Author's response to reviews

Title: Do Patients Perceive a Link Between a Fragility Fracture and Osteoporosis?

Authors:

Lora Giangregorio (lmiangr@healthy.uwaterloo.ca)
Alexandra Papaioannou (papaioannou@hhsc.ca)
Lehana Thabane (thaban@mcmaster.ca)
Justin DeBeer (justindebeer@cogeco.ca)
Ann Cranney (ancranney@ohri.ca)
Lisa Dolovich (ldolovic@mcmaster.ca)
Anthony Adili (adiloff@mcmaster.ca)
Jonathan D Adachi (jd.adachi@sympatico.ca)

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Author's response to reviews: see over
Editor-in-Chief
BMC Musculoskeletal Disorders

Re: Manuscript submission

To the Editor

Thank you for the opportunity to respond to the reviewers’ comments and revise our manuscript. Please consider the revised full length article manuscript, entitled “Do Patients Perceive a Link Between Fragility Fractures and Osteoporosis?” for publication in BMC Musculoskeletal Disorders. The manuscript has not been submitted elsewhere for publication. All authors have read and approved of the manuscript, and have made significant contributions to the research of the submitted manuscript.

My contact information (corresponding author) is listed below. If you have any questions or concerns, or if any information is missing from this submission, please let me know. Thank you for your consideration.

Sincerely,

Lora Giangregorio, Ph.D.
Department of Kinesiology
University of Waterloo
200 University Ave W
Waterloo ON N2L 3G1
Telephone: 519 888 4567 x36357
Fax: 519 885 0470
Email: lmgiangr@uwaterloo.ca
Response to Reviewers:

1. Results: It was very interesting that only 17% of respondents attributed their fragility fracture to osteoporosis. For those patients who did not attribute their fractures to osteoporosis, did the authors assess what factors they thought were related to/caused their fragility fractures?

We agree with the reviewers that it would be interesting to assess the factors that fragility fracture patients attribute their fractures to. We have some qualitative comments from patients that speak to this issue, but felt an analysis of the qualitative comments in addition to the quantitative analyses presented here would create a paper with too broad a scope and too many objectives, diluting the message that results from the quantitative analyses.

2. The authors assessed respondents’ participation in osteoporosis prevention behaviors (e.g., exercise, calcium intake, fall prevention). Previous studies have identified such behaviors as important correlates of perceived risk of osteoporosis. I was curious as to why these factors were not included in the list of potential correlates (described on p. 7), and the author’s justification for excluding these variables from the analysis. Did any of these variables correlate with their perceived risk of future fractures?

We thank the reviewers for their insight regarding potential predictors. We did consider including osteoporosis prevention behaviours as potential predictors, and in fact included use of an osteoporosis medication as a potential predictor. Use of osteoporosis medication was not a significant predictor of perception of future fracture risk. We did not include participation in exercise or fall prevention because the amount of exercise/fall prevention a patient performs is difficult to accurately verify in a brief telephone interview, and we felt that we would not be able to quantify it sufficiently to include it as an accurate predictor.

3. Discussion: The authors suggest that if fragility fracture patients do not perceive themselves at risk for future fractures, they may be less likely to engage in recommended treatment (or prevention behaviors). Based on the present findings, do the authors have any specific suggestions on how to increase patient understanding of their future risk?

The reviewers make an important point; it is necessary to provide the reader with ideas how to increase patient perception of risk. On page 13 in the discussion we suggest that it is necessary for health care providers to communicate to patients that having a fragility fracture increases the risk for future fractures. We feel that the following statement in the conclusion reiterates this message: “It is crucial for health care providers to communicate to the patient that increasing age and having a fragility fracture increases the risk for future fracture, so that patients can become active participants in chronic disease management.” However, given the reviewer’s comment, it is likely that the message is not clear, so we have added the following sentence to the conclusion: “It may also be necessary to rethink the way we convey messages about fracture risk to patients; rather than relying on brief verbal communications between
patient and physician during follow-up visits, the message could be emphasized using well designed written materials that include attention-grabbing graphics. As well the message that fragility fracture equals risk of future fragility fracture needs to become part of a nationwide post-fracture care initiative that targets patients in hospital so that all patients are made aware of the risk.”

**We have also added the following sentences to the discussion:**

“Further, the method of communication may be crucial. For example, a recent study demonstrated that patients preferred simple bar charts with absolute lifetime risk depicted on them (38).”