

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Emotional states and coping methods in nursing and non-nursing students responding to COVID-19: a cross-sectional study in China
AUTHORS	Miao, Qunfang; Xie, Lin; Xing, Bingyu; Wang, Xiaolei; Tang, Shiming; Luo, Hong

VERSION 1 – REVIEW

REVIEWER	Gupta, Vedika Bharati Vidyapeeth's College of Engineering
REVIEW RETURNED	12-Jun-2021

GENERAL COMMENTS	<p>1) The novelty of the work must be clearly addressed and discussed, compare your research with existing research findings and highlight novelty, (compare your work with existing research findings and highlight novelty),</p> <p>2) The main objective of the paper must be written in the more clear and more concise way at the end of the introduction section,</p> <p>3) Please add some quantitative data in the abstract section related to the main research outcomes,</p> <p>4) Introduction section must be written in a more quality way, i.e. more up-to-date references addressed. The research gap should be delivered in a more clear way with the directed necessity for the conducted research work. You may want to refer to some or all of the following latest references related to your work:</p> <ol style="list-style-type: none">1. An emotion care model using multimodal textual analysis on COVID-19.2. Prediction modelling of COVID using machine learning methods from B-cell dataset3. COVID-19 on Air Quality Index (AQI): A Necessary Evil?4. Understanding cartoon emotion using integrated deep neural network on large dataset. <p>5) Conclusion section is missing some perspectives related to future research work.</p>
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REVIEWER	Ji, Ji Sir Run Run Hospital Nanjing Medical University
REVIEW RETURNED	17-Jun-2021

GENERAL COMMENTS	Peer review report
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	<p>Thank you for the opportunity to review this manuscript. I have included detailed feedback below.</p> <p>1. Recommendation</p> <p>Major revision</p> <p>2. Comment to Author:</p> <p>Manuscript Number: bmjopen-2021-054007</p> <p>Title: Emotional states and coping methods in nursing students responding to COVID-19</p> <p>The manuscript is far from being ready for publication. There were numerous grammatical and sentence structure errors in the article itself. The manuscript also falls short on having sufficient impact and adding to the knowledge base around the issue.</p> <p>Further comments are explained below.</p> <p>2.1 Major comments</p> <p>2.1.1 Abstract section</p> <p>There is no Method section. Information about setting and sampling is missing.</p> <p>It was stated in the Objectives section that 'aim to investigate ... in nursing students', however, participants included 366 nursing students and 380 non-nursing students. Also, in the Results section only emotional status was compared between these two groups, and it was not clear whether other results were about nursing students or non-nursing students.</p> <p>2.1.2 Introduction section</p> <p>In the fourth paragraph, authors stated, '... undergraduate students, which serve as the major force for the national development and stability', this is unclear and needs clarification. Incidence of depression was also reported (30.6%), but information was lacking regarding which group, what situation. It was simply described that Chinese nursing students are more likely to suffer from anxiety and depression, but reasons are not clear.</p> <p>2.1.3 Materials and methods section</p> <p>Readers would like to know where the participants were from, but the only information is 'in the campus', 'in our university'. That is not helpful for readers get an idea of the participants and judge the generalisability.</p>
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	<p>The inclusion criteria included '(iii) those with no psychological illness, or not infected by COVID-19'. Authors may need to clarify how to identify those with no psychological illness, and how and why to identify those not infected by COVID-19. The exclusion criteria included '(iii) those with an internet position at Wuhan City'. I am not sure what this means.</p> <p>2.1.4 Results section</p> <p>In the first paragraph, it was showing that '... 746 (96.9%) questionnaires were obtained from the subjects, including 366 (96.3%) questionnaires collecting from nursing students and 380 (97.4%) from non-nursing students'. Not sure what these percentages mean.</p> <p>In the second paragraph, it was stated that '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'. However, it was stated after that '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'. It is quite confusing. The number is significantly lower, but the scores were not statistically different. According to the description about the scores of GAD-7 and PHQ-9, 'A score of 5, 10 and 15 was considered the threshold score for the slight, moderate and severe' anxiety, depression. Please clarify. It's difficult to understand.</p> <p>2.1.5 Discussion section</p> <p>In line 25-28, page 14, 'Rare individuals showed negative coping and their patterns were presented in an individual pattern'. Not sure what authors wanted to convey. What are the individual patterns?</p> <p>In line 51-57, page 14, this last sentence does not make sense to me. Why is it not effective but an appropriate way for coping with COVID-19?</p> <p>There are also discussions about the non-nursing students, so again, not sure about the population of this study.</p> <p>In addition, discussion regarding the contribution of the paper to the overall knowledge of the field is needed. This section could address how these findings can be applied to the current practice. Including practical implications in this section would highlight the importance of the findings and improve the article.</p> <p>2.1.6 Multiple grammar errors. Difficult to understand. Also some subjective tones were used such as 'interestingly'. Academic writing should not include subjective tones.</p>
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REVIEWER	EL-Monshed, Ahmed
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	Mansoura University Faculty of Nursing
REVIEW RETURNED	20-Jun-2021

GENERAL COMMENTS	<p>Recommendation: Minor revisions</p> <p>Comments: Thank you for the opportunity to review this interesting paper. This type of study is needed and I wish the authors success in the future. The study is well written, results are well presented and interpreted, and authors make a better effort (including with some additional citations) of addressing the similarities/differences in the research topic globally and how they relate to what is observed generally in China. I just recommend following minor modifications.</p> <p>Introduction</p> <ul style="list-style-type: none"> • The introduction is well written but it needs to be briefer. I believe that it would be better for authors to point out that one of the causes of emotional disturbances in nursing students is to be the result of their educational specialization as mentioned in an Egyptian study that may be beneficial for the authors (El-Monshed et al., 2021) El-Monshed, A. H., El-Adl, A. A., Ali, A. S., & Loutfy, A. (2021). University students under lockdown, the psychosocial effects and coping strategies during COVID-19 pandemic: A cross sectional study in Egypt. <i>Journal of American College Health</i>. https://doi.org/10.1080/07448481.2021.1891086 • I hope that the author will give an explanation about why the aim of the study, written at the end of the introduction, is different from what is written in the abstract. <ul style="list-style-type: none"> o Abstract: We aim to investigate correlation between emotional states and regulatory strategies and coping methods in nursing students responding to coronavirus disease 2019 (COVID-19). o Introduction: In this study, we aimed to investigate the psychological behaviors of the students in the nursing profession in the presence of COVID-19. In addition, a comparison was conducted between these students and the students with non-nursing professions, in order to identify the risk factors associated with the psychological conditions in face of COVID-19.
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Dr. Vedika Gupta, Bharati Vidyapeeth's College of Engineering

Comments to the Author:

1) The novelty of the work must be clearly addressed and discussed, compare your research with existing research findings and highlight novelty, (compare your work with existing research findings and highlight novelty),

Response: Thank you for your suggestions. We have revised the manuscript and highlighted the changes in the introduction section.

2) The main objective of the paper must be written in the more clear and more concise way at the end of the introduction section,

Response: The introduction section is rewritten after reading your comments. Please kindly see the revision. The revised main objective of the article was revised as follows:

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 the nursing and non-nursing students, which contributed to the construction of psychological supporting system and coping strategies during the COVID-19 pandemic.

3) Please add some quantitative data in the abstract section related to the main research outcomes,
 Response: Thank you for your comments. We have added the following information in the revised abstract.

In total, 746 students including 366 nursing students and 380 non-nursing students participated in the survey. Compared with the non-nursing students, significant decrease was noticed in GAD-7 score (2.12 ± 2.63 vs. 2.65 ± 3.48 , $t = -2.101$, $P < 0.01$) and PHQ-9 (3.34 ± 4.13 vs. 3.74 ± 4.79 , $t = -1.372$, $P < 0.01$) in the nursing students. The cognition reevaluation score in the nursing students was significantly lower than that of the non-nursing students (29.58 ± 5.13 vs. 29.65 ± 5.77 , $t = -0.117$, $P < 0.05$). There was a positive correlation between depression score and ERQ expression inhibition ($r = 0.192$, $P < 0.01$), and between depression level and SCSQ negative coping ($r = 0.176$, $P < 0.01$). There was a negative correlation between SCSQ positive coping ($r = -0.127$, $P < 0.05$) and anxiety and depression ($r = -0.190$, $P < 0.01$), respectively.

4) Introduction section must be written in a more quality way, i.e. more up-to-date references addressed. The research gap should be delivered in a more clear way with the directed necessity for the conducted research work. You may want to refer to some or all of the following latest references related to your work:

1. An emotion care model using multimodal textual analysis on COVID-19.
2. Prediction modelling of COVID using machine learning methods from B-cell dataset
3. COVID-19 on Air Quality Index (AQI): A Necessary Evil?
4. Understanding cartoon emotion using integrated deep neural network on large dataset.

Response: We have revised the Introduction section according to your comments. Please kindly see the revision highlighted in the manuscript.

5) Conclusion section is missing some perspectives related to future research work.

Response: The revised Conclusion is as follows:

COVID-19 affected the emotional status of the 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 emotion 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. 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 involving 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. For the non-nursing students, they 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.

Reviewer: 2

Dr. Ji Ji, Sir Run Run Hospital Nanjing Medical University

Comments to the Author:

*** Please find additional comments from this reviewer in the attached file ***

Thank you for the opportunity to review this manuscript.

The manuscript is far from being ready for publication. There were numerous grammatical and sentence structure errors in the article itself. The manuscript also falls short on having sufficient impact and adding to the knowledge base around the issue.

Response: Thanks for the comments of Professor Ji Ji. Our survey was conducted at the early stage of COVID19 outburst. This survey was designed to investigate the correlation between the emotional status, coping strategy and the dealing methods to the COVID-19 in the nursing and non-nursing students. Besides, we aimed to compare the emotional status of the non-nursing and nursing students. This contributed to the construction of psychological supporting system during the COVID-19 pandemic, which provided helpful information to the coping strategies among different population. For the grammar, we have revised the manuscript again after a group discussion.

Reviewer: 3

Dr. Ahmed EL-Monshed, Mansoura University Faculty of Nursing

Comments to the Author:

Recommendation: Minor revisions

Comments:

Thank you for the opportunity to review this interesting paper. This type of study is needed and I wish the authors success in the future. The study is well written, results are well presented and interpreted, and authors make a better effort (including with some additional citations) of addressing the similarities/differences in the research topic globally and how they relate to what is observed generally in China. I just recommend following minor modifications.

Introduction

- The introduction is well written but it needs to be briefer. I believe that it would be better for authors to point out that one of the causes of emotional disturbances in nursing students is to be the result of their educational specialization as mentioned in an Egyptian study that may be beneficial for the authors (El-Monshed et al., 2021)

El-Monshed, A. H., El-Adl, A. A., Ali, A. S., & Loutfy, A. (2021). University students under lockdown, the psychosocial effects and coping strategies during COVID-19 pandemic: A cross sectional study in Egypt. *Journal of American College Health*. <https://doi.org/10.1080/07448481.2021.1891086>

Response: In fact, the emotion of nursing and non-nursing students would be affected in the COVID-19 pandemic. Some studies indicated differences in the emotion between nursing and non-nursing students, such as those induced by educational background. We added such information in the revised manuscript on page 6.

- I hope that the author will give an explanation about why the aim of the study, written at the end of the introduction, is different from what is written in the abstract.

- o Abstract: We aim to investigate correlation between emotional states and regulatory strategies and coping methods in nursing students responding to coronavirus disease 2019 (COVID-19).

- o Introduction: In this study, we aimed to investigate the psychological behaviors of the students in the nursing profession in the presence of COVID-19. In addition, a comparison was conducted between these students and the students with non-nursing professions, in order to identify the risk factors associated with the psychological conditions in face of COVID-19.

Response: Thank you for your comments.

The abstract section and introduction have been revised, please kindly see the revision.

Peer review report

Thank you for the opportunity to review this manuscript. I have included detailed feedback below.,

1. Recommendation

Major revision

2. Comment to Author:

Manuscript Number: bmjopen-2021-054007

Title: Emotional states and coping methods in nursing students responding to COVID-19

The manuscript is far from being ready for publication. There were numerous grammatical and sentence structure errors in the article itself. The manuscript also falls short on having sufficient impact and adding to the knowledge base around the issue.

Further comments are explained below.

2.1 Major comments

2.1.1 Abstract section

There is no Method section. Information about setting and sampling is missing.

Response: We have added the method section in the abstraction.

It was stated in the Objectives section that 'aim to investigate ... in nursing students', however, participants included 366 nursing students and 380 non-nursing students. Also, in the Results section only emotional status was compared between these two groups, and it was not clear whether other results were about nursing students or non-nursing students.

Response: The objectives section has been revised. In addition, we added the information needed in the results section of the abstract.

2.1.2 Introduction section

In the fourth paragraph, authors stated, '... undergraduate students, which serve as the major force for the national development and stability', this is unclear and needs clarification. Incidence of depression was also reported (30.6%), but information was lacking regarding which group, what situation. It was simply described that Chinese nursing students are more likely to suffer from anxiety and depression, but reasons are not clear.

Response: We have deleted such sentences, and cited the references accordingly.

2.1.3 Materials and methods section

Readers would like to know where the participants were from, but the only information is 'in the campus', 'in our university'. That is not helpful for readers get an idea of the participants and judge the generalisability.

Response: In the subjects section of the Materials and methods, we added the information needed. It is a full-time university in Hangzhou, China.

The inclusion criteria included '(iii) those with no psychological illness, or not infected by COVID-19'. Authors may need to clarify how to identify those with no psychological illness, and how and why to identify those not infected by COVID-19. The exclusion criteria included '(iii) those with an internet position at Wuhan City'. I am not sure what this means.

Response: We added the following information in the revised inclusion criteria:

Before setting the questionnaire items in the survey, we needed to find out whether the subjects showed mental illness and COVID-19. In order to exclude the effects of COVID-19 pandemic on the psychological status, we excluded the subjects located in Wuhan City (Hubei Province, China).

2.1.4 Results section

In the first paragraph, it was showing that '... 746 (96.9%) questionnaires were obtained from the subjects, including 366 (96.3%) questionnaires collecting from nursing students and 380 (97.4%) from non-nursing students'. Not sure what these percentages mean.

Response: We have revised the manuscript as follows:

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 male (5.5%) and 346 females (94.5%).

In the second paragraph, it was stated that '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'. However, it was stated after that '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'. It is quite confusing. The number is significantly lower, but the scores were not statistically different. According to the description about the scores of GAD-7 and PHQ-9, 'A score of 5, 10 and 15 was considered the threshold score for the slight, moderate and severe' anxiety, depression. Please clarify. It's difficult to understand.

Response: Student's t-test revealed that the number of nursing students with a mean GAD-7 and PHQ-9 score of 5 or more was significantly lower than that of the non-nursing students ($t_1 = -2.101$, $P < 0.01$; $t_2 = -1.372$, $P < 0.01$). However, as there is a detailed classification standard for the mild, moderate and severe conditions, the SPSS software indicated that there were no statistical differences in the GAD-7 and PHQ-9 scores in the mild, moderate and severe among the nursing and non-nursing students (Table 1, $P > 0.05$).

The classification standards were based on the following references:

Spitzer RL, Kroenke K, Williams JB, Löwe B. A brief measure for assessing generalized anxiety disorder: the GAD-7. *Arch Intern Med.* 2006 May 22;166(10):1092-7. doi:

10.1001/archinte.166.10.1092. PMID: 16717171.

Leung DYP, Mak YW, Leung SF, Chiang VCL, Loke AY. Measurement invariances of the PHQ-9 across gender and age groups in Chinese adolescents. *Asia Pac Psychiatry.* 2020 Sep;12(3):e12381. doi: 10.1111/appy.12381. Epub 2020 Feb 3. PMID: 32011101; PMCID: PMC7507123.

2.1.5 Discussion section

In line 25-28, page 14, 'Rare individuals showed negative coping and their patterns were presented in an individual pattern'. Not sure what authors wanted to convey. What are the individual patterns?

Response: We have revised according to your comments.

In line 51-57, page 14, this last sentence does not make sense to me. Why is it not effective but an appropriate way for coping with COVID-19?

Response: We have revised according to your comments.

There are also discussions about the non-nursing students, so again, not sure about the population of this study.

Response: The subjects included nursing and non-nursing students. We have mentioned these information in the revised abstract and the manuscript.

In addition, discussion regarding the contribution of the paper to the overall knowledge of the field is needed. This section could address how these findings can be applied to the current practice. Including practical implications in this section would highlight the importance of the findings and improve the article.

Response: We have added these information in the revised manuscript.

2.1.6 Multiple grammar errors. Difficult to understand. Also some subjective tones were used such as 'interestingly'. Academic writing should not include subjective tones.

Response: We have revised the whole manuscript in the terms of grammar and spelling.

VERSION 2 – REVIEW

REVIEWER	Gupta, Vedika Bharati Vidyapeeth's College of Engineering
REVIEW RETURNED	09-Aug-2021

GENERAL COMMENTS	OK
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REVIEWER	EL-Monshed, Ahmed Mansoura University Faculty of Nursing
REVIEW RETURNED	31-Jul-2021

GENERAL COMMENTS	Thank you for the opportunity to review this interesting paper. I am pleased to recommend acceptance for your manuscript.
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