Author's response to reviews

Title: Practice patterns of doctors of chiropractic with a pediatric diplomate: a cross-sectional survey

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Version: 2 Date: 3 May 2010

Author's response to reviews: see over
May 3, 2010

Dear Nina Titmus and the BioMed Central Editorial Team,

I am pleased to resubmit the revised manuscript “Practice patterns of doctors of chiropractic with a pediatric diplomate: a cross-sectional survey” to *BioMed Central’s Complementary and Alternative Medicine (BMC CAM)*.

In the reviewer comments listed below I addressed each concern on a point-by-point basis. I would like to sincerely thank the reviewers for their thoughtful and insightful comments. Their suggestions have helped to strengthen this paper.

I believe that the study described in this manuscript is an original and innovative survey of doctors of chiropractic who specialize in pediatrics and is well suited to the *BMC CAM* readership.

Sincerely,

Katherine A Pohlman, DC, DICCP
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Reviewer’s report

Version: 1 Date: 31 March 2010
Reviewer: Anthony Lisi

Reviewer's report: Discretionary Revisions
1. It was not the purpose of this study, but it may be interesting for Discussion to consider if there is any indication that these diplomate programs actually prepare providers to deliver better quality care for pediatric patients. That is, do we have (or not have) reason to think that graduates of such programs provide safer, more effective care for pediatric patients than other chiropractors?

See Discussion section, Future Direction.

Minor Essential Revisions
2. "Gym owner" and "exercise instructor" are not commonly considered providers. Suggest using alternate terminology.

Removed these terms.

3. To my knowledge, the Diplomate programs in question consist of weekend seminars with no clinical rotations. This is substantially different from medical specialties and should be clarified.

Added a sentence in the last paragraph of the Background section, as well as additional information in the 2nd paragraph of the Discussion.

4. You state that these diplomate programs are administered through an accredited chiropractic college. To my knowledge, the chiropractic colleges that administer these diplomate programs are accredited for the professional (DC) degree only. The diplomate programs themselves are not accredited by any educational regulatory body. This should be clarified.

Added sentence into the 2nd paragraph of the Discussion, removed “accredited” from the background section.

Major Compulsory Revisions
5. Comparison with NBCE and National Health Statistics Report are interesting, however different methodologies were used in each case which makes direct comparison of results weaker. This should be stated as a limitation.

See Discussion, added more info about the methods used for the NBCE and the NHSR.

6. You measured practitioner demographics, practice characteristics, treatment procedures, referral patterns, and patient characteristics. Conspicuously absent is diagnostic procedures. This should be explained and/or stated as a limitation.

Added to Methods, Data Collection 3rd paragraph.
7. Although diagnostic services are not reported, you do report that chiropractic assistants perform x-ray development, take x-rays and obtain patient case history. Also, the use of physical examination and radiographs (from NBCE data) is mentioned in the Discussion. This can be confusing, particularly as it relates to the use of radiographs in a pediatric population. Please provide results on your respondents' use of x-rays in patients under 18 years old, or state that you did not collect this information.

See revised Results, Practice Characteristics, paragraph 2.

8. Listing of named chiropractic techniques is likely not meaningful to most non-chiropractor readers. There should be additional generic description provided to group these techniques into categories that are more widely understandable. Consider the following example:
spinal manipulation techniques involving a high-velocity thrust typically associated with joint cavitation or "popping (Diversified); spinal mobilization techniques which may involve a thrust but not typically resulting in joint cavitation (Activator, Thompson); mind-body techniques aimed at evoking a somatic reflex (Neuro-Emotional Technique); etc.
The above language may not be the best choice but something along those lines is necessary to make this text relevant to a wider audience than chiropractors.

See Results, Treatment Procedures, Chiropractic Techniques, paragraph 1, revised to include a brief description of techniques.
Reviewer's report

Version: 1 Date: 12 April 2010
Reviewer: Lise Hestbaek

Reviewer's report:
This seems to be a very well executed study with sound methods and analyses. The method and the result sections are very well written and easy to read. I have some problems with the discussion and conclusion as described below. However, this only requires some restructuring of the discussion and I think it will be suitable for publication.

1. Is the question posed by the authors well defined? Yes
2. Are the methods appropriate and well described? Yes
3. Are the data sound? Yes
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes
5. Are the discussion and conclusions well balanced and adequately supported by the data? No
6. Are limitations of the work clearly stated? Partly
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes
8. Do the title and abstract accurately convey what has been found? No
9. Is the writing acceptable? Yes

Major compulsory revisions:
1. Analysis of non-responders. Although the authors consider a response rate of 62% satisfactory, the sample may not be representative. I realize that it is not possible to compare the final sample with the target sample on all parameters, but it should be done where it is possible, e.g. one of the conclusions of the study is that the majority is female - this could be calculated for the whole sample from the names. I don't know if the authors have access to other information, such as practice characteristics and additional degrees for the target sample, but an attempt should be made to document representativeness.

We were only able to determine sex from the target sample lists, but added this information in the 4th paragraph of the Discussion.

2. When your abstract conclusion concentrates on similarities and differences between DCs with a pediatric diplomate degree and other surveys of typical chiropractors, I would like a more stringent comparison between the results from this study and other studies in the discussion. Otherwise your conclusion is not supported by your manuscript. Take each result and compare it to previous surveys, where possible. Examples:
   a. 4th paragraph: Although this differs from the typical doctor of chiropractic it is similar to
      Give us the male:female ration for the typical DC and a reference.

   Added the NBCE female percentage in the 5th paragraph and modified conclusion.

   b. 5th paragraph: I don't see the relevance to this study.

   Removed.
c. 6th paragraph: "...higher referral lower referral pattern...." How much higher or lower? Is it relevant, significant or just borderline, that could be a coincidence?

Removed this paragraph and added a more succinct sentence to the 8th paragraph of the Discussion.

d. In the conclusion you write:... they are more likely than other chiropractors to treat young patients "That is probably correct - we would have guessed that without doing a study. The study provides information about the age distribution of the patients in the study, but I don't find comparative figures for other chiropractors.

Added statistics from the NBCE job analysis concerning the age of respondents' patients' age in the 3rd paragraph of the Discussion

Minor compulsory revisions:
1. Under "Strengths and limitations of the study", 1st paragraph, last sentence: I don't think you can conclude from using different sampling strategies that you have a representative sample.

We agree and removed this sentence.

2. Same section, 2nd paragraph, last sentence: I don't understand this sentence. How does honesty relate to sampling strategy?

Removed that portion of the sentence.

3. Please label the tables that are presently included as supplementary material. After printing, there is no indication of what the table represents. Maybe include it in the manuscript?

The table titles are given on the last page of the main manuscript.

Discretionary revisions:
1. Background, 5th paragraph, 2nd sentence: "Of the various programs offered "I don't see the relevance of this information in relation to the present study.

Removed this information.

2. Results, Treatment procedures, Chiropractic techniques: Is it true that both the proportion using cranial therapy and extremity manipulation are 77%, or is it a mistake that it is the same figure?

Cranial therapy was 0.7693 and extremity manipulation was 0.7664.

3. Results, Treatment procedures, Additional therapies: It is easier to read if you follow the same pattern of recording. In the first paragraph you start with therapies provided once per month followed by therapies provided every other week. In the next paragraph it is the other way around.
4. There seems to be a large difference in the volume of the two pediatric programs described in the discussion. It would be interesting to see, if there are differences in practice patterns between the two groups.

Possible idea for a second paper, currently wanted to focus on the speciality as a whole.