Reviewer's report

Title: Physicians intentions and use of three patient decision aids

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Reviewer: Alan Montgomery

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General

This is a very well written paper describing a cross sectional study of physicians’ intended use of three patient decision aids. The aims of the study are clearly stated, the methods are appropriate and well executed, the results are clearly presented, and the discussion is generally appropriate based on the findings. I enjoyed reading it and think it is a useful addition to the literature.

The main issue I have with this study is the use of intended rather than actual behaviour as the main outcome variable. Even with the study completed, it might be possible to address this limitation with some secondary analyses, and it certainly should receive greater attention in the discussion section. More below.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

None.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. p5. The three decision aids are referenced; however a brief sentence stating whether any have been demonstrated as effective, including refs, would be helpful.

2. p6. Was there any further stratification of sampling (in addition to Dr-type), for example geographical location, age, postgraduate qualifications etc to ensure that representative samples were invited?

3. p6. The sample size calculation just needs a little clarification. I think by stating 150 per group, it implies separate analyses for each physician group, and n=150 would not allow a detectable margin of error of 10% unless the proportion with the outcome was at least 75%. Later it is clear that main analysis includes all three physician groups together.

4. p6. I’m not sure I agree that a survey response rate of 60% is conservative, also borne out by the actual response!

5. p8. The decision to include respondents with 1 or 2 missing data items seems a sensible pragmatic approach – is there a reference for this approach? Also, imputing values based on the mode (or other summary measure of the observed data) can cause problems by underestimating the variance of a particular variable. Other methods, such multiple imputation using regression methods, are available and are usually produce more conservative (ie larger) variance estimates.

6. p8. I am not an expert on factor or principal components analysis. However, aside from face validity, aren’t there usually other criteria (eg eigenvalues, cronbach’s alpha) used to determine the eventual number of factors/components?

p9. How were the components scored for the regression analyses vs intended use of DA?

7. p9. A little more information on the modelling strategy would be helpful here eg all univariable associations examined first, then variables with associations p<.2 entered into multivariable regression.

8. p9 and table 1. The respondents are described – are there any similar national data available to enable comment on the generalisability of the sample?
9. p10-11. I found much of this text repeated what was in the tables and became rather tedious. For me, the main analyses of interest are those in tables 5 & 6. Can the authors reduce the amount of text relating to the earlier analyses by just picking out one or two of the main points?

10. Results tables. Please give all p-values rather than designate those with p>0.05 as ‘non-significant’. See Sterne & Davey Smith, 2001, BMJ http://www.bmj.com/cgi/reprint/322/7280/226

11. p12. Terminology. Conventionally, univariate and multivariate are used to describe analyses with 1 and >1 outcome variables respectively; for multivariate, this means the simultaneous analysis of more than one outcome variable in the regression model. PCA is an example of a multivariate analysis. Univariable (which I think is what is actually meant by use of the term bivariate on line 18) and multivariable regression describe the analyses conducted here – namely, each with just one outcome variable in the model (in this case, intended use of DA, Y/N), and 1 or >1 predictor/independent variables respectively. See Armitage, Berry & Matthews, Statistical methods in medical research, 4th Ed. p429.

12. p12. The penultimate sentence (“While physicians…”) is not a proper sentence.

13. p12. The last sentence states that “Family physicians were three times more likely…” – I think the OR in table 5 to which this refers is actually 4.2.

14. Table 5. Please give N’s and denominators for each cell, rather than just ORs, 95% CI and p-values. e.g. create 2x2 table for comfort offering DA versus intention to use DA, etc. For predictor variables with >1 level, instead of giving p-values for each level compared with reference category (analogous to sub-group analyses), should just quote single p-value from Wald or partial LR tests. This is done after running the regression model in Stata, I am sure there must be an equivalent in SPSS.

15. Discussion. As I mentioned in my general comments, I think the main limitation of this study is in the use of intended, rather than actual, behaviour as the outcome measure. Data on actual use were not collected from everyone. However might there be value in a secondary analysis that assumes non-use for everyone who did not say they used it at 3 months? The discussion focuses on self-report of behaviour rather than intention vs actual (whether self-reported or measured in some other way). As we all know, good intentions don’t always translate into changes in behaviour, and I think this deserves much more attention in the discussion. I would guess that future work would look at predictors of actual behaviour, measured in ways other than just self-report, such as logged use via the web.

Discretionary Revisions (which the author can choose to ignore)

None.

What next?: Accept after minor essential revisions

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.