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| **Reviewers Comments** | **Response** |
| **REVIEWER A** |  |
| **Goals, Objectives, Rationale, Research Question, Hypothesis** |  |
| These components were stated clearly and well written overall. However, the term "patients" was used throughout the paper, in addition to references to "clinical" work. Although three of the four participant groups were enrolled in professional programs with a clinical focus and work with "patients", the health science students are not in a professional program. As such, use of the term "patient" and "clinical" to refer globally to the participants is erroneous. Health science students go on to work in a variety of capacities, many of which are not clinical in nature (e.g. policy work, administration, higher education, health advocacy, and other leadership roles). As such, when referring to all participants, I would recommend using a different term which adequately characterizes the future beneficiaries of the services that all these students will provide (e.g."people who are served" or something equally broad). | We changed the term “patient” to “client” where we referred to a more general group of individuals. However, the term “patient” was used when the studies we referenced referred to patients. We changed the term “clinical” to “practical” as a generic term. However, the term “clinical” was used when the studies we referenced referred to clinical experiences or when addressing nursing or physical therapy practice. |
| Finally, the abstract did not acknowledge whether or not improvements were made in the area of leadership. | To clarify this point, we added “There were no other significant time effects and no major differences between programs.” Page 2 |
| **Theoretical Framework, Literature Review** |  |
| The background/literature review section did a nice job of explaining why each component of the problem deserved new scientific attention. No theoretical framework was offered as having guided the methodology of the study. | We now provided a conceptual framework. See Figure 1. It reflects our previous research findings as well as study hypotheses. |
| **Methodology:** **Participants, instruments, data collection, data analysis** |  |
| In the participants section, more information is needed about the comparison between the two different educational methods. This is not made clear and is, thus, confusing. What is "problem-based learning" and how is it different than conventional learning? | We have described the unique aspects of the four educational programs and explained the difference between problem-based learning and conventional learning.  |
| There is no acknowledgement in the participants section about the potential impact that graduate vs. undergraduate status and age could have in terms of group differences. Why was this not listed as a basis for comparison? According to the table, there were some undergraduate students as young as18 and some graduate students as old as 28. | Our baseline results showed no difference between graduate and undergraduate students; therefore we did not examine this aspect as a potential influence on our variables. We added this information in the Introduction and Participants sections. |
| A brief mention should be made in the participants section about the number of participants for Time 1 and for Time 2 (although you mention it in the results). | We mentioned the number of participants in Time 1 and 2 in the Participants and Results sections. |
| More details about the steps you took in the recruitment and data collection process are needed, perhaps adding a "Data Collection" subheading under study design. It feels as if this was glossed over. | We clearly identified “Recruitment” and “Data Collection” sections in the text. |
| Also, it is unclear what the "knowing" subscale of the CAI refers to. This was a significant portion of the study, but, as a reader, I don't know what "knowing" means when it comes to caring. | We added information to clarify the meaning of each of the 3 Caring subscales: Knowing, Courage and Patience. We also provided an Appendix which includes concepts, measurement tools, definition, and sample items from the tools. |
| **Findings:Data summaries, Statistical significance, assertions, themes** |  |
| If you are going to include the fact that "the time differences for CAI\_C and SALI approached significance", I would suggest adding a sentence or two to justify why this needs to be said. Follow up with what kind of trend this near-significance might suggest or how it might represent a concept/factor that could be pursued in future research. | As also requested by Reviewer C, we have removed any reference to “approaching/ close to significance” in the text, table and figure.  |
| **Conclusion - CommentsDiscussion, Implications** |  |
| Again, the "knowing" aspect of the caring scale needs to be explained in the discussion in order for it to have meaning for the reader. | Caring subscales are now explained further in the Measurement Tools Section of the Methodology and in an Appendix.In the Discussion, we added: “The CAI\_K includes awareness of self and others – two concepts that are noted in the Intrapersonal and Interpersonal subscales of EQ-i:S. An improvement in CAI\_K may be due to the clinical and small group educational experiences of the students.” page 16 |
| Suggesting that "Perhaps the increased knowledge and exposure to university life contributed to the changes in the moral reasoning of all groups" seems a bit of a stretch seeing that the educational programs represented both graduate and undergraduate students of different age groups. The exposure to university life would be quite different for first-year undergraduate students than for a first-year graduate student | This suggestion was removed.  |
| Accordingly, I would suggest discussing the potential implications of age and year in school on the results (or at least to consider for further exploration in future studies with a similar focus). | Results of EQ-i:S are normalized by age and gender. We added this information in both the Methodology (Measurement Tools) and some comments on potential effect of age in the Discussion.  |
| A more convincing argument needs to be made for the claim that this study makes an "important contribution" to our understanding of changes in these constructs, especially considering that, in the discussion, it is noted that the results are similar to past studies. How does your study expand upon and add to previous literature? The implications and conclusions could be strengthened. | We indicated in the Discussion that this was the first longitudinal study to measure the 4 concepts concurrently in different disciplines and educational programs. We tested hypotheses concerning the effect of curricula on these concepts. The implications and conclusion have been strengthened and related back to the hypotheses. We have now provided a paragraph in the Discussion on the application of the results to educational curricula, and on suggestions for future research. |
| **Presentation:Format, style, organization** |  |
| Generally fine, although the direct quote in background section does not need to be italicized. | Italics were removed in the direct quote. |
| **Coverage - Comments** |  |
| Overall coverage is acceptable, although some sections could be further explicated to strengthen the paper as a whole (see comments in previous sections). | See above. |
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| **REVIEWER B** |  |
| **Goals, Objectives, Rationale, Research Question, Hypothesis** |  |
| Purpose is clear. |  |
| **Background:Theoretical Framework, Literature Review** |  |
| Examples of the relevance of concepts in health professions professional preparation would be helpful. For example, How does ethical practice/moral reasoning relate to the work of a PT, beyond the obvious patient confidentiality issues? | We developed a table in an Appendix to provide concepts’ definitions, outcome measures and sample items from the measures. |
| **Methodology:Participants, instruments, data collection, data analysis** |  |
| Sample sizes ended up smaller than the projected 25. This should be addressed. | We added information regarding the sample size in the Participants and Discussion (limitation) sections. |
| **Findings :Data summaries, Statistical significance, assertions, themes** |  |
| Findings flow logically from the data. |  |
| **Discussion, Implications, Conclusion,** |  |
| This paper is well done overall. Revision should focus on contextualizing findings with other disciplines. Point made, for example, on p. 14 about effective vs. enhanced functioning would be more meaningful if comparative data were provided from ESI in other disciplines. This would help answer the question whether nursing education programs should strive for enhanced functioning. | About effective vs. enhanced functioning, we provided comparative data on ESI in other disciplines. See page 17. |
| **Presentation:Format, style, organization** |  |
| Formatting is solid overall. Manuscript reads clearly and is well-developed. There are minor editorial issues that need to be resolved through proofing. | We proof-read the manuscript. |
| **Coverage - Comments** |  |
| Manuscript has sufficient/not excessive detail and length to develop basis for conclusion and contribute to SoTL literature.Needs more emphasis in discussion for curricular implications. | We provided further curricular implications in the Discussion on page 19. |
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| **REVIEWER C** |  |
| **Goals, Objectives, Rationale, Research Question, Hypothesis** |  |
| The purpose was clearly stated. No research questions/hypotheses were provided. The rationale for choosing these 4 concepts was articulated, but it was unclear as to why these concepts, in particular, were chosen. Numerous other concepts also affect clinical performance and patient outcomes. Why these 4?. Some reference was made to curricular structure within the programs, but no specifics were given as to the importance of these concepts within each program, let alone detail as to how they are taught.   | In the Introduction we provided more rationale for the choice of concepts, particularly as they relate to the expectations of the nursing and physical therapy professions.We provided hypotheses and the expected group differences based on the curricula of the 4 programs (See Figure 1). |
| **Theoretical Framework, Literature Review** |  |
| This area was the most problematic for me.  The author(s) were interested in 4 concepts. However, no conceptual link was provided between them except that these concepts are important in the health professions. A limited connection is made between ESI and caring, but none of the other concepts.  For 3 of the 4, conceptual definitions (none was provided for moral reasoning/ethical practice) from a number of sources were offered, but no clear decision was made by the author(s) as to THEIR chosen definitions for this particular study. I also do not believe the link between the programs curricula and these concepts was established. The information provided was not in sufficient detail to make this determination.  Furthermore, the literature on any one of these concepts is voluminous; hence, the need for some sort of theoretical framework to tie them all together is critical. | We provided a conceptual framework. See Figure 1. We also provided further explanation of the concepts as they are defined by the measurement tools. See Appendix.The key aspects of the program curricula are described so that the reader can see the potential link between the 4 educational programs and the possible differences in caring, leadership, emotional intelligence and moral judgment.  |
| **Methodology -** |  |
| **Participants, instruments, data collection, data analysis** |  |
| The choice of the particular student populations was interesting and a bit unclear. Why compare PT with nursing students? Their focus is completely different. I could see the BHSc group as some sort of control, but that is not how this study was designed. | As indicated above we now provided additional information about the 4 programs and indicated the differences we might expect between them, e.g., Nursing has a specific caring framework for their curriculum and therefore we expected greater changes in this attribute.Page 8: “The inclusion of these cohorts allowed for the comparison of (a) professional programs versus a non-professional health science program (BHSc), (b) two health professional disciplines (physical therapy and nursing), and (c) two educational methods (problem-based learning and conventional)”These comparisons were addressed in our hypotheses. |
| It is difficult to know if the concepts as operationalized by the instruments were congruent with the author(s) definitions of said concepts (variables), since none were provided. | We further explained the concepts in the text and in an Appendix. |
| A power analysis was executed prior to the study which demonstrated a need for 25 per group for the EQ-i:S only. No reference was made again as to adequacy of the sample size given the power; two of the post-groups were under this number.  This is particular concerning since at least 25 were needed for 80% power.  The ability of this study design to find a difference if one exists must be called in question for all variables. Again…a conceptual match between theoretical definitions and the instruments would have strengthened this study. | We commented in the Discussion about the problem with the resulting sample size, and the small effect sizes of the variables. See page 18. |
| Also, no reasons are given as to why nursing students were not administered the DIT-2. | This paper is part of a larger study in which nursing students completed an additional questionnaire. To decrease the burden of testing, we omitted the DIT-2 for this group. An explanation is provided in the Methodology (Data Collection) section. |
| **Findings**  |  |
| **Data summaries, Statistical significance, assertions, themes:** |  |
| The data appear to be reportedly accurately.  The phrase "close to significance" as listed under Table 2 should not be used. Data are either significant or not. | We removed this comment from Table 2. |
| **Discussion** |  |
| The discussion on ESI was somewhat enlightening. However, given the lack of a theoretical framework in this study, connections between the concepts cannot be made and is somewhat arbitrary at best. Given the results, the reader is left asking the question, “so what?” | Some of our earlier work indicated the correlations between variables. We referred to this work in the Introduction and used the information to design our conceptual framework (Figure 1). |
| **Coverage - Comments** |  |
| Again, lack of a theoretical framework makes interpretation of the results difficult. I do not believe this research informs curricular design in any way.  I would decline publication. | We have now provided a conceptual framework that assists with the interpretation of the results and application to curricular design. |
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| **REVIEWER D** |  |
| **Purpose:Goals, Objectives, Rationale, Research Question, Hypothesis** |  |
| Research question and hypothesis are clearly defined |  |
| **Background:Theoretical Framework, Literature Review** |  |
| Literature review is very comprehensive and interrelates well with rationales and findings |  |
| **Methodology:Participants, instruments, data collection, data analysis** |  |
| Methodology is clear and understandable |  |
| **Findings:Data summaries, Statistical significance, assertions, themes** |  |
| Findings and statistics are succinctly explained |  |
| **Conclusion - CommentsDiscussion, Implications** |  |
| Findings relate well with the literature and emphasize the important roles that educators have to embrace these critical concepts that are needed in these roles in healthcare |  |
| **Presentation - CommentsFormat, style, organization** |  |
| Presentation is systematic and organized |  |
| **Coverage – Comments** |  |
| I would suggest inserting a brief paragraph explaining the importance of EBP and Knowledge Transfer | We provided a conceptual framework and have more clearly interpreted our results as they relate to health professional education. |
| APA formatting and Typos noted directly in text | APA format (using APA Manual, 6th edition) and typos were corrected. |