

Jun 18, 2008

RE: NRES-D-08-00075, titled "Meta-analysis of quality-of-life outcomes from physical activity interventions"

Dear Dr. Conn,

Recently you sent your manuscript for consideration by Nursing Research. The review of your manuscript is complete and the comments of the reviewers are listed below along with a checklist for style. You may revise your manuscript based on the reviews and resubmit the manuscript to Nursing Research for further consideration. I will verify that this has been done upon receipt of the revised manuscript.

Please include with your revised submission an itemized, point-by-point response to the comments of the reviewers. The revisions should be completed by Sep 16, 2008 to avoid being considered as a new submission.

To submit a revision, go to <http://nres.edmgr.com/> and log in as an Author. You will see a menu item called "Submission Needing Revision." Please click on this item to obtain your submission record and begin the revision process.

With Kind Regards,

Molly C. Dougherty, PhD, RN, FAAN
Editor
Nursing Research

Reviewer Comments:

Reviewer #1: Examination of Quality of Life and Physical Activity is an important topic. Certainly a Meta analysis is one way to pool results and draw statistical conclusions.

However, some of the writing style is difficult to read. For example research question 1 "What are the overall effects of interventions to increase PA on QOL outcomes after interventions?" This could be stated in a much better and easier to understand fashion. The introduction is also confusing.

Second, many comments refer back to previous work. I don't want to read the previous work to understand what was done. Specifically what MESH words were searched? What diverse strategies were used for the searches? The selection criteria could be presented in a table form and why 1970? That is a rather broad time frame. Was there a reason for it? The conclusions are great and the unexpected finding about unpublished and unfunded work quite interesting.

Reviewer #2: Review of Manuscript # NRES-D-08-00075
"Meta-analysis of quality-of-life outcomes from physical activity interventions"

There have been many studies of the effects of interventions on physical activity among the chronically ill. This study focused on the effects of physical activity on quality of life through a quantitative meta-analysis of 66 studies. The purpose was to address four research

questions (a) overall effects of physical activity intervention on quality of life; (b) variance of these effects by characteristics of participants, methodology, or interventions; (c) association of physical activity behavior outcomes with quality of life outcomes; and (d) the difference in control groups outcome measures over time. This paper is very well written and provides a strong summary of the previous work. It is significant and adds considerably to the current knowledge.

The search of published literature was supplemented with a search for unpublished studies, a strength of the project. It would be helpful to the readers to know (a) the proportion of these 66 studies that were unpublished, (b) how they approached the investigators to obtain the results of unpublished studies, and (c) the response rate. The sample size for this meta-analysis was large enough, represented both experimental and pre-experimental designs, and included studies of different types of populations and physical activity interventions.

The coding and management of the data is well described and well referenced. Several points could be explained more thoroughly. First, "common language effect size" is discussed in the narrative as a proportion (53% (58%) of the subjects would have a better quality of life value) but the derivation of this is not clear in Table 1. Second, the "assumptions of association" discussed in the narrative should be explained further. Third - explain how the funnel plot (effect size by variance) is a publication bias assessment.

The results are described concisely and clearly, although information from the tables could be explained a bit further in the narrative. For example, clearly stating how many of the 66 studies were unpublished, including the median as well as the range of sample size, attrition, and mentioning the distribution of time and types of interventions included.

Further explanation is needed here for the CLES and a context for the minimal difference in probability of better quality of life scores between control (51%) and treatment (53%) subjects.

The discussion of findings is well done and remains within the scope of the modest effects findings. This section is very well done and clearly answers the research questions although the authors might consider including the heterogeneity in the discussion of the modest effect size. Another potential point to consider in the discussion of the larger effect size from unpublished studies is the possibility that the investigators in those studies may have been more likely to share the results for the meta-analysis if their results were clearly positive. Knowing the number of investigators contacted for unpublished results and the number who subsequently shared their results would be useful here.

Reviewer #3: An extremely well-written and important manuscript. You have included a wide variety of types of studies, as well as samples sizes; I would think that the interventions also would have varied considerably in terms of intensity, duration, and approach; assessment of physical activity and QOL must also have varied. All of this leaves the quality, hence, validity of the studies in question. Can you comment on this in manuscript? I realize that there are too many studies for you to present Forest plots (unless perhaps in one of the subgroups), but the manuscript is really heavy number-wise and not very "reader-friendly"; nurses need to become more comfortable reading meta-analyses and I wonder if there is any way for you to make the content here more accessible.

CHECKLIST FOR STYLE

Title Page -- Supply running head of less than 50 characters (no abbreviations).

Please avoid the use of first person in the text.

Update "in press" references.