

An analysis of international students' strategies for coping with stress and anxiety in the context of COVID-19

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Abstract: To investigate and analyze the mental health status of international students under the background of the normalization of the novel coronavirus (COVID-19) epidemic, and to provide reference for the formulation of psychological intervention measures, from September 1 to September 15, 2022, 149 overseas students aged 18 to 40 in Hebei Province were selected by questionnaire star method, and their mental health status was evaluated by filling in general information online and PQEPPH scale. Scores for fear, depression, neurasthenia, compulsive anxiety, and hypochondria were analyzed. Measurement data are expressed as mean \pm standard deviation ($x \pm s$). The scores from high to low were fear (2.06 ± 0.99), depression (1.97 ± 1.06), neurasthenia (1.90 ± 0.93), compulsive anxiety (1.53 ± 0.67) and hypochondria (1.20 ± 0.21). With the extension of study time in China, the scores of international students' psychological indicators show an increasing trend. There was no significant correlation between online and offline teaching methods and index scores ($P > 0.05$). The score of humanities and social sciences was the highest, and the score of art was the lowest ($P < 0.05$). All the indexes of female subjects were higher than those of male subjects ($P < 0.05$). In the context of the normalization of the epidemic, psychological problems are common among international students. We should pay attention to the mental health education of college students, especially the psychological status of female students majoring in humanities and social sciences, and find out the problems in time and intervene.

Keywords: Normalization of the epidemic; International students; Psychology

1. Introduction

With the increasing pace of China's internationalization, the education of international students in China has not only become an important part of China's higher education and education opening to the outside world, but also plays an important role in non-governmental diplomacy and international foreign aid. For a long time, the education of overseas students in China has played the role of serving the country's diplomatic strategy and promoting the opening up of education to the outside world. The international students in China have become an important part of the globalization of talents in China, and have played an important role in promoting the people-to-people bond, enhancing China's international influence, inspiring and shaping power, and creating a good external environment. According to the China Education Statistical Yearbook 2019, the number of international students in China's institutions of higher learning in 2019 was 333,072. A total of 172,571 international students from Asia (100,984), Africa (25,872), Europe (30,956), North America (10,216), South America (2,268) and Oceania (2,285) were newly enrolled in China for academic and language studies. Paying attention to the mental health status of international students in the context of the epidemic and intervening in existing psychological problems have become an important issue that needs urgent solutions. Psychological questionnaires for emergent events of public health (PQEPPH) is a professional questionnaire for psychological response assessment. It can be used to assess and monitor the psychological status of affected people during earthquakes, fires, and major public health emergencies such as SARS and COVID-19. In this study, PQEPPH questionnaire was used to group sample 149 international students from 5 provincial and municipal universities currently studying in Hebei Province, to understand their psychological status under the situation of normal epidemic situation, and to provide reference for psychological intervention strategies for international students.

2. Object and method

2.1 Object of study

From September 1, 2022 to September 15, 2022, 149 international students living in Hebei Normal University, Hebei University, Hebei University of Economics and Business, Hebei University of Industry and Technology, and Shijiazhuang Railway University (data up to September 15, 2022) were investigated by using questionnaire star mobile QR code scanning method. All the subjects agreed to the questionnaire. The subjects were international students aged 18-40 years old from 5 colleges and universities in Hebei Province, including 90 male and 57 female; There were 29 cases within 1 year, 12 cases after 1 to 2 years, 54 cases after 2 to 3 years, and 52 cases after 3 years. There were 68 cases of online learning, 20 cases of offline learning, and the remaining 59 cases were a combination of online and offline learning. Among the majors, 80 were humanities and social sciences, 53 were science and technology majors, and 14 were art majors.

2.2 Investigation methods

PQEEPH questionnaire in Chinese and English was used to investigate the psychological status of international students from five dimensions: depression, neurasthenia, obsessive-fear, anxiety and hypochondriasis. The questionnaire consisted of 27 items. The students were rated according to the degree (no, mild, moderate, severe) and frequency (occasional, sometimes, often, always) of the 5 emotions. The total score of the above five dimensions is divided by the number of items, which is the score of the dimension, with the theoretical maximum value of 3 and the theoretical minimum value of 0. That is, if you choose "1" to count "0 points"^[1], if you choose 2, 3, 4, you will count 1 points, 2 points, 3 points in turn. The single-dimension scoring method is to take the average of the sum of scores in this dimension. The higher the score, the more serious the psychological problem of international students in this dimension. 0 indicates that no such psychological condition has occurred among the international students surveyed. A score below 2 indicates that international students have mild psychological symptoms in this dimension and do not need to pay much attention to them. Higher than 2 is a high score, indicating that international students have serious psychological problems in this dimension. International students from colleges and universities in Hebei Province in China were screened according to school category (general, normal, science and technology, medicine), educational level (language students, bachelor, master, doctor), and major (humanities and social sciences, natural sciences, and arts), and were distributed one-to-one online answer sheets by questionnaire star. A total of 149 questionnaires were collected, among which 2 were unqualified. 147 valid questionnaires, with an effective rate of 98.65%. Cronbach's α coefficient of PQEEPH reliability was 0.921, indicating that the reliability of the questionnaire was very good^[2].

2.3 Statistical Methods

The total score for each dimension divided by the number of items is the score for that dimension. SPSS25.0 was used for data analysis. Counting data were described by frequency and component ratio, and normal measurement data were described by mean \pm standard deviation ($\bar{x} \pm s$). $P < 0.05$ indicated significant difference.

2.4 Quality Control

Each IP address can only fill in the questionnaire once. The questionnaire is anonymous, and the personal information filling part does not involve the privacy of the respondents. The online answering time should not be less than 3min.

3. Results

The five dimensions of PQEEPH score were ranked from high to low as fear (2.06 ± 0.99 points), depression (1.97 ± 1.06 points), neurasthenia (1.90 ± 0.93 points), obsessive-anxiety (1.53 ± 0.67 points) and hypochondria (1.20 ± 0.21 points). The five dimensions of female international students were higher than that of male students. The level of depression, neurasthenia, fear, obsessive-anxiety and hypochondriasis of students who have studied in school for more than 2 years is higher than that of students who have studied in school for less than 2 years. There was no significant relationship between

online and offline teaching methods and psychological status; Students majoring in humanities and social sciences have the highest level of five dimensions, followed by students majoring in science and technology, and students majoring in art have the lowest level of five dimensions.

Table 1: SPSS descriptive statistics of PQEPPH

item	Mean	Standard deviation	Items	Mean	Standard deviation
1. Worry that you or a family member or friend will get the coronavirus	2.17	1.09	15. Lack of interest	1.74	0.87
2. No interest in classes	1.72	0.88	16. Any physical discomfort will be associated with COVID-19	2.09	0.95
3. Wash repeatedly and feel that it is not clean enough	1.89	0.87	17. Develop symptoms related to the novel coronavirus and suspect that you have it	1.21	0.41
4. Poor mental state, slow reactions, distracted attention, and decreased memory	2.04	1.02	18. Thinking about things related to the outbreak and out of control	1.45	0.69
5. Feel your heart beating faster, sweat and blush easily	1.55	0.83	19. Avoid going to hospitals or places where people gather, and wear a mask at home during the week	2.49	1.06
6. Less energy than before.	2.21	1.16	20. Feeling irritable and irritable	2.04	1.06
7. You get tired easily and don't recover easily	2.28	1.14	21. Feel like you can't do anything	1.66	0.92
8. Loss of appetite and significant weight loss	1.77	0.96	22. Wash your hands repeatedly and uncontrollably	1.49	0.69
9. Slow brain response	1.94	1.03	23. Go to the hospital or buy tests to determine if you are infected	1.19	0.49
10. You feel scared and your heart quicken when you mention something related to the COVID-19 pandemic	1.83	0.98	23. Difficulty falling asleep, easy to wake up, poor sleep	2.26	1.13
11. Experience symptoms such as fatigue, dry cough, bloating, constipation, or diarrhea	1.34	0.70	25. Too much nervousness and fear to be controlled	1.83	1.03
12. Headache, muscle tension and soreness I	1.55	0.83	26. Have suicidal thoughts	1.34	0.73
13. There's always a sense of foreboding	1.60	0.92	27. You can't do anything else when you think about something related to the COVID-19 pandemic	1.57	0.77
14. Be nervous and nervous in crowded places, especially near hospitals	1.91	1.00	Total Points	21.17	14.16

From the survey results in Table 1, it can be seen that many students have obvious anxiety during the COVID-19 pandemic, such as "Slow brain response" "Have suicidal thoughts".

4. Discuss

4.1 Current Situation Analysis

According to PQEPPH, international students generally have psychological problems such as depression, anxiety and hypochondria in the context of COVID-19. Among them, the five dimensions of female students are higher than male students. For international students, it is a major challenge for them, especially girls, to make comprehensive adjustments in their behaviors, lifestyles and learning forms in the face of the pandemic exam. According to the "China Education Statistical Yearbook 2019" statistics, the number of international students in China's colleges and universities in 2019 was 333,072 (of which 141,869 were female, accounting for 42.59%). The number of female international students is small, the social range is relatively narrow, the contact with less people, coupled with emotional and emotional. They are more susceptible to the influence of the external environment. This shows that girls are more vulnerable in the face of major epidemics and need more attention.

4.2 Cause summary

The levels of depression, neurasthenia, fear, obsessive-anxiety and hypochondriasis of international students who have studied in school for more than 2 years are higher than those of students who have

studied in school for less than 2 years. Most of the language students in the international students study for 6 months to 1 year, so most of the students who study for more than 2 years are degree students. According to the rules of Chinese learning, most of these students have passed HSK (Chinese Proficiency Test) Band 4 with 180 scores and a Chinese vocabulary of about 1200. They can talk about daily topics in Chinese and communicate with native Chinese speakers fluently. Some students even have passed HSK Band 6 after more than two years of Chinese learning. They have a better understanding of China's national conditions and become "China hands". With the increase of their study time in China and the improvement of their Chinese language proficiency, these students have a preliminary understanding of China's policies, guidelines and basic national conditions. The information they get from TV, Internet, newspapers, periodicals, wechat, Weibo and many other channels is mixed, and they lack the ability to distinguish between true and false information, which is likely to cause excessive panic about the epidemic situation and aggravate psychological problems.

Students of humanities and Social sciences have the highest level of psychological problems in five dimensions, which is related to the academic pressure caused by the fact that most students of humanities and social sciences take Chinese as the language of instruction, and the course learning and graduation thesis writing are all in Chinese.

Paying attention to the mental health status of international students in colleges and universities, and implementing early detection and intervention of psychological problems are an important part of psychological work in colleges and universities. To carry out the prevention education of international students' mental health, we should pay more attention to international students from the day study of caring and caring, and help them finish their studies smoothly.

4.3 Coping strategies

Paying attention to the mental health status of international students in colleges and universities, and implementing early detection and intervention of psychological problems are an important part of psychological work in colleges and universities. To carry out international students' mental health prevention education, we should start from the daily details of caring and caring for international students, reflect the humanization of school management, so as to obtain the understanding and cooperation of international students. Measures can be taken from the following three aspects.

First, improve the mental health literacy of international students in an all-round way, and prevent the emergence of psychological problems from the source. As a special group of universities, international students are faced with differences in language, culture, customs and other customs, and the mental health course for this part of the population is still in the stage of exploration. According to the author's investigation of several key universities in Hebei Province, there are no mental health courses for international students at present. On the one hand, the reason for this phenomenon is the lack of mental health professional teachers who can teach in both Chinese and English or other languages. On the other hand, it shows that the mental health of international students is still in the fringe of international education in schools and has not attracted enough attention. Therefore, combined with the characteristics of international students, it is of great significance to set up systematic courses of mental health education, guided by relevant theories of positive psychology, give full play to the role of classroom teaching in the imparting and prevention of mental health knowledge, especially the transmission of knowledge and skills related to psychological construction in epidemic situations and major disasters, and establish international students' awareness of self-help and mutual assistance in mental problems^[3]. Colleges and universities should vigorously cultivate the positive psychological quality of international students, attract students to actively participate in the healthy and upward campus cultural life and integrate into the activities of Chinese students' associations, and cultivate the healthy psychological quality of students who cherish life and love life. Therefore, according to the characteristics of international students, it is of great significance to set up mental health education courses systematically, guided by relevant theories of positive psychology, give full play to the role of classroom teaching in the imparting and prevention of mental health knowledge, especially the transmission of knowledge and skills related to psychological construction in epidemic situations and major disasters, and establish international students' consciousness of self-help and mutual assistance in psychological problems. Colleges and universities should vigorously cultivate the positive psychological quality of international students, attract students to actively participate in the healthy and upward campus cultural life and integrate into the activities of Chinese students' associations, and cultivate the healthy psychological quality of students who cherish life and love life. Taking Hebei Normal University as an example, against the background of the normalized epidemic situation, the university implements assimilation management for international students, conducts nucleic acid testing for all staff, releases the latest measures on epidemic prevention

and control of the university in Dingding and wechat groups, and implements a body temperature monitoring morning and afternoon report system. The university also equips international students with essential items such as masks, thermometers and disinfectant, as well as ordinary and conventional medicines. To enrich students' after-school cultural life, the university also prepares books on traditional Chinese culture, cultural and sporting goods such as shuttlecock, skipping rope and badminton. 25 international students living in the building volunteered to be mobile volunteers, helping to complete the daily disinfection, temperature measurement, epidemic prevention materials procurement and other work, contributing their own strength to the epidemic prevention work, and effectively relieving the psychological pressure of students.^[4]

The second is to improve the level of daily counseling for international students and strengthen process management. Colleges and universities should actively make use of professional psychological assessment tools and means to speed up the development of psychological assessment scales that are more in line with the characteristics of international students. For example, the Chinese-English bilingual PQEPPH, which is translated and used by the author, can be used as a powerful aid to carry out the mental health assessment of international students on a regular basis, and then improve the psychological screening and early warning mechanism and implement precise intervention. Colleges and universities should speed up the bilingual and multilingual training of counselors, strengthen the construction of psychological counseling service platforms, and set up multilingual counseling rooms for psychological development, Jiji psychological experience centers, and comprehensive psychological quality training rooms to provide high-quality real-time field services for international students to carry out individual psychological counseling and counseling. Universities should also create conditions to open 24h multilingual epidemic psychological assistance hotline, set up consultation email and other channels, and do a good job in psychological counseling services under the background of the normalization of the epidemic. At the same time, various forms and contents of activities should be carried out to implement a multi-language assistance system according to the special circumstances of international students' language level, cultural differences, religious beliefs, customs and other conditions, so as to enhance the humanistic care of schools.

5. Conclusion

From the university level, the recruitment, training, management and export of international students in China involve not only the School of International exchange Education, but also the relevant training departments, disciplines and functional departments. Therefore, colleges and universities need to take the training of international students as the core, establish and improve the school-wide coordinated working mechanism for talent training. In each stage of international students' learning and growth, from the big closed loop from China to graduation and departure, in each small closed loop of education and teaching design, the awareness of mental health education is integrated in the whole process to improve the education effect and achieve the goal of talent training.

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