Reviewer’s report

Title: Interest in genomic SNP testing for prostate cancer risk: A pilot survey

Version: 1 Date: 10 October 2014

Reviewer: Morgan Butrick

Reviewer’s report:

Dear authors,

Thank you for your preparing an interesting and relevant manuscript. I appreciate the novel contribution in the area of prostate cancer on finding out unsolicited information from genetic testing.

However, several changes are needed before the manuscript is ready for publication, including modification to the data presentation/analysis, as well as better engagement with the existing literature on the manuscript’s main topics.

A. Major Compulsory Revisions

1. The authors need to provide evidence for the statement on page 4 that "The importance of knowledge of genetic ancestry to preventing future diseases like cancer is likely to increase as the role of genetic and genomic testing grows in all areas of clinical medicine." Significantly, the racial variable in race-related health risks is usually understood as a proxy for underlying biological differences and/or socio-economic risk factors. This broad literature is currently omitted and must be discussed. Vence Bonham is one author who has written extensively on this subject.

2. Relatedly, the authors need to provide evidence for their hypothesis on page 6 that finding out ancestry information would negatively impact interest in testing. This issue resurfaces on page 14, in the discussion section.

3. On page 8-9, the authors do not outline the statistical comparison of the PRAP vs URO populations in their statistical analysis section. However, these results feature prominently in the results section (page 10). They either need to be removed if it is decided they are not important or outlined AND justified. The authors must articulate why that comparison is meaningful if kept.

4. The variable selection approach needs to be reconsidered for the multivariable. Supported by your data in table 1, colinearity is a significant issue for your multivariable model. Including both group membership (i.e., PRAP vs URO) as well as race, age, and family history (all of which are statistically significantly different in PRAP vs URO groups) obscures the importance of the latter variables. The important clinical implication of difference in the two clinic groups (i.e., PRAP patients are much more interested in SNP testing for prostate cancer than patients from a urology clinic) is already well established by your univariate analyses. Therefore I recommend group be left out of the multivariate
model.

5. While the general finding that attitudes are associated with interest is not novel, it is useful to further highlight the differential predictive power of negative vs positive attitudes. Discussion of this finding within the context of the broader literature on interest or decision-making is omitted and must be included.

6. The authors omit the literature on “unsolicited results” from the background section but feature those findings prominently in the discussion section. In both sections, better engagement of the existing literature is needed, specifically including evidenced or hypothesized reasons why “unsolicited results” about health risk (e.g., BRCA1 mutation) and ancestry maybe perceived differently.

B. Minor Essential Revisions

1. Correct use of undefined PRAP acronym in abstract.

2. On page 7, consent was used when concept seems to have been meant: “briefly introduced to the consent of genomics SNP testing…”

3. Relatedly, please provide detail on what education was provided.

4. On page 8, specify if perceived risk was gauged quantitatively or qualitatively.

5. In table section, please include descriptive data on attitudes towards genomics SNP testing including frequencies of endorsing the specific positive and negative reasons. This is potentially interesting and a stronger use of this data than its use in quantitative analysis, see A5.

C. Discretionary Revisions

1. I find the placement of the “(PRAP)” on page 7 confusing. The sentence reads “… at increased risk of prostate cancer (PRAP) having a yearly evaluation…” Perhaps you mean to use “(i.e., PRAP patients).”

2. Please double check the numbers in your result section. For example, on page 10, the 38% citation for “a sizeable minority of men in the URO group had a personal history…” does not match table 1 which has 62%.

3. Please reconsider use of “(PRAP group)” on page 9. “40 from PRAP sample (PRAP group) and …” This placement seems confusing. If needed, the URO acronym can be first introduced on page 6-7 when the patient samples are being described.

4. I find the statement on page 13 overly conservative: “due to our small sample size and high literacy levels, our findings would need to be explored further before definitive conclusions could be made”. There is a broad literature on literacy and huge swath of health beliefs and behavior. Your results are consistent with that literature so I find your statement about further research is not be very meaningful as it’s unclear what novel insight you need to confirm. Please reword or further engage in the literacy literature.

5. Related to A1, the authors should reconsider the use of “unsolicited genetic information” as a broad phrase used in the discussion section in light of the disparate types of information falling under that umbrella, lest their results be
over generalized.

**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