Reviewer's report

Title: Psychometric Properties of two Physical Activity Questionnaires, the AQuAA and the PASE, in Cancer Patients.

Version: 2 Date: 24 January 2011

Reviewer: Duncan J Macfarlane

Reviewer’s report:

• Major Compulsory Revisions
NONE that is evident.

• Minor Essential Revisions
1. P15 Para 1 – the claim that the construct validity was comparable to other PA self-reports needs some modifications/substantiation, as it is too general as I feel it overstates the situation somewhat, even though on Page 15 Para 1 two recent and comprehensive reviews are cited. I feel both sections somewhat overstate the comparisons between this study and others by claiming others show similar results. A number of currently and widely used PA questionnaires (eg. IPAQ, 7D-PAR, GPAQ), have construct validity often around 0.2-0.3 (Spearman rho, and often statistically significant – although clearly not in all studies – some are indeed poor, but equally some are quite reasonable/fair correlations such as the substantial study by Craig et al 2003, rather than poor correlations). Thus I feel the claim that the low and non-significant rho values seen here (0.05 and 0.16) for the Summary PA are actually quite poor and, arguably closer to the lower end of the spectrum reported and below a typically average/median correlation (if there is such). Hence I think it is a bit unfair to imply these validity correlations are similar (and effectively no worse) than others, when in fact they look lower?

2. Table 2: Please define T1 and T0 as well as SDD95 (and arguably SDD95/range95) simply to help some readers so they do not need to have to refer back to the main text and the table can stand alone (not a major problem).

• Discretionary Revisions
3. P5 para 2: perhaps better to state specifically, that “On the 8th day they completed both the AQuAA and PASE at their homes (T0) and after 5 further days the patients completed the questionnaires ....”

4. Possibly add the Terwee Sp Med review citation (ref 11) on Page 8 Para 3 to support the statement there is no gold standard for measuring PA.

5. Possibly mention in the limitations of the Metzger et al MSSE 2008 paper as a source of more recently justified accelerometry cut-points, rather than using the older (but perhaps still more popular) Freedson cut-points.
6. Is the fact that the PASE has such gross “duration” options (1, 2, 3, 4 hours) mean that are almost more nominal than continuous variable, and contribute to its poor correlation?? If so, this seems to be a very unfortunate limitation with this scale and worthy of mentioning in the Discussion? We know most people do not exercise for more than 30 minutes per day – so to have a scale whose smallest unit of duration is “less than one hour” seems very imprecise (people who do 5min and 55 minutes get clustered together and treated as being "the same" - this seems very odd). Surely this scale does not discriminate well among most participants (very large numbers must appear in the “less than 1 hr” and virtually none in the “4 hour” category). Hence it fails at its primary job, to help discriminate durations among a high percentage of the respondents??

**Level of interest:** An article whose findings are important to those with closely related research interests

**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'