Reviewer’s report

Title: Colorectal cancer screening knowledge, attitudes and behavioural intention among Indigenous Western Australians

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Reviewer: Sarah Damery

Reviewer’s report:

This is a useful paper which addresses an under-researched population group with regard to screening uptake. As such, it tackles an important question. I have a problem with papers which study intention to screen rather than uptake, since by definition, these studies can have only limited utility and it is well known that intention to screen is rarely an adequate proxy for actual uptake. However, the authors recognise this in their limitations. The study was fairly well designed (and the authors note the limitations attached to the way that participants were recruited, for example), and a large amount of data was collected and analysed. The methods are in general well described, but more attention should be paid to the analyses that were performed – particularly the multivariate analysis. The discussion raises some useful points, but ought to be better structured. The conclusions do not entirely follow from the foregoing results and analyses presented.

Major compulsory revisions

ABSTRACT
1. The results section of the abstract is confusing. The authors state that “Almost a third (63%) of respondents reported intending to participate in screening”. 63% is not one third.

BACKGROUND
2. The background needs to be significantly shortened. There is a lot of repetition, and although much relevant literature is referred to, a re-structuring of this section would improve it considerably and make the salient issues clearer.

3. The aims of the research need to be clearly stated in the background section.

4. The way that the Australian bowel cancer screening programme operates needs to be described in more detail. At present, the only information offered is that the programme started in 2006, uses FOBT, and offers screening at the ages of 50, 55 and 65. The implications of poor uptake, and potential improvements to the programme cannot be assessed if readers are not made fully aware of the detail of the current operation of screening in Australia.

METHODS
5. The survey instrument should be uploaded as a supplementary file if this has not already been done
6. The way that the knowledge score was derived needs to be better described, particularly with regard to the way that the different facets of knowledge were treated in the analysis, and how the different responses were categorised and grouped.

7. Participant selection: why did the study sample include individuals aged between 25-44 years of age when the study inclusion criteria were stated as 40+?

8. The regression methods described appear to relate to a backwards stepwise model rather than a forward one: this needs to be clarified.

RESULTS

9. The way that the results are described is often incredibly confusing, and it is frequently unclear which numbers are being referred to and how these relate to the tables. For example, one sentence states “Only 15% (11/72) could give a correct description of any aspect of bowel cancer. Even fewer were aware of what polyps were (29%, 25/86). 29% is not fewer than 15%.

10. Similarly, another sentence in the results section says that “Most (86%) respondents did not know what an FOBT/bowel screening test was...only a slightly higher proportion (30%, 27/91) reported having ever heard of this test. Again, 30% is not higher than 86%. These inconsistencies need to be clarified.

11. Where percentages are stated, the number of individuals that this refers to needs to be stated also. This is particularly important given the confusions that I have noted above.

12. Significantly more detail on the multivariate analyses needs to be offered.

13. The “Factors affecting screening intention” section, under “socio-demographic factors” has a typographical error. The sentence in question currently reads “Those who intended to participate in screening were more likely to married or de-facto relationships”. There are some words missing here.

14. If talking about certain sub-groups being x times more likely to do something or to have a particular attitude, then the odds ratios are needed, either instead of, or preferably in addition to, the p value.

15. It is unclear why the odds ratios for the multivariate analyses are higher than the univariate analyses. Statistical review of the manuscript may be required.

DISCUSSION

16. This needs to be sub-divided into sections as the present structure is rather scattergun and difficult to follow in places.

17. In the paragraph beginning “only 5% of our sample...”, reference is made to kit recall in 2009. The reader will be unaware of what this means. As I said at the beginning of this review – providing more information and background to the operation of the bowel cancer screening programme in Australia would go a long
way to addressing these sorts of issues.

18. Intention is conflated with uptake several times throughout the discussion. For example, the authors state that 87% of people said that they would do the FOBT test if their doctor recommended it, which is consistent with other studies that show endorsement of screening by a primary care professional can facilitate participation. This is not actually the same thing, and goes back to the hypothetical vs. real world uptake issue that I alluded to earlier. These inconsistencies need to be addressed.

CONCLUSIONS

19. These need to come after the limitations section.

20. The conclusion section is too long, and would benefit from being shortened, otherwise it merely repeats what has been said in both the background and discussion sections.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.