Author’s response to reviews

Title: Predictors of self-perceived cultural responsiveness in entry-level physiotherapy students in Australia and Aotearoa New Zealand

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Author’s response to reviews:

Dr. Sandra Nicholson

Dr. Liam Messin

BMC Medical Education

18th January 2019
Dear Dr. Nicholson and Dr. Messin,

We would like to thank you and the reviewers for the feedback of our manuscript titled “Predictors of self-perceived cultural responsiveness in entry-level physiotherapy students in Australia and Aotearoa New Zealand”. We have reviewed the comments and provide our responses to the reviewers below. Changes we have made are highlighted in red text within the revised manuscript.

Yours sincerely,

Maxine Te

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Reviewer 1

No changes required.

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Reviewer 2
1. The term 'predictors' is used. I understand this can be common parlance in statistical modelling but in reality, the researchers have found 'associations'. Predictors can be misconstrued as implying causation.

Author response:

As the reviewer notes, the term ‘predictor’ is a common term used in multiple regression analysis. The choice to use of the term ‘predictor’ in this study was based on statistical/research method texts, and also published studies in social science, psychology and education literature using multiple regression analysis [1-3]. To minimise any potential misinterpretation, we have:

1. Where appropriate, we have made changes throughout the manuscript to use a different word. For example, we now use the term ‘associated’ or ‘related’ in a several sections.

2. Included a brief definition of ‘predictor variables’ in the manuscript to explain that predictors are variables associated with the dependent variable.

Specifically, changes have been made in the following sections:

Abstract, page 2, line 9 which now reads:

“This study aimed to evaluate the level of self-perceived cultural responsiveness of entry level physiotherapy students during their training, and explore the factors that might be associated with these levels.”

Abstract section, page 2, line 19, which now reads:

“Fewer number of weeks of clinical placement attended, lower levels of dogmatism, and greater social desirability were related to greater self-perceived cultural responsiveness.”

Discussion, page 12, line 11, which now reads:

“This study is also the first to explore factors associated with levels of self-perceived cultural responsiveness in physiotherapy students.”

Conclusion, page 15, line 19-22, which now reads:
“This study is the first to assess and explore the factors associated with Australian and Aotearoa New Zealand physiotherapy students’ self-perceived cultural responsiveness. The results indicate that higher dogmatism was related to lower levels of self-perceived cultural responsiveness, and higher social desirability was related to higher levels of self-perceived cultural responsiveness.”

Statistical analysis, page 8, line 24 – page 9, line 1, which now reads:

“Predictors are independent variables that are linked or associated with a particular outcome such as the level of cultural responsiveness [53].”

2. The response rate should appear in the abstract

Author response:

We have changed this as recommended (Abstract, page 2, line 16) which now reads:

“A total of 817 (19% response rate) students participated in this study.”

3. I was curious to know if there might be any differences by university but my guess is the numbers may be too small to determine this - plus there would likely be some political sensitivities around this. I wonder if some acknowledgement on this might be worthwhile? That is, why the decision was taken not to compare the different courses? For example, it is possible the association with attachment lengths might be confounded by the type of programme. I don't feel strongly about this point

Author response:

The reviewer is correct. This would be interesting information but we were not able to assess differences between universities due to political sensitivities and differences in sample sizes
between universities (range 86 -758 students). However, as recommended by the reviewer, we have added a sentence outlining our decision not to explore differences between universities (Statistical analysis (methods section), page 8, line 20-21) which now reads:

“Differences between universities were not assessed due to political sensitivities and differences in the sample size between participating institutions.”

4. The description of the demographics section and how this related to census data was not clear to me (p6 lines 16-20). I’m guessing what may have happened is that the questions asking about demographics may have been worded in the same way as they are worded in a census? If that is the case, then that should be stated more clearly. I’d also like to know which demographic questions this referred to. I found it even harder to understand how the 'published work on cultural responsiveness' related to the census data collection. I presume this sentence needs some re-wording as it seems to conflate different ideas.

Author response:

Thank you for the feedback. Based on the reviewer recommendations we have made amendments to the manuscript to make this clearer.

Please see methods section, page 6, lines 17-24 which now reads:

“Content validity for this section of the questionnaire was ensured by including questions and answer options based on published work in cultural responsiveness or based on the census data collection in Australia and Aotearoa New Zealand [9, 24, 36, 37]. For example, questions related to demographic variables such as age, gender, level of study, self-identified ethnoculture, type of program or previous cultural training were adapted from published studies assessing self-perceived cultural responsiveness or based on the literature defining important factors associated with cultural responsiveness. Questions related to ancestry, religious affiliation and spoken language were worded similarly to the Australian 2016 census or Aotearoa New Zealand 2013 census…”
5. In view of the low response rate, it would be reassuring to have some indication of how representative the respondents were compared with non-respondents. One way to do this would be to look at the demographic breakdown of the denominator populations (the universities will have this information) and compare that with the respondents. It won't provide complete reassurance, but knowing if there was a gender or age imbalance or a cultural background imbalance would be pertinent to interpret the results.

Author response:

This is a good point. Unfortunately, we do not have access to this information for all universities involved. Instead, we have attempted a non-responder analysis using two similar strategies.

First, we compared our demographic data and the most recent publicly available data set of registered physiotherapists in Australia [4]. While this is not entirely representative, no significant differences were calculated for the gender of participants compared to workforce data ($\chi^2 = 0.813, p = 0.37$). Please see below for percentages of gender.

- Physiotherapy students in this study: female 64%; male 34%
- Registered physiotherapists: female 67%; male 33%

Second, characteristics of Australian physiotherapy student from published studies have reported the similar trends in gender/age [5-7]. Below we have extrapolated gender and age data from recent cross-sectional surveys completed at different universities in Australia. No significant differences were calculated for the gender of participants compared to data from these studies ($\chi^2 = 3.25, p = 0.335$). While average ages between the studies listed below are slightly different, we feel age differences should not have a major influence on the outcome as age is consistently found to not predict levels of self-perceived cultural responsiveness in student cohorts in other health disciplines [8-15].

- This study: female = 529 (34%); Male = 281 (34%); age (mean (SD))= 22.6 (4.9)
- Knox et al (2017) (five universities, final year students): female = 233 (63%); male = 137 (37%); age (mean (SD))= 23.2 (3.1)
- Edgar (2015) (One university in WA, greater proportion of 1st/2nd year students): female = 152 (66%); male = 78 (34%); age (mean (SD))= 21.2 (3.6)

- Connaughton et al. (2016) (One university in WA, greater proportion of 1st/2nd year students): female = 115 (71%); male = 47 (29%); age = 20 (median)

We have added into the manuscript that the demographic breakdown (gender) from our study reflects the samples from recent studies and workforce data. Limitations, page 15, line 6-8, which reads:

“Also, demographic data for gender proportions reflect recent studies in Australian physiotherapy universities and the current workforce data [73-76].”

Unfortunately, we were not able to compare differences in cultural background as our study used self-identified ethnoculture as recommended in the literature.

6. In table 2 the "p<.05" is indicated by asterisks but it is not clear what was compared with what. For example, there is an asterisk under CAS for 1st year and 2nd year but not 3rd year or 4th year. So one assumes 1st year was different from something - was it different from year 2, 3 or 4 or all of those? Or maybe it implies that 1st year was different from 2nd year? This needs to be clarified. Each table really needs to be understandable on its own without undue reference to the text or to other tables/figures.

Author response:

We have amended the table as recommended by the reviewer. The differences between the year groups are now clearly labelled in the table and table figures for each outcome.

Please see Table 2.
7. In table 3 there are figures indicated by 2 asterisks but the footer only provides information on data with one asterisk. I presume this is a simple typographical error?

Author response:

Thank you for pointing out this error. We have changed the asterisks to make them consistent.

8. I'm not sure we need figures 1-3 as well as table 2

Author response:

Thank you for this feedback. We agree and have removed figures 1-3 and have kept table 2. The decision to keep the table over the figures is to allow future the readership to have access to the numerical data for any data synthesis in meta-analyses.

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Reviewer 3

I have two small wording suggestions:

- In this sense, individuals who are dogmatic would likely process information about different or competing health beliefs and practices in a biased or dismissive manner.

- Additionally, these results could also represent the increasing ability of students over the duration of their training to effectively self-reflect on their abilities

Author response:
Thank you for the feedback. We have changed the wording as suggested by the reviewer. Please see page discussion section, page 13, line 1 and discussion section, page 14, line 21.

“In this sense, individuals who are dogmatic would likely process information about different or competing health beliefs and practices in a biased or dismissive manner.”

“Additionally, these results could also represent the increasing ability of students over the duration of their training to effectively self-reflect on their abilities”

References


