Peer Review File

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Reviewer A:
Comments:
This reviewer insights presented by the authors are interesting, with contents that would benefit the medical society. However, there are some points that the authors should consider to amend that could further contribute to the potential readers of this manuscript.

Comment 1: Firstly, further background should be provided for non-clinical staff. Although the authors present informative results for non-clinical staff in their manuscript, their background mainly highlights the references of clinical staff. Further information should be provided in the background, especially to highlight the importance supporting non-clinical staff with or without the pandemic. If not found, some previous research that reflect the mental health outside hospital settings, or mental stress of medical students may be of aid.

Reply 1: We appreciate the reviewer reminding us of the importance of including non-clinical staff in the background and have endeavored to give some context despite limited prior research in this area We have modified our text (See Page 5, Lines 126-131).

Changes in the text: Although there are limited pre-pandemic data on the mental health of Non-clinical staff, a New Zealand study reported a significant impact of job demand stressors such as role conflict and role overload on emotional exhaustion among non-clinical healthcare service workers (14). A pre-pandemic Italian study found that 68% of clinical research coordinators reported stress negatively impacting their work performance and on average they experienced an intermediate level of burnout (15).

Comment 2: Secondly, the authors should consider the presentations of their results. For example, the authors should consider the phrasings of L254 and L266. Even if to consider the context, these contents are rather suited for discussions, rather than the pure results. The authors should reconsider the results section to organize the contents to differentiate the results and the discussions.

Reply 2: We thank the reviewer for this suggestion. We have aimed to keep the contents of the results section in alignment with best practices in mixed methods integration. According to Onwuegbuzieand colleagues (1), mixed methods integrations should be seamless, hence we wrote our results following Fetters, Curry and Creswell's (2) single report. This meta-inference strategy combines quantitative and qualitative results into a single narrative with both types of data results blend together to reach full Mixed Methods integrations. To avoid confusion, we also integrated Reviewer B's suggestion of deleting Table 7 and adding an additional column to Table 2-6 with the qualitative quotes that complimented significant quantitative findings.

Changes in the text: No changes.

Comment 3: In addition to the second comment, the authors should consider the strength of their presented results. For example, this reviewer believes that the phrasing on L276 would be too definitive, considering the sample size and the nature of the presented study. A phrasing presented in L337 would be more suitable. The authors should reconsider their results and discussions and rephrase as appropriate.

Reply 3: We thank the reviewer for noticing this misuse of language. We have modified our text (See Page 18, Line 613).

Changes in the text: Moral distress was associated with worse WBI scores among Nurses (β=0.171, $p<.05$).

Comment 4: Finally, one trivial comment: the authors should review how to present their samples. For example, the phrasing “nurses” (in L236) is in lower case, while others are referred to as“Nurses”in upper case. Such wordings should be consistent throughout the manuscript in order not to confuse the readers.

Replay 4: We thank the reviewer for noticing this inconsistency. To address this issue, we capitalized all employee roles, i.e., Physician, Nurse, Clinical support staff, and Non-clinical staff.

Change in the text: physician Physician; nurse Nurse; clinical support staff Clinical support staff; non-clinical staff Non-clinical staff.

Reviewer B:
Comments:
Comment 1: The article used the SURGE reporting checklist (provided at the end of the submitted paper), which is not listed as one of the accepted reporting guidelines for JHMHP or in the Equator Network. I recommend using one of the reporting guidelines listed on the JHMHP website.

Reply 1: We thank the reviewer for this comment. Initially we used the STROBE (STrengthening the Reporting of Observational studies in Epidemiology) checklist as listed on the journal website. However, the editor contacted us and requested us to use the SURGE checklist. Underneath, the editor re-emphasized that we use the SURGE checklist and move the SURGE checklist statement towards the end, under footnotes.

Change in the text: No change.

Comment 2: Lines 132-134: Identifying who sent out the survey, and knowing UAB is affiliated with a large healthcare system opens up for possible identification of where this survey was administered. I would eliminate "from the UAB Medicine and Wellness Center" from this sentence.

Reply 2: We thank the reviewer for indicating this identifier. To address this issue, we removed “from the UAB Medicine and Wellness Center”from the sentence. We have modified our text (See page 7, Lines 188-190).

Change in the text: In June and July 2020, healthcare employees at a large medical center in the Southeastern United States received an online invitation to participate in an anonymous cross-sectional survey.

Comment 3: Line 157: You provide information for the general population. Is there literature identifying the average WBI for healthcare providers before COVID-19? I would presume healthcare workers' WBI was already higher than the general public even before COVID-19. So, do we know whether there was a change or how much change occurred since COVID-19?

Reply 3: We thank the reviewer for suggesting the importance of including information comparing pre- versus post-pandemic levels of distress. While we lack pre-pandemic information on WBI scores specifically, we added some text to the introduction regarding some longitudinal studies of physician burnout. We have modified our text (See Pages 5-6, Lines 133-148)

Change in the text: While there are few longitudinal studies that evaluate pre- versus post-COVID-19 pandemic distress among healthcare workers, The Physicians Foundation Survey found that 61% of US Physicians reported often experiencing feelings of burnout in 2021 as opposed to 40% in 2018. In contrast, the Medscape National Physician Burnout and Suicide Report 2021 found that the proportion of US Physicians reporting burnout was similar to 2019 (42% versus 44%) and that 79% of Physicians with burnout reported their burnout began prior to the pandemic. However, there was a shift in specialties with highest proportion of Physicians reporting burnout to critical care, rheumatology and infectious diseases, and 21% of Physicians with burnout reporting it began after the pandemic (17, 18).

Comment 4: Lines 200-204: The article you reference discusses a 36-item SPOS, not an 8-item SPOS. Need to explain which 3 items you selected and why. Additionally, the original scale was a 7-point scale, and you altered it to 5-point scale. Discuss why and whether this impacts validity. Some (Krisnick, JA & Presser, S. (2010). Question and questionnaire design. In PH Rossi, JD Wright, and AB Anderson (Eds.), Handbook of Survey Research (pp. 263-313). Emerald Group Publishing Limited.) would argue that there may be a difference between a 5-point vs 7-point scale.

Reply 4: There is growing usage of single-item measures for human behavior and organizational research, especially when specific conditions make longer measures impossible (3). Because we were surveying healthcare workers in the middle of the century's worst pandemic, we had to carefully weigh the advantages of using longer scales with multiple items for research, versus using the shortest possible scales so as to not induce survey fatigue and add to their distress. Therefore, we opted to use the most parsimonious possible measures, but using questions from previously validated scales whenever possible (which has shown higher reliability than questions not developed from existing scales). There is a general movement toward using single-item measures in the workplace with minimal impacts to validity. This approach is becoming common in the literature (4,5)

However, so as to avoid confusion, we have changed our mention of Perceived Organizational Support to "feelings of organizational support" throughout the paper, so it is not confused with the well-established construct in the existing literature.

Change in the text: Perceived Organizational Support feelings of organizational support.

Comment 5: Lines 228-231: Need to break down demographic information or provide table summarizing overall breakdown of participants. Is the sample representative of the hospital demographics?

Reply 4: We thank the reviewers for these suggestions. To provide demographic information of our sample, we incorporated percentages of gender and race categories, and the average age of the sample. We have modified our text (See Page 13, Lines 344-350).

Change in the text: Our analytic sample had 1,037 participants with a mean age of 44 years. More than half of our sample identified as female (68%), 20% male, 1 % other, and 11% preferred not to disclose their gender. In terms of race and ethnicity, 67% of participants identified as non-Hispanic White, 9% as Black or African American, and 7% as Other–i.e., Hispanic, Asian, Native American or Alaskan Native, Native Hawaiian or Pacific Islander, or Multiracial–and 17% preferred not to disclose their racial and ethnic identity.

Comment 5: Table 1: You never identify what APPs are in this article. Though many would think of just PAs and NPs, there is some discussion as to what clinical professionals should be included in the APP group. Who is included in your study?

Reply 5: We thank the reviewers for indicating this missing piece of information. In our survey we provided participants a wide range of role categories to choose from, including Physician Assistant (PA), Nurse practitioner (NP), and Certified Registered Nurse Anesthetist (CRNA). For analytical purposes, we combined these categories into APP as a role. We have modified our text (See Page 10, Lines 235-238).

Change in the text: All role categories were recoded into 5 categories: Physician, Nurse, Advanced Practice Provider (APP) (e.g., Physician assistants, Nurse practitioners, and Certified registered nurse anesthetists), Clinical support staff (e.g., Lab personnel, Social worker, Respiratory therapist) and Non-clinical Staff (e.g., Administrative worker, Non-clinical researcher, Pastoral service).

Comment 6: Line 237: Just some clarification - add WBI to this phrase so it says "the highest WBI distress score." I was confused when reading about WBI distress scores vs moral distress scores and had to re-read your verbiage to determine which distress score you were referring to.

Reply 6: We thank the reviewer for bringing this issue. To distinguish moral distress from regular distress we change distress to WBI distress.

Change in the text: distress WBI distress.

Comment 7: Table 2: Per journal guidelines, you need to include the unit of measurement in parenthesis in the tables. In this case (β) should be in the columns heading for tables 2-6.

Reply 7: We thank the reviewer for this suggestion. We changed Coef. to β on tables 2-6.

Change in the text: Coef.β

Comment 8: Lines 273-274: So did the physicians not care whether they got COVID or not by providing care to patients, or were they reporting that they hadn't contracted COVID from their patients? Was the wording clear in the survey?

Reply 8: We thank the reviewer for this question. On table 2, we show the percent of physicians who chose the listed stressors as major stressors, hence it does not mean that they did not care whether they could get infected with the COVID-19 virus while taking care of patients. They might care, but not many saw that risk as a major clinical stressor.

In our survey, we provided a list of stressors they could choose as major stressor(s).

Change in the text: No changes.

Comment 9: Line 279: Are you referring to Table 7? There is no Table x. As for my comments about Table 7, the quantitative columns are repetitive from Tables 2-6. You have some good qualitative data here, but only reference it once, not including any specific quotes in your narrative. I would recommend deleting this whole table and either: 1) include the exact quotes in the narrative when discussing the results in each section (It would better connect these quotes from participants with the quantitative material as compared to listing it near the end of the section); or 2) you could add a column in Tables 2-6 and incorporate this information into those sections so it's more comparable to the quantitative data you shared in those sections and doesn't repeat the data.

Reply 9: We thank the reviewers for these suggestions. We removed Table 7 from the text and added an additional column in Tables 2-6 for the qualitative excerpts to easy quantitative and qualitative comparison.

Change in the text: Deleted from text: “Table 7 presents a joint display of significant coefficients and qualitative quotes for each employee role.”See Tables 2-6.

Comment 10: Table 5: I think you missed something interesting in your results. Why did clinical support staff exhibit lower levels of stress with non-work stressors than other groups? Anything in the qualitative results to support/explain?

Reply 10: We thank the reviewer for these questions. If we compare the average total non-work stressors across groups, clinical support staff exhibit the highest total. According to the regression model, WBI distress was not significantly affected by this predictor after controlling for other covariates included in the model. Given that we did not have sufficient statistical evidence for this predictor, we were unable to corroborate the relationship between the outcome measure and this predictor with qualitative results.

Change in the text: No text change.

Comment 11: Lines 387-388: What level of wellbeing score (β) is considered significant? Some coefficients (maybe not this one) have cutoff limits of .20 to be considered significant or have levels to signify weak, medium, or strong associations. Please identify what you considered significant for this study and why? What does the literature say?

Reply 11: We thank the reviewer for these questions. According to the literature, a score equal or greater than 2 is associated with burnout or distress (6). Across Tables 2-6 we presented the coefficient (β) of the regression model and the p-value indicates whether WBI scores are statistically significantly associated with the predictors listed in each model and how much they change by one-unit increases. The discussion of what changes in WBI are practically significant has not been established in the literature, other than that scores above 2 or 3 have been associated with a number of negative outcomes across various clinical groups (7). Because the score has a maximum of an 11-point spread, even small changes are important. Table 1 include average WBI distress scores that indicated that all employee groups experienced burnout. We have modified our text (See Page 14, Lines 416-418).

Change in the text: On average, all employee categories exhibit high WBI distress scores and, as suggested in prior research, “the high distress” threshold is considered to be a WBI score greater or equal to two in the general employee population (33).

Comment 12: Line 488: I don't see where "fear of infecting others" was measured for non-clinical professionals. "Fear of exposure to COVID-19" was a slight stressor, but I didn't see in any table where fear of infecting others was an issue for non-clinical staff. And I didn't see any part of the discussion where you connected this fear (both of being exposed or spreading the infection) with the possibility of many non-clinical workers being able to work remotely from home during COVID-19, and probably didn't interact with patients as much as the clinical staff. Did you ask this in your survey?

Reply 12: We thank the reviewer for these questions. Given that we used stepwise regression, these predictors were removed from the model due to lack of significance or contribution to model fit. Moreover, non-clinical staff were not asked to report clinical work stressors because they did not apply to their work context.
Change in the text: No changes.

Comment 13: Lines 536-538: You're making quite a claim that these outcomes are linked to healthcare professionals without citing your source(s). You did not address these in this study nor did you discuss them in your article until now. Please cite source(s) to support your claim.

Reply 14: Thank you for pointing this out. We have added references to support our claim. We have modified our text (See Page 36, Lines 1055).

Change in the text: It may be that reporting this issue as a major stressor is associated with some other unmeasured factor that may serve to lower distress, such as greater empathy or concern for injustice or community engagement (58–61).

Comment 15: Overall, the general idea of the paper - the introduction, methodology, results, and discussion - was well organized; however, there are numerous grammatical issues (misspellings like in line 130, verb tense like in line 270, duplicate phrases like in lines 215 & 489, and phrases/sentences with missing or confusing words that disrupt flow like in lines 68, 214-215, 357, 371, 513) and formatting issues within the reference section (listing the first 3 authors' names then et al., capitalization issues with article titles, etc.) per the journal's guidelines. I highly recommend an editor review the paper before final submission.

Reply 15: We thank the reviewers for bringing this issue to our attention. We all reviewed our manuscript and made substantial grammatical corrections to our text.

Change in the text: See changes throughout the text.

Reviewer C:
Comments:
Comment 1: Abstract: Define "all types of employees." Note surveys used. Note use Concurred MMMRD

Reply 1: We thank the reviewer for indicating these missing pieces of information. We change listed the types of employees to clarify who is included in our sample and added the phrase “Using a” before concurrent mixed methods approach.

Change in the text: We added to Lines 73 “Using a concurrent…” and Lines 76-77 Among all types of employees i.e. Physicians, Nurses, Advanced Practice Providers, Clinical support staff and Non-clinical staff…”

Comment 2: Define SURGE
line 135, use another work besides "exhorted"

Reply 2: We thank the reviewer for these suggestions. We change the word “exhorted” for “encouraged.”Concerning the SURGE check list, we follow the editors request to move this statement towards the end of our manuscript under Footnotes.

Change in the text: In line 196: exhorted encouraged.
