Reviewer's report

Title: Correct Recognition and Continuum Belief of Mental Disorders in a Nursing Student Population

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Reviewer: Anthony Goreczny

Reviewer's report:

The purpose of this paper was to assess ability of nursing students to correctly recognize various mental health disturbances embodied in a vignette. The authors generally do a very nice job accomplishing their task. There are, however, several items that need addressed prior to publication:

1. The results section of the abstract is not at all clear. The authors need to rewrite this in a way that someone who has not read the full document will be able to understand. This is especially true regarding what they mean by continuum and how they measure it. This does not become clear until reading the paper itself. The phrase "continuum belief" needs expanded to be something like "a belief that symptoms/disorders exist on a continuum instead of as a discretely different/categorically different condition."

2. In the Methods section (participants subsection), the authors indicate that participants received a reimbursement of some sort. It would be helpful to readers to know the kind and amount of reimbursement. This will aid readers in their determination of whether or not the reimbursement was appropriate for the work performed or if it offered too much inducement and may have affected results obtained.

3. In the Results section, where the authors describe results presented in Table 4, although they are correct in their description of the results, the statistically significant results regarding stage of nursing education are quite possibly (perhaps even likely) just spurious results. The authors have computed so many analyses on the same data that they have inflated alpha well beyond the acceptable level of .05. As such, the authors need to mention this and the strong possibility of a Type I error. Undoubtedly, if they were to
perform any type of correction, such as a Bonferroni correction, the results in table 4 regarding stage of nursing education would not be statistically significant.

4. The Discussion needs several changes:

a. The authors found that nursing students misidentified alcohol abuse as depression. Although they mention it in the Discussion, there was only a sentence or two devoted to this. This is a potentially important finding upon which the authors need to elaborate. In fact, it deserves a paragraph itself. For instance, there are potential implications of this for primary care providers.

b. In the section "Continuum belief and its association with identification as mental illness," the authors briefly mention stigma. They need to expand upon this topic and it's potentially substantial implications as related to their results.

c. Immediately before their paragraph on strengths of their study, the authors mention that "continuum belief scores tend to decrease significantly" with increased years of nursing education. Two problems with this: (1) They imply that the decrease is a good thing. Is that really the case? They need to explain this either way. (2) Their supposition is not supported by their own data, at least not data I can see they presented in the manuscript.

d. In the results, the authors mentioned that individuals who had close friends or family similar to the person in the vignette they read were more likely to believe that the disorder exists on a continuum. This needs to be a point in the discussion. Is this because close friends and family are more familiar with the symptoms/disorder than are those with no such experience? Are they more empathic and sympathetic to the condition than are those with no experience? Either way, this has significant implications for understanding their results, for training of nurses, and for health care initiatives.
5. In the Discussion, the authors mention significant differences in continuum belief between the conditions, especially schizophrenia. I can't find anywhere in the Results section where they detailed this finding and the statistics they used to determine this. The Discussion is not the place to introduce new results - only to elaborate on them and identify implications of them.

6. The Tables need work. Each Table needs to be able to stand on its own, meaning that readers ought to be able to interpret them without referencing the text. In particular, the authors need to elaborate on what they mean by OR, upper, lower, and beta. Although experienced researchers will understand these terms, they still need clearly explained in the text and tables.

7. In Table 3, the authors note that there are no differences in correlates of correct recognition of mental disorders and years spent in nursing education, but they do not elaborate upon this in the Discussion. This is a significant piece that is missing, especially because the focus of the paper is on nursing education. If advanced nursing students are no more accurate in diagnosing mental disorders than are beginning students, what are the implications for nursing education? Does nursing education need to change to improve this over the years, or is identification of mental illness not the specialty area of nursing professionals (i.e., is this not a competency expected of nursing professionals)?

Overall, the paper presents important findings, but there are many changes, some of them significant, that the authors need to make prior to publication.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
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