

Status of and Factors Influencing the Anxiety and Depression of Front-line Medical Staff Supporting Wuhan in Containing COVID-19

ning sun (✉ sunning_ly@126.com)

Ningbo College of Health Sciences

Laiyou LI

Ningbo College of Health Sciences

Shuangqin CHEN

Ningbo College of Health Sciences

Shuang YANG

Ningbo College of Health Sciences

Xiufen LIU

Yinzhou People's Hospital

Research Article

Keywords: medical workers, novel coronavirus pneumonia, anxiety, depression, influencing factors

Posted Date: April 2nd, 2020

DOI: <https://doi.org/10.21203/rs.3.rs-19665/v1>

License:   This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Abstract

Background: The novel coronavirus pneumonia (NCP) has the novel coronavirus as its pathogen. At present, more than 30,000 medics from nationwide medical teams have supported Wuhan. However, some medical workers have been seriously infected in Wuhan and other parts of Hubei Province, with over 3,000 medical staff having been confirmed of infection. Therefore, it is necessary to analysis the emotional status of front-line medical staff and their influencing factors in dealing with the NCP so as to provide an objective basis for prevention and intervention measures.

Methods: This research aimed to shed light on the relation between the personality characteristics of front-line medical workers and their anxiety and depression, to provide the basis and reference for targeted mental health education and for relevant departments to formulate relevant policies. This study adopted a convenient sampling method and examined the psychological status of 150 front-line medical workers from Zhejiang Province with questionnaire surveys using the Hamilton Anxiety and Depression Scale.

Results: The participants had severe anxiety and depression; the top three items under the category of anxiety were genitourinary symptoms, behavior at interview, and respiratory symptoms, whereas the top three items under depression were feelings of guilt, weight loss, and retardation. Among all personal data, the following factors influenced anxiety, in decreasing order: degree of suspicion of being infected when showing associated symptoms, degree of fear of yourself and your family being infected, and the affiliated hospital ($P < 0.05$). The first two factors similarly influenced depression ($P < 0.05$).

Conclusion: The front-line medical staff were found to have serious anxiety and depression when dealing with the outbreak of the novel coronavirus pneumonia, and have enormous psychological stress in the face of the growing number of confirmed cases and current absence of special treatment. Targeted mental health promotion work must be carried out to alleviate the psychological pressure of front-line medical staff and enhance their physical and mental health so that they can better contribute to the efforts against the current epidemic.

Background

The novel coronavirus pneumonia (NCP) has the novel coronavirus as its pathogen. On January 12, 2020, WHO officially named the disease as the 2019 coronavirus disease (COVID-19). The first case of COVID-19 was found in Wuhan on December 12, 2019^[1-2]. Although COVID-19 shares some similarities with SARS-CoV and MERS-CoV, the rapidly increasing number of cases and evidence of more human-to-human transmission have shown that COVID-19 is more contagious than the other two, and that it is a new strain of coronavirus that had never been found in human beings^[3-4].

The common signs of the NCP infections include fever, cough, shortness of breath, and breathing difficulties. In more severe cases, pneumonia, severe acute respiratory failure, renal failure, and even death can occur^[5]. There is currently no special treatment for NCP. The main therapy includes

symptomatic treatment and prevention of complications, with auxiliary care for infected people also being very effective. The incidence of confirmed cases has increased rapidly within a short period of time, with confirmed cases exceeding 80,000 and deaths reaching 2,912 by March 1, 2020^[6], plus secondary infections, all of which have placed a huge burden and pressure on local prevention and treatment.

At present, more than 30,000 medics from nationwide medical teams have supported Wuhan^[6], which has eased the pressure on local rescue work for treating critically ill patients with NCP. However, some medical workers have been seriously infected in Wuhan and other parts of Hubei Province, with over 3,000 medical staff having been confirmed of infection^[7], which has greatly intensified the psychological stress of the front-line medics. Facing such catastrophic emergency as NCP and influenced by various subjective and objective factors, the front-line medical staff can manifest some psychological disorders, as a form of stress response, which is an explanatory, emotional, and defensive response process within the human body, as well as also a physiological response of the human body to its needs or potential harm. Therefore, this study analyzes the emotional status of anxiety and depression of front-line medical staff and their influencing factors in dealing with the NCP so as to provide an objective basis for prevention and intervention measures.

Methods

Study design

This study used convenient sampling to collect information from 150 front-line medics from hospitals in Zhejiang Province between February 1 and 20, 2020. The inclusion criteria were as follows: 1. They were front-line medical workers; 2. They consented to voluntary participation in the study. Meanwhile, those who did not wish to participate in this study were excluded.

Instrumentation

(1) Questionnaire for the demographic characteristics of medical staff with 16 items: hospital, department, occupation, sex, age, highest level of education, years of service, technical titles, marital status, having children or not, residence, having training regarding response to public health emergencies or not, having family support for controlling the epidemic at the front-line or not, level of fear for the staff surveyed and their family getting infected, level of worry about getting infected when having symptoms associated with NCP, and recent completion of comprehensive medical observation.

(2) The Hamilton Depression Scale, compiled by Hamilton in 1960, is the most used scale for the clinical evaluation of depression status. This scale has 17 entries and adopts a five-point scoring method with points ranging from 0 to 4: (0) absent; (1) mild; (2) moderate; (3) severe; (4) incapacitating. The less severe the depression, the lower the total score; the more serious the depression condition, the higher the total score. If the score is less than 7, the participant is regarded as having no depression; with a score between 7 (included) and 17, the participant is considered as having mild or moderate depression; and a

score of 24 and above indicates severe depression. The reliability coefficient r of the scale is between 0.88 and 0.99, and content validity coefficient at 0.80 or above, showing good reliability and validity [8].

(3) The Hamilton Anxiety Scale, compiled by Hamilton in 1959, is one of the most commonly used scales in psychiatric clinics and has 14 items rated using a five-point score of 0 to 4, with standards at all levels being (0) absent, (1) mild, (2) moderate, (3) severe, and (4) incapacitating. If the total score is 29 points or more, the respondent may suffer from serious anxiety; if the score is higher than 21 (included), the participant has obvious symptoms of anxiety; if the score is more than 14 (included), the participant has anxiety; if the score is more than 7, the respondent might have anxiety; if the score is less than 7, the respondent does not have symptoms of anxiety. This scale has a reliability coefficient of 0.92 and content validity coefficient of 0.86, suggesting good reliability and validity [9].

Ethical considerations

This study adopted an online questionnaire method and the researchers conducted the survey after unified training. All procedures were approved by the Ethics Committee of Ningbo College of Health Sciences(NCHS-062). We approached the medical staff on the front line and explained the research objectives, methods, and other relevant information to them to facilitate cooperation. After obtaining their agreement, we then requested them to sign a letter of consent online, informing them that participation was fully voluntary and that they could choose to withdraw from the research at any time. We then conducted online survey by sending the questionnaire link to a total of 180 medical staff.

Statistical methods

(1) We used SPSS 22.0 and performed data analysis after logical testing. $P < 0.05$ was considered as statistically significant.

(2) Statistical description: We used mean, standard deviation, and frequency values to describe the demographic data of the front-line medical staff; we also used mean and standard deviation values to describe the anxiety and depression scores of front-line medical workers who were supporting Wuhan in its efforts to control NCP.

(3) Statistical inference: We adopted multi-linear regression to analyze the influence of the demographic data of medical workers on their anxiety and depression.

Results

General information of front-line medical workers

A total of 180 questionnaires were distributed, and 150 valid ones were collected, with an effective recovery rate of 83.33%. The detailed personal information collected is listed in Table 1.

Status of anxiety and depression among front-line medical staff

According to the total score of anxiety and depression among the front-line medical staff, the results showed severe anxiety and depression; the top three items under the category of anxiety were genitourinary symptoms, behavior at interview, and respiratory symptoms; and the top three depression items were feelings of guilt, weight loss, and retardation. The details are shown in Table 2.

Analysis of factors of anxiety and depression, influence on front-line medical staff

Progressive linear regression analysis was conducted, with the total scores of anxiety and depression as the dependent variables. Sixteen items of personal data were the independent variables: hospital level, department, occupation, sex, age, highest level of education, years of working experience, technical titles, marital status, having children or not, living conditions, participation in training for response to public health emergencies, family support to work at the front-line of anti-epidemic efforts, level of fear for one's own and family getting infected, level of worry about getting infected when having symptoms associated with NCP, and having undergone any medical observation lately. The assignment method is detailed in Table 3. The values for entering into and deleting from a regression equation were set as 0.10 and 0.15, respectively. The research results showed that factors influencing anxiety could be arranged in decreasing order of influencing degree as follows: level of worry about getting infected when having symptoms associated with NCP, level of fear for one's own and family getting infected, and affiliated hospital ($P < 0.05$). The factors affecting depression could be ordered as follows, with the influencing degree from high to low: level of worry about getting infected when having symptoms associated with NCP and level of fear for one's own and family getting infected ($P < 0.05$), as detailed in Table 4.

Discussion

Status of anxiety and depression among medical staff on the front line

NCP is an acute infectious disease. Because of its extreme infectiousness, many people are fearful of it, and even turn pale at the mention of "corona," the influence of which can be reflected on the front-line medical staff. The present results showed that front-line medical workers had serious anxiety and depression, with the top three items under the category of anxiety being genitourinary symptoms, behavior at interview, and respiratory symptoms, and the top three depression items being feelings of guilt, weight loss, and retardation. Specifically, as the front-line medical staff are in direct contact with patients infected with NCP, they are among the people with the highest risk of contracting NCP. Meanwhile, they have a profound understanding of the harmful effects of NCP and are thus susceptible to anxiety and depression. In terms of the depression items, when dealing with NCP, front-line medical workers had to go through cumbersome protective procedures and wear tight protective equipment every day.

Currently, protection equipment is in shortage in Wuhan, and as such, some medical staff members wear only one set each day to avoid waste, which compels them to refrain from drinking water. Some have gone so far as to wear diapers for urination, which can lead to genitourinary symptoms, if not replaced for a long time. Moreover, wearing protective equipment for a long time can lead to poor vision, poor

mobility, clumsy operation, poor breathing, communication difficulties, and other problems that bring anxiety to the medical staff. In addition, 5.3% of the front-line medical staff reported not having their family's support for going to the anti-epidemic front line; they may experience self-blame for being in an environment with high risks of infection. Meanwhile, because of overtime work on the front line, they could only sleep for a few hours a day and have irregular eating time, which can lead to weight loss. Owing to mental retardation arising from poor physical health, the front-line medics can face severe depression. The results of this study suggested that the psychological issues of the front-line medical workers, such as depression and anxiety, urgently demand attention from psychologists and team leaders. Only when equipped with good professional advantages and psychological qualities for self-adjustment and self-protection can the front-line medical workers better overcome the epidemic. The conclusions of this study are partially consistent with those on the mental health status of medical workers at the front line of efforts to contain SARS in 2003^[10].

Factors influencing the anxiety and depression of front-line medical staff

Influence of the level of worry about getting infected when having symptoms associated with NCP and the level of fear for oneself and one's family getting infected on the medical worker's anxiety and depression

The source of NCP infection is mainly patients infected with NCP, and people with recessive infection (i.e., asymptomatic infection) may also become the source of infection^[11]. Front-line medical staff members face high risks of getting infected because of frequent close contact with patients in the treatment of and care for the latter^[12]. Among the 138 patients admitted to Zhongnan Hospital of Wuhan University between January 1 and 28, the proportion of medical workers was as high as 29% . A retrospective analysis of the 1,099 patients diagnosed with NCP (diagnosis date as of 29 January) in 552 hospitals in 31 provinces found that the proportion of medical staff was 2.09%. Therefore, medical workers belong to the high-risk group and experience great psychological pressure. If they are infected when supporting anti-epidemic efforts in Hubei province, the effects are not only on their own physical and mental health but also those of their families. Thus, with the appearance of symptoms and corresponding increase in the degree of worry, especially for 15.3% of the front-line medical workers who were under medical observation, their anxiety and depression would become aggravated, which could heavily affect their physical and mental health and, subsequently, the treatment of patients infected with NCP. Therefore, targeted psychological interventions are needed for the front-line medical workers who appear to have related symptoms and those receiving medical observation to relieve their physical and psychological burdens and facilitate speedy recovery.

Impact of hospital to which they belong on anxiety

From the perspective of the hospital level, medical professionals from high-level hospitals have high scores of anxiety and depression (i.e., having more psychological problems). In the present study, the front-line medical personnel were sent to different levels of hospitals, including level 3 grade A, level 3

grade B, level 2 grade A, and level 2 grade B. Hospitals of a higher level are equipped with more medical equipment and receive more patients with NCP, who also tend to be in a more serious stage. Therefore, the higher the hospital level, the heavier its anti-epidemic tasks, and the higher the professional and technical requirements for the medical workers. Meanwhile, society, including the media, tends to pay the highest attention to medical workers in high-level hospitals; thus, the latter have to set a leading model role in the efforts against the epidemic, and also endure more physical and mental pressure compared with their counterparts in lower-level hospitals. Previous studies on mental health at the time of similar events have reported the same insights ^[10].

Limitations and further research

The generalizability of the research results is limited by its cross-sectional design using convenient samples from front-line medical workers in one province. Based on the current study, future research may use a longitudinal approach with a wider scope of samples to measure the psychological state of front-line medical professionals from multiple dimensions. This approach is expected to identify the interaction between demographics and psychological states in a more comprehensive manner.

Conclusion

In the face of such catastrophic emergency as the COVID-19 epidemic, and influenced by various subjective and objective factors, the presence of some psychological disorders is a form of stress response for front-line medical staff. These disorders can also be seen as an explanatory, emotional, and defensive response process within the human body, and also the body's physiological response to physical needs or harm. While working in such unique environments, front-line medics can experience disorders with respect to their work, life, emotions, and other normal states. Owing to the requirements for isolation and disinfection, medical workers have to wear several layers of isolation gowns, which adds to their physical labor, consumes a large amount of energy, and leads to a severe lack of oxygen, resulting in physical and psychological symptoms. When confronted with a disaster, people in good mental health would take the initiative to adopt countermeasures, such as speaking out, shifting attention, compensating, relaxing, and turning to humor, self-comfort, and reason. The present results demonstrated that front-line medical workers experience serious anxiety and depression in their efforts to control the NCP epidemic. The psychological testing showed that people experience a process of adaptation to catastrophic emergencies, from initial unacceptance, shock, and fear, to routine, acceptance, and calmness, until co-existence is reached, which is a process with its order. Facing such sudden disasters as the NCP outbreak, both medical professionals and patients experience psychological clinical symptoms. For front-line medical staff, while ensuring the completion of their duties, keeping good mental health is crucial. Given the special circumstances, it is urgently worth discussing how to strengthen the mental health monitoring of front-line medical workers and establish an active, systematic, and scientific system for psychological protection.

Declarations

Acknowledgment

The authors would like to thank the front-line medical staff supporting Wuhan in containing COVID-19 who participated in the study.

Funding

This work was no funding.

Availability of data and materials

The data sets generated and analyzed during the current study are not publicly available due to ethical restrictions and patient confidentiality but are available from the corresponding author on reasonable request. The aggregated data are provided in the tables.

Authors' contributions

NS conception, design, analysis and interpretation of data, drafting the manuscript, revising manuscript, final approval; LYL acquisition of data, project administration, revising manuscript, final approval; SQC formal analysis, revising manuscript, final approval; SY conception, revising manuscript, final approval; XFL conception, design, funding acquisition, revising manuscript, final approval; NS conception, design, project administration, revising manuscript, final approval. All authors read and approved the final manuscript.

Ethics approval and consent to participate

Permission to conduct the study and to obtain entry for the purpose of gathering the data was obtained from the Ethics Committee of Ningbo College of Health Sciences.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

References

- [1]Chinese Center for Disease Control and Prevention. Wuhan Municipal Health Commission's Briefing on viral pneumonia with unknown cause. 2020. Retrieved from http://www.chinacdc.cn/jkzt/crb/zl/szkb_11803/jszl_11809/202001/t20200119_211274.html
- [2]Wuhan Municipal Health Commission.. Report of clustering pneumonia of unknown etiology in Wuhan City.2019. Retrieved from <http://wjw.wuhan.gov.cn/front/web/showDetail/2019123108989>

- [3]Li, Q., Guan, X., Wu, P., et al. Early transmission dynamics in Wuhan, China, of Novel coronavirus-infected pneumonia. *The New England Journal of Medicine*. 2020; DOI: 10.1056/NEJMoa2001316. (Epub ahead of print)
- [4]World Health Organization. Novel coronavirus-China. 2020. Retrieved from <https://www.who.int/csr/don/12-january-2020-novel-coronavirus-china/en/>
- [5]Huang, C., Wang, Y., Li, X., et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*, 2020; *S0140–6736* (20), 30183–5. DOI: 10.1016/S0140-6736(20)30183-5. (Epub ahead of print)
- [6]Chinese Center for Disease Control and Prevention. The distribution of the novel coronavirus pneumonia epidemic.2020. Retrieved from <http://2019ncov.chinacdc.cn/2019-nCoV/>
- [7]The State Council. Notice on the Joint Defense and Control Mechanism of the novel coronavirus-infected pneumonia.2020. Retrieved from <http://www.gov.cn/xinwen/gwylflkjz20/index.htm>
- [8]Si, C. D., and Pan, Y. L. A study on the correlation between the Hamilton Depression and Anxiety scales and the Positive and Negative Affect Schedule. *General Care*, 2019;17(2), 140–142.
- [9]Chuai, A. D. *A study on the correlation between insomnia-related factors and symptoms and Hamilton's Anxiety scale* (Dissertation). Beijing University of Chinese Medicine: Beijing, China. 2014.
- [10]Wang, B., Wu, J. H., Wang, F., et al. 106 cases of mental health survey on medical workers battling SARS on the first line. *Beijing Journal of Traditional Chinese Medicine*, 2004; 23(3), 139–141.
- [11]La, R., Zhao, X., Li, J., et al. Genomic characterisation and epidemiology of 2019 novel binding coronavirus: implications for virus origins and receptor binding. *Lancet*. 2020;DOI: 10.1016/s0140-6736(20)30251-8 (published Online First: February 3, 2020).
- [12]Chan, J. F., Yuan, S., Kok, K. H., et al. A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. *Lancet*. 2020; DOI: 10.1016/s0140-6736(20)30154-9 (published Online First: January 28, 2020).
- [13]Wang, D., Hu, B., Hu, C., et al. Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus-infected pneumonia in Wuhan, China. *JAMA*. 2020; DOI: 10.1001/jama.2020.1585 [published Online First: February 8, 2020].
- [14]Hui, D. S., Azhar, E. I., Madani, T. A., et al. The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health – the latest 2019 novel coronavirus outbreak in Wuhan, China. *International Journal of Infectious Diseases*,2020; 91(2020), 264–266.

Tables

Table 1. Demographic information of front-line medical workers (n = 150)

	Item	Number	Composition ratio (%)
Hospital level			
	Level 3 Grade A	125	83.3
	Level 3 Grade B	8	5.3
	Level 2 Grade A	14	9.3
	Level 2 Grade B	3	2.0
Department			
	Internal medicine	36	24.0
	Surgery	35	23.3
	Obstetrics and Gynecology	4	2.7
	Pediatrics	2	1.3
	Emergency	28	18.7
	Critical Medicine	25	16.7
	Outpatient	5	3.3
	Operation	2	1.3
	Others	13	8.7
Occupation			
	Doctor	43	28.7
	Nurse	107	71.3
Sex			
	Male	56	37.3
	Female	94	62.7
Age distribution (years)			
	Under 25 years old	4	2.7
	26-35 years old	84	56.0
	36-45 years old	41	27.3
	Over 45 years old	21	14.0
Highest level of education			
	Secondary specialized school	2	1.3
	College	10	6.7
	Bachelor's degree	99	66.0
	Master's degree and above	39	26.0
Years of service			
	5 years and less	20	13.3
	6-10 years	51	34.0
	11-15 years	32	21.3
	16-20 years	21	14.0
	More than 20 years	26	17.3
Technical titles			
	Primary	63	42.0
	Intermediate	52	34.7
	Senior	35	23.3
Marital status			
	Unmarried	33	22.0
	Married	111	74.0
	Divorced	6	4.0

Have children or not			
	Yes	109	72.7
	No	41	27.3
Current residence			
	Living alone	35	23.3
	Living with family	112	74.7
	Living in shared apartment	3	2.0
Have you taken part in training in responding to public health emergencies?			
	Yes	112	74.7
	No	38	25.3
Does your family support you working at the front line of anti-epidemic containment?			
	Yes	142	94.7
	No	8	5.3
Level of fear for oneself and one's family getting infected			
	High	9	6.0
	Moderate	60	40.0
	Mild	40	26.7
	Not present	41	27.3
Level of worry about getting infected when having symptoms associated with NCP			
	High	67	44.7
	Moderate	45	30.0
	Mild	22	14.7
	Not present	16	10.7
Are you under medical observation lately?			
	Yes	23	15.3
	No	127	84.7

Table 2. Current anxiety status of front-line medical staff (n = 150)

Item	Average	Standard deviation
Anxious mood	3.23	1.21
Tension	3.17	1.26
Fears	3.26	1.22
Insomnia	3.01	1.26
Intellectual	3.19	1.26
Depressed mood	3.27	1.24
Somatic (muscular)	3.40	1.16
Somatic (sensory)	3.39	1.13
Cardiovascular symptoms	3.43	1.11
Respiratory symptoms	3.48	1.07
Gastrointestinal symptoms	3.23	1.17
Genitourinary symptoms	3.56	0.85
Autonomic symptoms	3.43	1.07
Behavior at interview	3.54	1.03
Total score of anxiety	46.59	14.78

Table 3. Current depression status of front-line medical staff (n = 150)

Item	Average	Standard deviation
Depressed mood	3.18	1.31
Feelings of guilt	3.61	1.06
Suicide	3.43	0.79
Initial insomnia (difficulty falling asleep)	2.92	1.32
Insomnia (during the night)	2.81	1.40
Delayed insomnia (waking up in early hours of the morning)	3.04	1.34
Work and interests	3.17	1.25
Retardation	3.45	1.07
Agitation	3.41	1.12
Psychiatric anxiety	3.13	1.28
Somatic anxiety	3.25	1.22
Gastrointestinal somatic symptoms	3.19	1.16
General somatic symptoms	3.33	1.16
Genital symptoms	3.40	1.06
Hypochondriasis	3.35	1.17
Weight loss	3.56	0.97
Outlook	3.25	1.15
Total score of depression	55.88	17.11

Table 4. Assignment method regarding the independent variables of factors influencing the mental health status of front-line medical workers

Item	Assigning value
Hospital level	With other levels as reference
Department	With other departments as reference
Occupation	Doctor = 0; Nurse = 1
Sex	Female = 0; male = 1
Age	Under 25 years old = 1; 26-35 years old = 2; 36-45 years old = 3; 45 years old and older = 4
Highest level of education	Secondary specialized school = 1; college = 2; undergraduate = 3; Master's degree and above = 4
Years of service	5 years and less = 1; 6-10 years = 2; 11-15 years = 3; 16-20 years = 4; 20 years or more = 5
Technical titles	Primary = 1; Intermediate = 2; Advanced = 3
Marital Status	Take other marital status as reference
Have children or not	Yes = 0; No = 1
Current residence	Take other living conditions as reference
Have you taken part in training in responding to public health emergencies?	Yes = 0; No = 1
Does your family support you working on the front line of anti-epidemic containment?	Yes = 0; No = 1
Level of fear for oneself and one's family getting infected	No = 1; Mild = 2; Moderate = 3; High = 4
Level of worry about getting infected when having symptoms associated with NCP	No = 1; Mild = 2; Moderate = 3; High = 4
Are you under any medical observation lately?	Yes = 0; No = 1

Table 5. Multiple linear regression analysis results of factors influencing the mental health conditions of front-line medical workers

Variable	B	Beta	t-value	P value
Anxiety				
Constant	3.498		21.574	0.000
Level of fear of getting oneself and one's family infected	1.082	0.398	5.381	0.000
Level of worry about getting infected when having symptoms associated with NCP	1.174	0.312	4.236	0.000
Hospital affiliation	1.342	0.151	2.306	0.023
Depression				
Constant	3.621		23.304	0.000
Level of fear of getting oneself and one's family infected	1.271	0.367	4.899	0.000
Level of worry about getting infected when having symptoms associated with NCP	1.385	0.326	4.349	0.000

Note: for Anxiety, $R^2 = 0.386$, $F = 30.546$, and $P = 0.000$; for Depression, $R^2 = 0.353$, $F = 40.014$, and $P = 0.000$