

PEER REVIEW HISTORY

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ARTICLE DETAILS

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| TITLE (PROVISIONAL) | Sex and age differences in clinically significant symptoms of depression and anxiety among people in Australia in the first month of COVID-19 restrictions: A national survey |
| AUTHORS | Hammarberg, Karin; Tran, Thach; Kirkman, Maggie; Fisher, Jane |

VERSION 1 – REVIEW

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| REVIEWER | Roger Ho National University of Singapore Singapore |
| REVIEW RETURNED | 07-Aug-2020 |

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| GENERAL COMMENTS | <p>I have the following comments for the authors to consider. I hope the authors to address the following comments:</p> <p>1) The authors stated "As a result of the restrictions, economic activity stalled and unemployment soared. Concerns about the mental health consequences of being confined to home, loss of employment, financial strain, loss of freedom to move, and uncertainty about the future have been expressed by health professionals and widely reported in the media.[4-6]". I have read references 4-6. These are not research study. Please discuss the following research studies on healthcare workers and general workers and their mental health during COVID-19:</p> <p>References:</p> <p>Chew NWS, Lee GKH, Tan BYQ, et al. A multinational, multicentre study on the psychological outcomes and associated physical symptoms amongst healthcare workers during COVID-19 outbreak [published online ahead of print, 2020 Apr 21]. <i>Brain Behav Immun.</i> 2020;S0889-1591(20)30523-7. doi:10.1016/j.bbi.2020.04.049</p> <p>Tan W, Hao F, McIntyre RS, et al. Is Returning to Work during the COVID-19 Pandemic Stressful? A Study on Immediate Mental Health Status and Psychoneuroimmunity Prevention Measures of Chinese Workforce [published online ahead of print, 2020 Apr 23]. <i>Brain Behav Immun.</i> 2020;S0889-1591(20)30603-6. doi:10.1016/j.bbi.2020.04.055</p> <p>2) Under the introduction, the authors stated "Studies in Australia, the United States, and the United Kingdom have reported that COVID-19-related restrictions have adversely affected women's mental health more than men's but the potential underlying reasons for this have not been described.[7-10]". The authors should discuss about China:</p> |
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| | <p>Wang C, Pan R, Wan X, et al. (2020) A Longitudinal Study on the Mental Health of General Population during the COVID-19 Epidemic in China [published online ahead of print, 2020 Apr 13]. <i>Brain Behav Immun.</i> 2020; S0889-1591(20)30511-0. doi:10.1016/j.bbi.2020.04.028</p> <p>3) I recommend the authors to discuss their findings in Australia with other studies: This population-based study identified sex and age differences in the mental health consequences of COVID-19 restrictions and associated factors. While the loss of a job, being very fearful of contracting COVID-19, and experiencing the restrictions as highly adverse for daily life increased the risk of clinically significant symptoms of anxiety and depression and of reported irritability in almost all groups, other factors were more likely to affect the mental health of sub-groups." The authors should discuss the findings with reference to other countries, especially with different cultural background. The following studies have good information:</p> <p>Wang C, Pan R, Wan X, et al. (2020) Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. <i>Int J Environ Res Public Health.</i> 2020;17(5):1729. Published 2020 Mar 6. doi:10.3390/ijerph17051729</p> <p>Hao F, Tan W, Jiang L, et al. Do psychiatric patients experience more psychiatric symptoms during COVID-19 pandemic and lockdown? A Case-Control Study with Service and Research Implications for Immunopsychiatry [published online ahead of print, 2020 Apr 27]. <i>Brain Behav Immun.</i> 2020;S0889-1591(20)30626-7. doi:10.1016/j.bbi.2020.04.069</p> <p>4) The authors should discuss how psychotherapy such as cognitive behavior therapy and mindfulness based therapy help general public during the COVID-19 pandemic.</p> |
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| REVIEWER | Naiara Ozamiz-Etxebarria University of the Basque Country. Spain. |
| REVIEW RETURNED | 21-Aug-2020 |

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| GENERAL COMMENTS | <p>This is a very interesting topic in times of pandemic. Research is very necessary given the situation that is being experienced and the suffering that is being experienced by the general population.</p> <p>Here are some points for the improvement of the article: There is much research being done on the psychological state of different populations in all parts of the world and it is important that you could reference more work as you have done. Here I leave you two works that you could reference among others: Ozamiz-Etxebarria N, Dosil-Santamaria M, Picaza-Gorrochategui M, Idoiaga-Mondragon N. Stress, anxiety, and depression levels in the initial stage of the COVID-19 outbreak in a population sample in the northern Spain. Niveles de estrés, ansiedad y depresión en la primera fase del brote del COVID-19 en una muestra recogida en el norte de España. <i>Cad Saude Publica.</i> 2020;36(4):e00054020. Published 2020 Apr 30. doi:10.1590/0102-311X00054020</p> <p>Ozamiz-Etxebarria N, Idoiaga Mondragon N, Dosil Santamaría M, Picaza Gorrotxategi M. Psychological Symptoms During the Two</p> |
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| | <p>Stages of Lockdown in Response to the COVID-19 Outbreak: An Investigation in a Sample of Citizens in Northern Spain. <i>Front Psychol.</i> 2020;11:1491. Published 2020 Jun 18. doi:10.3389/fpsyg.2020.01491</p> <p>I have noticed that the discussion needs more references by comparing your results with other research. I also recommend reviewing the references according to the criteria of the journal. The discussion should also explain why it happens that the majority of participants in all studies are women. This is also the case in other studies conducted in other countries.</p> <p>It seems that the situation of the COVID has highlighted social problems that existed previously such as the difficulty of emancipation of young people, the burden of care on women, the care of dependents... It is important to underline this in the article. The strongest point of the present work is the size of the sample. I congratulate you on the work done.</p> |
| REVIEWER | Wei Li Department of Geriatric Psychiatry, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, Shanghai, China |
| REVIEW RETURNED | 05-Sep-2020 |
| GENERAL COMMENTS | <p>This is an interesting study, and the sample size is large, closely related to current events. However, there are still some problems that need to be solved by the author. Please compare the studies similar to this study and analyze the differences between them. In addition, please explain why the 50 year old is taken as the critical value of stratified age. It seems that it is more appropriate to divide the above population into the young, middle-aged and the elderly.</p> |

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1 Roger Ho

1) The authors stated "As a result of the restrictions, economic activity stalled and unemployment soared. Concerns about the mental health consequences of being confined to home, loss of employment, financial strain, loss of freedom to move, and uncertainty about the future have been expressed by health professionals and widely reported in the media.[4-6]". I have read references 4-6. These are not research study. Please discuss the following research studies on healthcare workers and general workers and their mental health during COVID-19:

References:

Chew NWS, Lee GKH, Tan BYQ, et al. A multinational, multicentre study on the psychological outcomes and associated physical symptoms amongst healthcare workers during COVID-19 outbreak [published online ahead of print, 2020 Apr 21]. *Brain Behav Immun.* 2020;S0889-1591(20)30523-7. doi:10.1016/j.bbi.2020.04.049

Tan W, Hao F, McIntyre RS, et al. Is Returning to Work during the COVID-19 Pandemic Stressful? A Study on Immediate Mental Health Status and Psychoneuroimmunity Prevention Measures of Chinese Workforce [published online ahead of print, 2020 Apr 23]. *Brain Behav Immun.* 2020;S0889-1591(20)30603-6. doi:10.1016/j.bbi.2020.04.055

Author response: We specify that we refer to media reports of concerns among health professionals about the effects of COVID-19 related restrictions on severe mental illness and rates of suicide. We have revised the section to make this clearer and it now reads: 'Concerns expressed by health professionals about the mental health consequences of being confined to home, loss of employment,

financial strain, loss of freedom to move, and uncertainty about the future have been widely reported in the media. These media reports have focused on the likelihood of the pandemic and its associated restrictions increasing the risk of severe mental illness and rates of suicide. However, the possible implications of the COVID-19 restrictions for psychological wellbeing at a population level have received less attention.'

We refer to the reviewer's studies in the discussion.

2) Under the introduction, the authors stated "Studies in Australia, the United States, and the United Kingdom have reported that COVID-19-related restrictions have adversely affected women's mental health more than men's but the potential underlying reasons for this have not been described.[7-10]". The authors should discuss about China:

Wang C, Pan R, Wan X, et al. (2020) A Longitudinal Study on the Mental Health of General Population during the COVID-19 Epidemic in China [published online ahead of print, 2020 Apr 13]. *Brain Behav Immun*. 2020; S0889-1591(20)30511-0. doi:10.1016/j.bbi.2020.04.028

Author response: Our point here is that studies have reported that women's mental health has been more adversely affected by COVID-19 restrictions than men's without engaging with the possible reasons for this. As the paper that the reviewer suggest we include here does not report sex differences, we do not believe that it is appropriate to refer to it here. We have however referred to another study conducted in China which also found that women's mental health was more adversely affected than men's (Liu N, Zhang F, Wei C, et al. Prevalence and predictors of PTSS during COVID-19 outbreak in China hardest-hit areas: Gender differences matter. *Psychiatry Res* 2020;287:112921-21.)

3) I recommend the authors to discuss their findings in Australia with other studies:

This population-based study identified sex and age differences in the mental health consequences of COVID-19 restrictions and associated factors. While the loss of a job, being very fearful of contracting COVID-19, and experiencing the restrictions as highly adverse for daily life increased the risk of clinically significant symptoms of anxiety and depression and of reported irritability in almost all groups, other factors were more likely to affect the mental health of sub-groups." The authors should discuss the findings with reference to other countries, especially with different cultural background.

The following studies have good information:

Wang C, Pan R, Wan X, et al. (2020) Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. *Int J Environ Res Public Health*. 2020;17(5):1729. Published 2020 Mar 6. doi:10.3390/ijerph17051729

Hao F, Tan W, Jiang L, et al. Do psychiatric patients experience more psychiatric symptoms during COVID-19 pandemic and lockdown? A Case-Control Study with Service and Research Implications for Immunopsychiatry [published online ahead of print, 2020 Apr 27]. *Brain Behav Immun*. 2020;S0889-1591(20)30626-7. doi:10.1016/j.bbi.2020.04.069

Author response: Thank you, we have added references to other studies in the discussion.

4) The authors should discuss how psychotherapy such as cognitive behavior therapy and mindfulness based therapy help general public during the COVID-19 pandemic.

Author response: We would prefer to not single out specific therapies but refer to the reviewer's insightful commentary in the discussion: Ho CS, Chee CY, Ho RC. Mental Health Strategies to Combat the Psychological Impact of COVID-19 Beyond Paranoia and Panic. *Ann Acad Med Singap* 2020;49(3):155-60.

Reviewer: 2 Naiara Ozamiz-Etxebarria

This is a very interesting topic in times of pandemic.

Research is very necessary given the situation that is being experienced and the suffering that is being experienced by the general population.

Here are some points for the improvement of the article:

There is much research being done on the psychological state of different populations in all parts of the world and it is important that you could reference more work as you have done. Here I leave you two works that you could reference among others:

Ozamiz-Etxebarria N, Dosil-Santamaria M, Picaza-Gorrochategui M, Idoiaga-Mondragon N. Stress, anxiety, and depression levels in the initial stage of the COVID-19 outbreak in a population sample in the northern Spain. Niveles de estrés, ansiedad y depresión en la primera fase del brote del COVID-19 en una muestra recogida en el norte de España. *Cad Saude Publica*. 2020;36(4):e00054020. Published 2020 Apr 30. doi:10.1590/0102-311X00054020

Ozamiz-Etxebarria N, Idoiaga Mondragon N, Dosil Santamaría M, Picaza Gorrotxategi M. Psychological Symptoms During the Two Stages of Lockdown in Response to the COVID-19 Outbreak: An Investigation in a Sample of Citizens in Northern Spain. *Front Psychol*. 2020;11:1491. Published 2020 Jun 18. doi:10.3389/fpsyg.2020.01491

Author response: We have referred to the reviewer's papers in the discussion.

I have noticed that the discussion needs more references by comparing your results with other research. I also recommend reviewing the references according to the criteria of the journal.

Author response: We have added references to other studies relating to the impact of COVID-19 on people's mental health. The unique contribution of our paper is that it identifies sex and age differences in the factors that contribute to poor mental health and associated factors which has not been explored in other studies.

We have implemented the journal's reference style.

The discussion should also explain why it happens that the majority of participants in all studies are women. This is also the case in other studies conducted in other countries.

Author response: There is clear evidence that women are more likely than men to participate in research and we have added a comment about this. The reasons for this have to our knowledge not been established. We comment on how the gender bias in responses might influence the generalisability of our findings.

It seems that the situation of the COVID has highlighted social problems that existed previously such as the difficulty of emancipation of young people, the burden of care on women, the care of dependents... It is important to underline this in the article.

Author response: Thank you for this suggestion, we have added a comment about pre-existing gender inequalities worsening during the COVID-19 restrictions.

The strongest point of the present work is the size of the sample. I congratulate you on the work done.

Author response: Thank you!

Reviewer: 3 Wei Li

This is an interesting study, and the sample size is large, closely related to current events. However, there are still some problems that need to be solved by the author. Please compare the studies similar to this study and analyze the differences between them. In addition, please explain why the 50 year old is taken as the critical value of stratified age. It seems that it is more appropriate to divide the above population into the young, middle-aged and the elderly.

Author response: We have added references to other studies relating to the impact of COVID-19 on people's mental health in the discussion. The unique contribution of our paper is that it identifies sex and age differences in the factors that contribute to poor mental health which has not been explored in other studies. Regarding the age grouping, we agree there may have been other more appropriate groupings. However, we decided on the 18-49 and 50 and above grouping on the basis that this was the median age in this sample.