PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	The mental health consequences of COVID-19: a nationally representative cross-sectional study of pandemic-related stressors and anxiety disorders in the United States.
AUTHORS	Abdalla, Salma; Ettman, Catherine; Cohen, Gregory; Galea, Sandro

VERSION 1 – REVIEW

REVIEWER	Fiorillo, Andrea University of Campania Luigi Vanvitelli
REVIEW RETURNED	10-Sep-2020

GENERAL COMMENTS	This is an interesting study on the mental health consequences of COVID-19 in a probability-based panel representative of households in the United States. I would suggest authors to address the following points in order to improve the clarity of the manuscript: • In the Abstract, authors should report socio-demographic data of the study sample (e.g., gender distribution, mean age, etc.) • In the “strengths and limitations” bullet point, I would suggest rephrasing that “This analysis uses a nationally representative sample examining the burden of anxiety disorders”. As far as I understand, the study examines the impact of COVID-19 pandemic and its related stressors on the risk of developing anxiety and stress symptoms. In mental health the concept of “burden” is related to the psychosocial consequences of the disorder, but no data are available on this issue in the paper. Please consider rephrasing also bullet point number 3. I would suggest not to use the word “burden” throughout the paper, but it would be better to say “risk of developing anxiety disorders” (or something similar). • Data come from a panel-based dataset, therefore it would be of interest to compare these findings with previous data on anxiety/stress symptoms on the same panel prior to the pandemic, if available. • The data collection took place on March-April 2020, some contextual factors related to the pandemic in the US in that period should be reported (e.g., mortality rate, contagious rate, etc.). The impact of mortality/contagious rate should be tested on the selected outcomes. • In the methods, authors report that the number of stressors has been collapsed in a categorical variable. Why do you decide to manage it as categorical? How did you select the different threshold? I would suggest running again the analysis using it as continuous variable. Furthermore, in the discussion authors argue that “economic and emotional stressors contribute to higher rates of both GAD and PTSS” but using a categorical variable based on

	the different cumulative number of stressors does not allow to make this assumption. I would suggest merging similar stressors (from a conceptual viewpoint) in the same category (e.g., “emotional”, “economic”, etc.) and then entering it in the regression model. Furthermore, an interaction term between the number of stressors and the type of stressor should be entered in the logistic model. • The authors use the term “prevalence of GAD and PTSS” throughout the text. This could be misleading, since both scales are screening, not diagnostic tools. Considering that the results are quite alarming, reporting a significant increase of rate of anxiety and stress symptoms compared to previous traumatic events, I would choose carefully wording and would further highlight that these data must be confirmed in representative sample using diagnostic tools. • In the methods’ section, authors should provide rationale for choosing threshold scores of 15 or more at GAD. • How was stressor list created? This is a not validated tool which could have biased the findings. • Do you have any information on the mental health status of the participants? Do they suffer from any prior mental or physical condition(s)? • In Figures 2 and 4, authors should clarify whether any statistical difference exist or not.

REVIEWER	Chen, Jing-Xu Peking University
REVIEW RETURNED	31-Oct-2020

GENERAL COMMENTS	1. Several similar studies to quantify the prevalence of anxiety disorders in the United States during the COVID-19 pandemic have already been published (Liu CH, et al. Psychiatry Res. 2020 Aug;290:113172; Fitzpatrick KM, et al. Psychol Trauma. 2020 Aug;12(S1):S17-S21.). The novelty and importance of this study should be addressed clear. 2. In line 49, the authors stated “We assessed the prevalence of anxiety disorders, generalized anxiety disorder (GAD) and post-traumatic stress symptoms (PTSS)”. I think “anxiety disorders” be deleted 3. The authors created a cumulative stressor score and divided the score into three stressor categories. I am wondering whether this classification method has already been established before, if yes, please add the relevant references. If no, please address the rationale of this classification method. 4. In line 54, the authors described “we used two validated anxiety disorders questionnaires”. I think that the 4-items PTSD checklist (PCL) is not an anxiety disorders questionnaire. 5. When multiple logistic regression models were constructed to assess the predictors of each outcome, some statistical data, such as OR, 95%CI, P, should be shown in the paper. 6. The discussion section was simplistic at the present form. There is a need to discuss closely with your findings, such as comparisons with previous epidemiological data during COVID-19 outbreaks, the role of certain psychological stressors on mental health.

REVIEWER	Santabárbara , Javier University of Zaragoza

REVIEW RETURNED	10-Nov-2020

GENERAL COMMENTS	Thank you for the opportunity to review the manuscript entitled " The mental health consequences of COVID-19: a nationally representative cross-sectional study of pandemic-related stressors and anxiety disorders in the United States" in BMJ Open. This work represents an important area of inquiry that is relevant to the readership of this journal. The statistical analyses were well conducted and represents the principal strength of the work. I applaud the use of STATA software and STROBE guidelines. This is an interesting manuscript, but I have several issues the authors should address before publication can be considered: 1. The authors state that studies of the prevalence of anxiety during COVID in the United States have not yet been carried out, however the Twenge and Joiner study (2020) was the first to be published. This deserves justification in the introduction section and deep discussion and comparison of the findings of the findings of both studies. Reference: Twenge, JM, Joiner, TE. U.S. Census Bureau-assessed prevalence of anxiety and depressive symptoms in 2019 and during the 2020 COVID-19 pandemic. Depression and Anxiety. 2020; 37: 954– 956. https://doi.org/10.1002/da.23077 2. The authors have avoided meta-analysis of anxiety in the general population (Salari et al., 2020) and in specific populations (Lasheras et al., 2020) that should be included in the introductory and discussion sections References: Salari, N., Hosseinian-Far, A., Jalali, R. et al. Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: a systematic review and meta-analysis. Global Health 16, 57 (2020). https://doi.org/10.1186/s12992-020-00589-w Lasheras, I.; Gracia-García, P.; Lipnicki, D.M.; Bueno-Notivol, J.; López-Antón, R.; de la Cámara, C.; Lobo, A.; Santabárbara, J. Prevalence of Anxiety in Medical Students during the COVID-19 Pandemic: A Rapid Systematic Review with Meta-Analysis. Int. J. Environ. Res. Public Health 2020, 17, 6603. 3. The authors should discuss their findings with a meta-analysis of the prevalence of depression during covid given that depression and anxiety usually present together (Bueno-Notivol et al., 2020) Reference: Bueno-Notivol, J., Gracia-García, P., Olaya, B., Lasheras, I., López-Antón, R., Santabárbara, J., 2020. Prevalence of depression during the COVID-19 outbreak: A meta-analysis of community-based studies. Int. J. Clin. Heal. Psychol. https://doi.org/https://doi.org/10.1016/j.ijchp.2020.07.007

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Andrea Fiorillo
Institution and Country: University of Campania, Italy
Please state any competing interests or state 'None declared': No conflict of interests

This is an interesting study on the mental health consequences of COVID-19 in a probability-based panel representative of households in the United States.
I would suggest authors to address the following points in order to improve the clarity of the manuscript:
• In the Abstract, authors should report socio-demographic data of the study sample (e.g., gender distribution, mean age, etc.)

Thank you for for taking the time to review our mansucirpt and for your comments. We have now added socio-demographic data to the abstract.

• In the "strengths and limitations" bullet point, I would suggest rephrasing that "This analysis uses a nationally representative sample examining the burden of anxiety disorders". As far as I understand, the study examines the impact of COVID-19 pandemic and its related stressors on the risk of developing anxiety and stress symptoms. In mental health the concept of "burden" is related to the psychosocial consequences of the disorder, but no data are available on this issue in the paper. Please consider rephrasing also bullet point number 3. I would suggest not to use the word "burden" throughout the paper, but it would be better to say "risk of developing anxiety disorders" (or something similar).

We edited the paper throughout to remove the term "burden" to "risk of developing"

• Data come from a panel-based dataset, therefore it would be of interest to compare these findings with previous data on anxiety/stress symptoms on the same panel prior to the pandemic, if available.

We think this is an excellent idea. Unfortunately, the panel has not collected data on these areas before so we are unable to report on them. However, we are in the process in conducting a follow up survey that will allow us to compare the results.

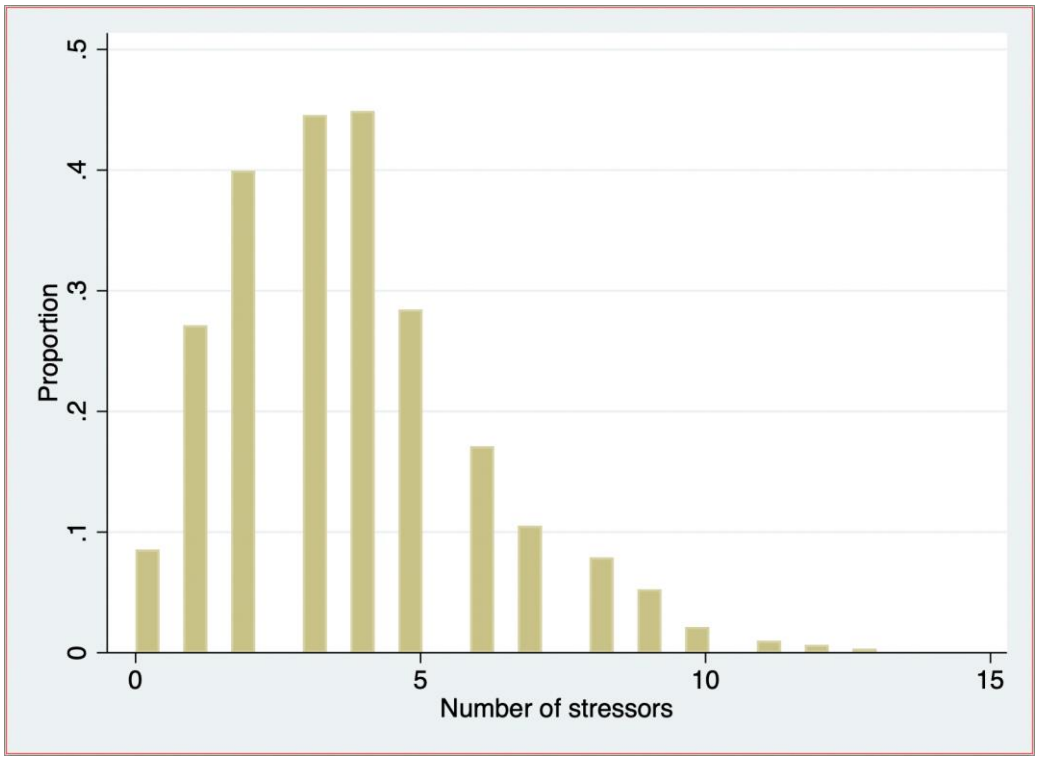
• The data collection took place on March-April 2020, some contextual factors related to the pandemic in the US in that period should be reported (e.g., mortality rate, contagious rate, etc.). The impact of mortality/contagious rate should be tested on the selected outcomes.

We now note the phase of the pandemic in the paper. However, during that time the pandemic mortality/contagious rate differed by state during that time and our data is not stratified by state. Also we do not have longitudinal data here to test the impact of changing variables such as mortality rate on the final outcomes; we hope to be able to do that with a follow-up survey scheduled for 2021.

• In the methods, authors report that the number of stressors has been collapsed in a categorical variable. Why do you decide to manage it as categorical? How did you select the different threshold? I would suggest running again the analysis using it as continuous variable. Furthermore, in the discussion authors argue that “economic and emotional stressors contribute to higher rates of both GAD and PTSS” but using a categorical variable based on the different cumulative number of stressors does not allow to make this assumption. I would suggest merging similar stressors (from a conceptual viewpoint) in the same category (e.g., “emotional”, “economic”, etc.) and then entering it in the regression model. Furthermore, an interaction term between the number of stressors and the type of stressor should be entered in the logistic model.

We collapsed the number of stressors in a categogircal variable based on their distribution in the study sample population, in which we divided the population into three categories that are roughly equally distributed. Please see the graph below to illustrate.

Figure: distribution of number of stressors in the study sample



We have now conducted sensitivity analyses with continuous variables: one model including all stressors and another divides stressors into financial and social stressors. You can find the results in the tables below. We do not see notable change in the results compared to the models that used categorical variables. Given that the interaction terms were not significant, we did not further examine the interaction. We have now added those tables as an appendix to the paper.

Appendix table 1: multivariable regression model of probable generalized anxiety disorder (GAD) and post-traumatic distress symptoms (PTSS) in adults 18 years and older in the U.S. by demographic characteristics and COVID-19 related stressors (continuous variable).

	Probable GAD		**PTSS**	
	Odds ratio (95% CI)	**P-value**	**Odds ratio (95% CI)**	**P-value**
Gender				
Male	ref		ref	
Female	1.5 (1.0 – 2.4)	0.076	1.5 (1.0 – 2.1)	0.034
Age				
18-39 y	ref		ref	
40-59 y	0.6 (0.3 – 1.0)	0.047	1.1 (0.7 – 1.6)	0.805
≥60 y	0.50 (0.2 – 1.1)	0.100	0.6 (0.3 – 1.1)	0.082
Race				
Non-Hispanic White	ref		ref	
Non-Hispanic Black	0.8 (0.3 – 1.9)	0.583	0.7 (0.4 – 1.2)	0.163
Hispanic	0.7 (0.4 – 1.3)	0.229	1.0 (0.6 – 1.7)	0.882
Non-Hispanic Asian	0.1 (0.0 – 0.6)	0.017	0.3 (0.1 – 1.4)	0.126
Other Race – Including Multi-Racial	1.0 (0.4 – 2.5)	0.971	0.5 (0.2 – 1.1)	0.084
Education				
No high school diploma	1.1 (0.4 – 3.1)	0.860	0.7 (0.3 – 1.4)	0.288

High school graduate or equivalent	1.1 (0.5 – 2.2)	0.818	1.1 (0.7 – 1.8)	0.708
Some college	1.8 (1.0 – 3.1)	0.034	1.0 (0.6 – 1.4)	0.822
College grad or more	ref		ref	
Marital status				
Married	ref		ref	
Widowed, divorced, or separated	1.3 (0.7 – 2.6)	0.424	1.1 (0.6 – 1.9)	0.758
Never married	1.3 (0.7 – 2.5)	0.402	1.1 (0.7 – 1.7)	0.753
Living with partner	1.4 (0.7 – 3.0)	0.322	0.9 (0.5 – 1.6)	0.777
Household income				
$0 - $19,999	0.9 (0.4 – 1.9)	0.767	1.2 (0.6 – 2.2)	0.652
$20,000 - $44,999	0.7 (0.3 – 1.4)	0.295	0.7 (0.4 – 1.2)	0.193
$45,000 - $74,999	0.6 (0.3 – 1.2)	0.162	0.9 (0.6 – 1.5)	0.717
≥$75,000	ref		ref	
Household savings				
$0 - $4,999	2.0 (1.2 – 3.2)	0.008	1.3 (0.8 – 1.9)	0.290
≥$5,000		ref	ref	
Household size	1.0 (0.8 – 1.1)	0.631	1.0 (0.9 – 1.1)	0.962
COVID-related stressors	1.3 (1.2 – 1.4)	<0.001	1.3 (1.2 – 1.4)	<0.001

Appendix table 2: multivariable regression model of probable generalized anxiety disorder (GAD) and post-traumatic distress symptoms (PTSS) in adults 18 years and older in the U.S. by demographic characteristics and COVID-19 related economic and social stressors.

	Probable GAD		PTSS	
	Odds ratio (95% CI)	**P-value**	**Odds ratio (95% CI)**	**P-value**
Gender				
Male	ref		ref	
Female	1.6 (1.0 – 2.5)	0.064	1.5 (1.0 – 2.6)	0.032
Age				
18-39 y	ref		ref	
40-59 y	0.6 (0.3 – 1.0)	0.043	1.0 (0.3 – 1.0)	0.818
≥60 y	0.5 (0.2 – 1.1)	0.105	0.6 (0.2 – 1.1)	0.084
Race				
Non-Hispanic White	ref		ref	
Non-Hispanic Black	0.8 (0.3 – 1.8)	0.581	0.6 (0.3 – 1.8)	0.162
Hispanic	0.7 (0.4 – 1.2)	0.180	1.0 (0.4 – 1.2)	0.900
Non-Hispanic Asian	0.1 (0.0 – 0.6)	0.016	0.3 (0.0 – 0.6)	0.120
Other Race – Including Multi-Racial	1.0 (0.4 – 2.4)	0.937	0.5 (0.4 – 2.4)	0.084
Education				
No high school diploma	1.1 (0.4 – 3.0)	0.907	0.6 (0.4 – 3.0)	0.278

High school graduate or equivalent	1.1 (0.5 – 2.1)	0.892	1.1 (0.5 – 2.1)	0.728
Some college	1.8 (1.0 – 3.0)	0.041	1.0 (1.0 – 3.0)	0.809
College grad or more	ref		ref	
Marital status				
Married	ref		ref	
Widowed, divorced, or separated	1.3 (0.7 – 2.6)	0.416	1.1 (0.7 – 2.6)	0.755
Never married	1.3 (0.7 – 2.4)	0.420	1.1 (0.7 – 2.4)	0.764
Living with partner	1.4 (0.7 – 3.0)	0.327	0.9 (0.7 – 3.0)	0.772
Household income				
$0 - $19,999	0.9 (0.4 – 1.9)	0.738	1.2 (0.4 – 1.9)	0.668
$20,000 - $44,999	0.7 (0.3 – 1.4)	0.276	0.7 (0.3 – 1.4)	0.195
$45,000 - $74,999	0.6 (0.3 – 1.2)	0.160	0.9 (0.3 – 1.2)	0.713
≥$75,000	ref		ref	
Household savings				
$0 - $4,999	2.0 (1.2 – 3.2)	0.008	1.3 (1.2 – 3.2)	0.290
≥$5,000	ref		ref	
Household size	1.0 (0.8– 1.1)	0.627	1.0 (0.8– 1.1)	0.956
COVID-related financial stressors	1.4 (1.2 – 1.6)	<0.001	1.3 (1.2 – 1.6)	<0.001

COVID-related social stressors	1.2 (1.1 – 1.5)	0.011	1.3 (1.1 – 1.5)	<0.001

• The authors use the term “prevalence of GAD and PTSS” throughout the text. This could be misleading, since both scales are screening, not diagnostic tools. Considering that the results are quite alarming, reporting a significant increase of rate of anxiety and stress symptoms compared to previous traumatic events, I would choose carefully wording and would further highlight that these data must be confirmed in representative sample using diagnostic tools.

We edited the wording across the paper to highlight that the results reflect screening rather than diagnosis adding the word “probable” to all results pertaining to GAD and highlighted in the limitations that the results need to be confirmed. We note that PTSS specifically refers to symptoms, not a diagnosis, so we think that stands well as is.

• In the methods’ section, authors should provide rationale for choosing threshold scores of 15 or more at GAD

We now explain in the methods section that the score was based on recommended cutoffs for the GAD-7 screening.

• How was stressor list created? This is a not validated tool which could have biased the findings.

The stressor list was developed based on prior studies following traumatic events, which you find below. We have now also added those references to the manuscript.

- Galea, Sandro, et al. "Financial and social circumstances and the incidence and course of PTSD in Mississippi during the first two years after Hurricane Katrina." *Journal of Traumatic Stress*: Official Publication of The International Society for Traumatic Stress Studies 21.4 (2008): 357-368.
- Boardman, Jason D., et al. "Neighborhood disadvantage, stress, and drug use among adults." *Journal of health and social behavior* (2001): 151-165.

• Do you have any information on the mental health status of the participants? Do they suffer from any prior mental or physical condition(s)?

Unfortunately, we do not have the information. We highlight that in the limitations section.

• In Figures 2 and 4, authors should clarify whether any statistical difference exist or not.

Thank you. We have now conducted the analysis, there is statistical difference for both graphs ($P<0.05$), and we now note that in the graphs.

Reviewer: 2

Reviewer Name: Chen, Jing-Xu
Institution and Country: Peking University, China
Please state any competing interests or state 'None declared': I have no potential conflicts of interest.

1. Several similar studies to quantify the prevalence of anxiety disorders in the United States during the COVID-19 pandemic have already been published (Liu CH, et al. Psychiatry Res. 2020 Aug;290:113172; Fitzpatrick KM, et al. Psychol Trauma. 2020 Aug;12(S1):S17-S21.). The novelty and importance of this study should be addressed clear.

Thank you for taking the time to review our paper and for your comments. We now refer to these papers in our revised manuscript.

2. In line 49, the authors stated "We assessed the prevalence of anxiety disorders, generalized anxiety disorder (GAD) and post-traumatic stress symptoms (PTSS)". I think "anxiety disorders" be deleted

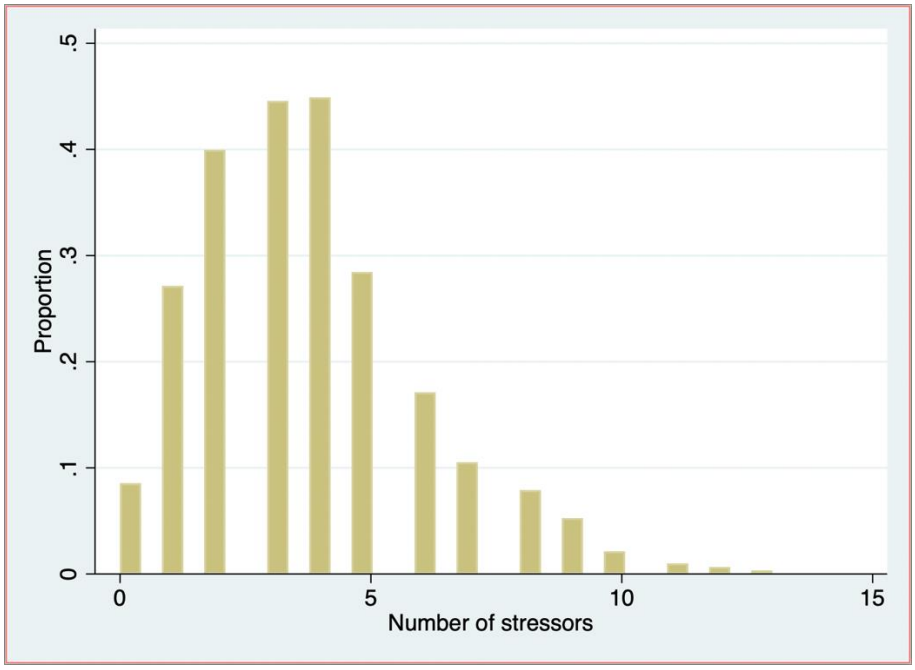
Both GAD and PTSS are classified as anxiety disorders. Please see reference: https://www.ncbi.nlm.nih.gov/books/NBK519704/ . However, we recognize this was unclear and have now edited to:

"We assessed the prevalence of anxiety disorders, specifically generalized anxiety disorder (GAD) and post-traumatic stress symptoms (PTSS)"

3. The authors created a cumulative stressor score and divided the score into three stressor categories. I am wondering whether this classification method has already been established before, if yes, please add the relevant references. If no, please address the rationale of this classification method.

We collapsed the number of stressors in a categogircal variable depending on their distribution in the study sample population, in which we divided the population into three categories that are roughly equally distributed. Please see the graph below to illustrate.

Figure: distribution of number of stressors in the study sample



4. In line 54, the authors described “we used two validated anxiety disorders questionnaires”. I think that the 4-items PTSD checklist (PCL) is not an anxiety disorders questionnaire.

According to the DSM Posttraumatic stress is is classified as anxiety disorders. Please see reference: https://www.ncbi.nlm.nih.gov/books/NBK519704/ . However, we are happy to edit the sentence if the editors believe we should remove the term.

5. When multiple logistic regression models were constructed to assess the predictors of each outcome, some statistical data, such as OR, 95%CI, P, should be shown in the paper.

We agree with the reviewer and we report ORs and 95% CIs for highlighed measures in the results section and for all measures in the tables.

6. The discussion section was simplistic at the present form. There is a need to discuss closely with your findings, such as comparisons with previous epidemiological data during COVID-19 outbreaks, the role of certain psychological stressors on mental health.

Thank you for your comment. We have now made sure to edit the discussion to carefully address previous epidemiological data, what we know about the role of psychological stressors on mental health, and what this paper adds to that literature.

Reviewer: 3

Reviewer Name: Dr. Javier Santabárbara
Institution and Country: Depertament of Preventive Medicine and Public Health- University of Zaragoza (Spain).
Please state any competing interests or state ‘None declared’: None declared

Thank you for the opportunity to review the manuscript entitled " The mental health consequences of COVID-19: a nationally representative cross-sectional study of pandemic-related stressors and anxiety disorders in the United States" in BMJ Open. This work represents an important area of inquiry that is relevant to the readership of this journal.

The statistical analyses were well conducted and represents the principal strength of the work. I applaud the use of STATA software and STROBE guidelines.

Thank you for taking the time to review our paper and for your comments. We aimed to address all of them points below.

This is an interesting manuscript, but I have several issues the authors should address before publication can be considered:

1. The authors state that studies of the prevalence of anxiety during COVID in the United States have not yet been carried out, however the Twenge and Joiner study (2020) was the first to be published. This deserves justification in the introduction section and deep discussion and comparison of the findings of the findings of both studies.

Reference: Twenge, JM, Joiner, TE. U.S. Census Bureau-assessed prevalence of anxiety and depressive symptoms in 2019 and during the 2020 COVID-19 pandemic. Depression and Anxiety. 2020; 37: 954– 956. https://doi.org/10.1002/da.23077

Thank you. We agree that it is an important contribution to the science and we now refer to it in our revised manuscript. Our analysis focuses on the role of COVID-19 stressors in shaping the prevalence of anxiety disorders rather than reporting on the overall prevalence. We have now edited the wording in our manuscript to make the differences clearer.

2. The authors have avoided meta-analysis of anxiety in the general population (Salari et al., 2020) and in specific populations (Lasheras et al., 2020) that should be included in the introductory and discussion sections

References:

Salari, N., Hosseinian-Far, A., Jalali, R. et al. Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: a systematic review and meta-analysis. Global Health 16, 57 (2020). https://doi.org/10.1186/s12992-020-00589-w

Lasheras, I.; Gracia-García, P.; Lipnicki, D.M.; Bueno-Notivol, J.; López-Antón, R.; de la Cámara, C.; Lobo, A.; Santabárbara, J. Prevalence of Anxiety in Medical Students during the COVID-19 Pandemic: A Rapid Systematic Review with Meta-Analysis. Int. J. Environ. Res. Public Health 2020, 17, 6603.

Thank you for sharing these relevant analysese. We have included the reviews in in our revised manuscript.

3. The authors should discuss their findings with a meta-analysis of the prevalence of depression

during covid given that depression and anxiety usually present together (Bueno-Notivol et al., 2020)

Reference: Bueno-Notivol, J., Gracia-García, P., Olaya, B., Lasheras, I., López-Antón, R., Santabárbara, J., 2020. Prevalence of depression during the COVID-19 outbreak: A meta-analysis of community-based studies. Int. J. Clin. Heal. Psychol. https://doi.org/https://doi.org/10.1016/j.ijchp.2020.07.007

Thank you for sharing this relevant paper. We have included the review in in our revised manuscript.

FORMATTING AMENDMENTS (if any)
Required amendments will be listed here; please include these changes in your revised version:
● Please provide figure caption at the end of your main document just before the reference list.

Thank you. We have now provided figure caption in the main document

VERSION 2 – REVIEW

REVIEWER	Fiorillo, Andrea University of Campania Luigi Vanvitelli
REVIEW RETURNED	04-Mar-2021

GENERAL COMMENTS	The authors have addressed all my previous queries and I think that the manuscript is improved. However, I think that authors did not include "contextual" variables related to the pandemic in their regression models (such as the infection rate and the mortality rate during the period of data collection), but it would be of interest to evaluate whether the results are affected by these confounding variables. Furthermore, I would suggest to include in the discussion some comparisons with data coming from European countries on the impact of the pandemic on mental health.

REVIEWER	Santabárbara , Javier University of Zaragoza
REVIEW RETURNED	09-Feb-2021

GENERAL COMMENTS	The authors have implemented correctly all my suggestions.

VERSION 2 – AUTHOR RESPONSE

Reviewer comments

Reviewer: 1(Dr. Andrea Fiorillo, University of Campania Luigi Vanvitelli)

Comments to the Author:
The authors have addressed all my previous queries and I think that the manuscript is improved. However, I think that authors did not include "contextual" variables related to the pandemic in their

regression models (such as the infection rate and the mortality rate during the period of data collection), but it would be of interest to evaluate whether the results are affected by these confounding variables.

Thank you. We agree with the reviewer that including contextual factors would add to the robustness of the regression model. However, we think that accounting for these contextual factors would be beyond the scope of this paper. To account for contextual factors would require an explication of the range of distal influences on mental health – conceptualizing, measuring, and accounting for a breadth of factors. This is, in many ways, a separate manuscript. We also note that the rapidly changing situation in the context of COVID-19 makes it difficult to isolate a narrow set of contextual variables to meaningfully capture complex features of context. However, we do recognize that there are several contextual factors that could illuminate further mental health in this context and we now add this as a note in the discussion section.

Furthermore, I would suggest to include in the discussion some comparisons with data coming from European countries on the impact of the pandemic on mental health.

Thank you. We now report on mental health in different parts of the world in our discussion section.

Reviewer: 3 (Dr. Javier Santabarbara, University of Zaragoza)

Comments to the Author:
The authors have implemented correctly all my suggestions.

Thank you much for taking the time to review our paper.

VERSION 3 – REVIEW

REVIEWER	Fiorillo, Andrea University of Campania Luigi Vanvitelli
REVIEW RETURNED	09-Apr-2021

GENERAL COMMENTS	This is the third time I review this manuscript. I am very much disappointed that my previous comments have not been addressed at all by the authors. I will not see it further if they do not take into consideration my comments. The authors should control their regression models for "contextual" variables, such as infection rate and mortality rate during the period of data collection, in order to have "robust" results. In the Discussion, the authors should compare their findings with those coming from studies carried out in Europe and China (e.g., Effects of the lockdown on the mental health of the general population during the COVID-19 pandemic in Italy: Results from the COMET collaborative network. Eur Psychiatry. 2020 Sep

	28;63(1):e87; Change in Physical Activity, Sleep Quality, and Psychosocial Variables during COVID-19 Lockdown: Evidence from the Lothian Birth Cohort 1936. Int J Environ Res Public Health. 2020 Dec 30;18(1):210; Gender differences in emotional response to the COVID-19 outbreak in Spain; Brain Behav. 2021 Jan;11(1):e01934.; Li J, Yang Z, Qiu H, Wang Y, Jian L, Ji J, Li K. Anxiety and depression among general population in China at the peak of the COVID-19 epidemic. World Psychiatry. 2020 Jun;19(2):249-250). Differences and similarities across the different socio-cultural contexts should be commented upon.

VERSION 3 – AUTHOR RESPONSE

Response to the editor

Thank you for taking the time to review our article. Per our communication with the editor, we have now included a sensitivity logistic regression analysis that included participants' concern about the pandemic as a proxy for COVID-19 context. Incorporating this variable in the model produced results consistent with the main model and other sensitivity analyses.

Thank you for the suggestion to add this variable; we think that it strengthens the paper. Adding COVID-19 concern about the pandemic did not change our main findings.

Multivariable regression model of probable generalized anxiety disorder (GAD) and post-traumatic distress symptoms (PTSS) in adults 18 years and older in the U.S. by demographic characteristics and concern for COVID-19.

	Probable GAD		**PTSS**	
	Odds ratio (95% CI)	**P-value**	**Odds ratio (95% CI)**	**P-value**
Gender				
Male	ref		ref	
Female	1.6 (1.0-2.6)	0.048	1.6 (1.1-2.6)	0.014
Age				
18-39 y	ref		ref	
40-59 y	1.5	0.012	1.0	0.949

	(0.3-0.9)		(0.7-1.5)	
≥60 y	0.4 (0.2-0.9)	0.028	0.5 (0.3-1.0)	0.028
Race				
Non-Hispanic White	ref		ref	
Non-Hispanic Black	0.6 (0.2-1.5)	0.267	0.5 (0.3-1.0)	0.054
Hispanic	0.7 (0.4-1.2)	0.208	1.0 (0.6-1.7)	0.945
Non-Hispanic Asian	0.1 (0.01-0.7)	0.024	0.3 (0.1-1.4)	0.138
Other Race – Including Multi-Racial	1.2 (0.4-3.1)	0.764	0.6 (0.2-1.1)	0.160
Education				
No high school diploma	1.1 (0.4-3.1)	0.830	0.7 (0.3-1.5)	0.365
High school graduate or equivalent	1.0 (0.5-2.0)	0.985	1.1 (0.7-1.8)	0.711
Some college	1.9 (1.1-3.3)	0.023	1.0 (0.7-1.5)	0.838
College grad or more	ref		ref	
Marital status				
Married	ref		ref	
Widowed, divorced, or separated	1.3 (0.7-2.7)	0.405	1.1 (0.6-1.9)	0.849
Never married	1.5 (0.8-2.8)	0.229	1.1 (0.7-1.8)	0.585
Living with partner	1.4 (0.7-3.1)	0.356	1.0 (0.5-1.7)	0.918

Household income				
$0 - $19,999	1.0 (0.5-2.2)	0.975	1.2 (0.7-2.4)	0.509
$20,000 - $44,999	0.7 (0.3-1.4)	0.290	0.7 (0.4-1.2)	0.230
$45,000 - $74,999	0.7 (0.3-1.4)	0.278	1.0 (0.6-1.7)	0.938
≥$75,000	ref		ref	
Household savings				
$0 - $4,999	2.2 (1.3-3.6)	0.003	1.3 (0.8-2.0)	0.255
≥$5,000	ref		ref	
Household size	1.0 (0.8-1.1)	0.662	1.0 (0.9-1.1)	0.926
COVID-related stressor score				
Low	ref		ref	
Medium	1.8 (0.9-3.6)	0.100	1.3 (0.8-2.0)	0.347
High	3.5 (1.8-6.9)	<0.0001	2.7 (1.7-4.3)	<0.0001
Concern about COVID-19				
Very concerned	4.1 (1.4-12.4)	0.012	5.3 (1.9-14.6)	0.004
Moderately concerned	2.7 (0.9-8.2)	0.086	4.0 (1.5-11.0)	0.014
A little concerned	0.3 (0.1-1.3)	0.112	1.3 (0.4-3.9)	0.784
Not at all concerned	ref		ref	

Additionally, we edited the manuscript to remove any potential reference to causal language and cited papers suggested by the reviewer in the introduction section.

Thank you for the opportunity to re-submit this paper. We think that the suggestions from the editor and reviewers have made this a stronger piece, and we are hopeful to share these findings broadly.

VERSION 4 – REVIEW

REVIEWER	Fiorillo, Andrea University of Campania Luigi Vanvitelli
REVIEW RETURNED	09-Jul-2021

GENERAL COMMENTS	I think that this revised version of the paper is improved. I like the new logistic analysis included by authors. Therefore, I think the paper can be accepted for publication.