Author’s response to reviews

Title: Is undergraduate physiotherapy study a risk factor for low back pain? A prevalence study of LBP in physiotherapy students

Authors:
Leah J Nyland (eahnyland@hotmail.com)
Prof Karen A Grimmer (karen.grimmer@unisa.edu.au)

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Response to Reviewers

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Is undergraduate physiotherapy study a risk factor for low back pain? A prevalence study of LBP in physiotherapy students.

Reviewer: Jean Cromie

Point 1. The findings as reported are correct, and the confusion in interpretation seems to have come about because the reviewer seems to be linking the information presented in Figure 1 (12 month prevalence frequency reports) with the information presented in this paragraph. To avoid similar confusion in readers we have clarified how we considered the data and the combinations of the data that we present. We have reworded the paragraph as follows:

Considering subjects’ responses to all categories of LBP prevalence (LBP ever, LBP in the previous 12 months, LBP in the previous month and LBP in the previous week) we found that 30.8% subjects reported never experiencing LBP, 5.2% students reported experiencing LBP earlier in their life, but not in the last 12 months, 19.6% students reported LBP within the past 12 months (but not in the last month), 17.6% students reported experiencing LBP in the past month (but not the past week), and 27.2% students experienced LBP in the past month as well as the past week.

We hope that this clarification addresses the reviewer’s confusion.

Point 2: Table reference is corrected.

Point 3: The reporting has been standardised to reflect Confidence Intervals, rather than Confidence Limits.

Point 4: It is a moot point as to what is ‘significant’ when reporting confidence intervals. To ignore a finding where the confidence interval skims 1 may be as incorrect as acknowledging it as significant, particularly where measurement error may be masking the true nature of the association. However, Reviewer 1 is correct in that our approach was inconsistent, and we have attempted to take a consistent approach to reporting significance, by denoting with a * in Table 4, those associations which have confidence intervals skimming 1, and thus differentiating them from those associations which appear to have a more significant association (++). We have tried to be more circumspect in the text as well.
Point 5: We have clarified our reporting in Table 4, and have amended our descriptions of our findings in this table as follows (pp12):

Year level and gender exposure: Table 4 illustrates that, compared with the first year students, all other students incurred significantly elevated risk of one-week prevalence of LBP. The fourth year students also demonstrated significant elevation of risk for all other measures of LBP (lifetime, 12 month, one month as well as one-week prevalence).

There were differences in gender-specific risk of LBP. Females in fourth year sustained a significantly elevated risk of all measures of LBP compared with first year females, whilst there was no difference in risk of any measure of LBP for males in these year levels. In contrast, males in second and third year showed a consistent increase in risk in most measures of LBP compared with first year males, whilst females in second and third year levels generally showed no difference in LBP risk. The significant increase in one-week prevalence in second year females compared with first year females may reflect a chance finding, or an artifact of the data.

Point 6: In seeking comparison data (from Cromie’s paper) for our study, we took our lifetime prevalence estimate from pp341, para 1 (quote) ‘488 respondents (91%) reported experiencing work-related musculoskeletal pain or discomfort at some time in their working life. For 225 (48%) of these respondents, the most serious work-related problem concerned their low back…….’

If this is an incorrect interpretation of the findings then we have no choice but to remove this information from Table 6.

Point 7: We have removed the term ‘clinical’ from page 16.
Reviewer Lise Hestbaek

Point 1: We have addressed this point in our response to reviewer 1.

Point 2: This has been addressed as per comments by reviewer 1.

Point 3: Corrected

Point 4: We have attempted to explain more appropriately how we analysed the data, as outlined in Table 1. The amended paragraph is as follows:

Table 1 outlines the associations between LBP prevalence measures and exposure variables that are reported in this paper. Due to the time-period of data capture for exposures, not all were relevant to all LBP prevalence measures. Gender, age, year level of study and length of study were relevant exposures for all measures of LBP. Lifetime occupational and sport participation exposure measures were relevant to lifetime LBP prevalence, but not to more recent LBP measures. Educational exposures measured over the past month were only relevant to one-month and one-week LBP prevalence. Weight and height were unlikely to be related to one month or one-week LBP prevalence because of limited potential for change in exposure, but may well be related to 12 month prevalence. On the other hand, changes to height and weight over a lifetime would reduce the usefulness of these variables as exposures for lifetime LBP prevalence. Self-assessed fitness was potentially relevant to 12 month, one-month and on-week prevalence measures.

Point 5: This has been addressed

Point 6: Corrected

We trust that these changes now make this paper suitable for publication.

Sincerely,

Ms Leah Nyland

Associate Professor Karen Grimmer