Reviewer’s report

Title: Computer-induced health complaints and sources of ergonomic instructions in computer-related issues among Finnish adolescents: A cross-sectional study

Version: 2 Date: 25 March 2009

Reviewer: Nathaniel Hupert

Reviewer’s report:

Major Compulsory Revisions:

Abstract: To avoid computer-associated complaints,…

--Although this is obviously the reason for any ergonomic educational program, stating it this way sounds a bit odd...

p. 3: Adolescent computer users are at a greater risk of several musculoskeletal health complaints.

--Greater than whom? Where is the evidence?

p. 3: The risk has grown as time spent on computers has increased [5].

--I assume this is not a historical statement, but is rather a poorly worded attempt to say that other researchers have noted a dose-response relationship between time on computers and severity or extent of symptoms.

p. 3: Results have suggested that computer use induces pain and discomfort not only in the neck-shoulder or back regions [8, 9, 10, 11, 12, 13, 14] but also in the hands, fingers or wrists [8, 10, 11, 13, 15] and eyes [8, 10]. Most of the studies have been cross-sectional with unrepresentative, small samples.

--This is insufficient; "results have suggested computer use induces.." is once again placing causality where it cannot scientifically be supported. The second sentence, intended I am sure as a caveat, is not good enough—the authors must state explicitly that cross-sectional studies cannot be relied upon to draw conclusions about what "induces" what.

p. 8: After first examining each health complaint in the model adjusted for age and sex, computer use time was included. These variables were considered potential confounders and treated as covariate, because the response alternatives were categorical...

--I am confused as to which variables are considered "potential confounders" of what other variable here….which was treated as a covariate?

p. 10: The most commonly reported symptom among computer users in the eyes, and the least common pain location was the lower back (Table 1).

--This is awkwardly phrased (vs., e.g., "Computer users reported symptoms in
multiple body locations; eye discomfort was the most common, and lower back symptoms the least common.

p. 10: The prevalence rates of health complaints increased with age, and girls reported more symptoms than boys.

--Prevalence is not a rate! Incidence is a rate, prevalence is a ratio, or is just "prevalence".

p. 10: Daily computer use of 4 hours or more increased frequent health complaints statistically significantly in all anatomical sites...

--Since the actual prevalence by body location was given for the comparison in the prior sentence, the analogous data should be presented here for the increased complaints (that is, the reader should not have to be left wondering what the absolute difference in reported complaints is, never mind the fact that it was stat. significant).

P. 13: IMPORTANT:

"Receiving these instructions was not related to lower prevalence of computer-associated health complaints."

--This is not quite accurate, since it was only via your model that you presented these results (I don't see unadjusted findings in the results section). So you should say something like, "After adjusting for [recognized, assumed, ...?] factors that influence the relationship between computer use and symptomatology, we did not find a statistically significant association between prior receipt of ergonomic instruction and decreased levels of reported symptoms".

p. 16: "Overall, no relationship was found between ergonomic instructions and occurrence of health complaints, except that there were more eye-related complaints among adolescents who reported having received ergonomic instructions or being ergonomically self-instructed..."

--Same concern as above...

p. 19

This report shows that ergonomic instructions on how to prevent computer-related musculoskeletal problems fail to reach a substantial number of children.

--I would not be quite so negative; something that might work is:

"This report shows that ergonomic instruction has failed so far to reach a substantial proportion of the Finnish school-age population, and furthermore that such instruction may not be associated with reduced levels of computer-related symptoms."

**Level of interest:** An article of importance in its field
Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.