiences, behaviours and psychological system. In addition, it was considered a functional reaction to the generation time, experience and expressional emotion.[23] Individuals with recognition re-evaluation had a greater tendency to share their emotion, which obtained more social support.[24] Despite the fact that quarantine at home limited the face-to-face communication to some extent, the online communication contributed to the students with a high recognition re-evaluation as they could obtain social support through communication via online system and/or telephone, which could attenuate the psychological pressure.

The mean score for the SCSQ positive coping dimension in the nursing students was similar to that of the non-nursing students, while the mean score for the negative coping dimension was lower than that of the non-nursing students. When facing the COVID-19, positive coping included wearing a mask, frequent handwashing and quarantine at home, together with obtaining social support. These measures were highly associated with the effective management of the Chinese government to face COVID-19.[25] Since the COVID-19 pandemic, the Chinese government acts rapidly and adopts immediate and effective measures for the prevention and treatment

to the civilians. In addition, the local authorities propose accurate and effective education to the civilians about COVID-19, and the disease is under control in time.[26] Rare individuals showed negative coping and their patterns were presented in an individual pattern, such as their coping methods for depression, escape and self-blame. It is necessary to mention that there is no definite boundary between positive coping and negative coping when facing a severe public infection. Specially, there is indeed a relation between positive coping and negative coping. For the individuals placed in quarantine at home, their coping behaviours are still limited.

The uncontrollability and uncertainty of COVID-19 would lead to an increase in powerlessness and feeling of helplessness. Compared with the other conditions involving the utilisation of positive coping to the specific issues, the supporting means from the emotional aspects may provide more benefits to attenuate the pressure for the individuals placed in quarantine at home. Self-comforting and accepting the reality were not effective ways for positive coping, but it was an effective coping strategy for COVID-19.

There might be interactions between emotional state and regulatory strategy.[27] The emotional state would affect the selection of the regulatory strategy, while the regulatory strategy would modulate the emotional state. In a previous study, the individual responses to the emotional onset, experience and expression would play important roles in physical and mental health. Nursing students using positive recognition re-evaluation strategy were more positive in their daily lives to the normal affairs, and they were apt to alternate their emotional state based on their knowledge to the emotional stress. This contributed to the attenuation of negative emotion, which would prevent the individuals from experiencing

Table 4 Correlation between anxiety, depression and regulatory strategy and coping methods

Variable	Nursing students (n=366)				Non-nursing students (n=380)			
	Recognition re-evaluation	Expression inhibition	Positive coping	Negative coping	Recognition re-evaluation	Expression inhibition	Positive coping	Negative coping
GAD-7	−0.067	0.153**	−0.127*	0.171**	−0.069	0.090	−0.055	0.252**
PHQ-9	−0.035	0.192**	−0.190**	0.176**	−0.065	0.145**	−0.077	0.248**

*p<0.05; **p<0.01.
GAD-7, Generalized Anxiety Disorder 7; PHQ-9, Patient Health Questionnaire-9.

depression and anxiety. In this study, there was a positive correlation between depression emotion and expression inhibition of ERQ in the nursing and non-nursing students (p<0.01), especially the nursing students. Those with obvious depression emotion were mainly featured by sorrow and loneliness. They did not tend to express their feelings in cases of negative emotion, and they would emerge in it. When evoked by anxiety and nervousness, the individuals willing to express their depression would attempt to suppress the emotion. This would lead to negative effects to themselves and experience on the negative feeling, which was harmful to the individuals. The students not willing to express their emotion under a high pressure were not likely to acknowledge their anxiety and depression. They considered this as immoderate and would not be accepted by the others even if they expressed their feeling.

In a previous study, Ray[28] proposed a risk of up to 43.3% for the psychological issues for the individuals lacking effective coping methods in the presence of high stress, which was about twofold higher than that of the normal counterparts. Appropriate coping was effective for the management and attenuation of the over-response and unhealthy psychological behaviours, which would alternate the subjective knowledge of an individual. Subsequently, it would relieve the psychological nervousness and maintain the psychological balance. In contrast, negative coping would lead to anxiety. In our survey, coping strategy was correlated with anxiety. Besides, there was a positive correlation between anxiety, depression and negative coping. Similar with the previous study,[29] those with high anxiety were more likely to select a negative coping method, while those with lower anxiety were more likely to select a positive coping method. This indicated that staff involved in the nursing education should pay attention to the psychological status of the nursing students and propose appropriate psychological interference, and integrate the systemic training on the outbreak of public health events to the nursing education. For the staff involved in the education of non-nursing students, attention should be paid to the psychological health of the students in cases of emergency events, and improve the psychological health through regulating the emotion and coping strategies. In addition, the non-nursing students should be educated about the emergency events, together with the prevention of the disease. In addition, measures should be taken to protect the students from emergency events that may hamper the psychological health in order to improve the psychological health through regulating the emotional regulation and coping methods.

In this survey, the male nursing students accounted for about 5.5%, and then no differential analysis was conducted in views of gender. For the non-nursing students, Student's t-test indicated statistical differences in the emotional states and regulatory strategy between the male and female counterparts. The female students were more sensitive in feeling and emotional experience than the male students, which would easily bring in negative effects in the presence of COVID-19. This indicated that the female student had a greater tendency to use the emotion regulation than the male student; however, it triggered no benefits to prevent the development of emotional problems. Instead, the female students were more likely to adopt maladjusted strategies, which may lead to more emotional disorders easily.[30] Meanwhile, in a meta-analysis, although there were small differences in gender, there were large variations in the emotional expression. Compared with men, women tended to express more positive feeling and negative feeling (eg, sorrow and anxiety).[31] This was in line with the previous study, in which the female student was more likely to bear a larger stress and generate more psychological nervousness on seeing any information about SARS such as infection rate, death and other online information. On this basis, the male student was relatively lonely in the presence of COVID-19 even if they were not infected. They would not communicate with others and chose negative coping methods (eg, avoiding seeing or self-blame), which resulted in inadequate social and emotional support.

LIMITATIONS

This survey was performed during the epidemic stage of COVID-19, and it is really a problem for the sample collection. Thus, convenient sampling was used, which hampered the representativeness of the samples. Meanwhile, the online questionnaire would be affected by the social network, which may lead to generation of bias in the data collection. Furthermore, the number of male students in the nursing profession was lower, which may lead to bias in the demographic information. Indeed, there are really some aspects to be improved. We can further illustrate the stress pathway of the nursing and non-nursing students in cases of severe public health events, and then establish a model for the psychological health service. The data obtained in the setting of COVID-19 could be applied in the specific conditions cautiously.

CONCLUSION

COVID-19 affected the emotional status of nursing and non-nursing students. The emotional status of the nursing students was less likely to be affected by COVID-19 compared with the non-nursing counterparts. The emotional status was closely related to the emotion regulation and coping methods. Therefore, more attention should be paid to the psychological status of the nursing and non-nursing students, together with appropriate psychological interference in the presence of COVID-19.

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