Author's response to reviews

Title: Skin surveillance intentions among family members of patients with melanoma

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Author's response to reviews: see over
Dear Dr. Du:

We are grateful for the reviewers’ helpful comments on the above-referenced manuscript. A list of the comments and our responses are shown below. Changes to the manuscript are denoted by yellow highlighting.

Reviewer #1

1. According to the Theory of Planned Behaviour, performance of a behaviour is a joint function of intentions and perceived behavioural control. The later aspect does not appear to have been adequately discussed in this study but it clearly is inherent in the barriers identified. As perceived barriers are a significant factor in not performing a SSE, these barriers should be described in more detail and identified. They could be targeted in order to effect changes in behaviour.

Response: The reviewer correctly notes that we did not explicitly include the perceived behavioral control construct from the Theory of Planned Behavior in the current study. We agree that some of the barriers capture elements of perceived behavioral control and could be targeted to produce behavior change. Based on the reviewer’s comment, we added a description of the most commonly reported barriers for total cutaneous and skin self-examinations to the Results section (see page 8) and added relevant text to the Discussion section (see page 10).

Reviewer #2

1. I question whether looking at intentions is the best outcome parameter to assess. For example, why not simply look at those who actually went to the dermatologist for a full body skin exam or performed a self-skin exam.

Response: The reviewer raises a good point with regard to the issue of looking at intentions versus behavioral outcomes. The data for this manuscript were drawn from the baseline questionnaire of a randomized clinical trial to promote skin cancer surveillance and
prevention among first-degree relatives of melanoma patients (see page 5). Thus, the study focused on individuals who lacked prior total cutaneous examinations and had low performance of skin self-examinations (and who were at increased risk for melanoma due to their family history). Accordingly, we focused on screening intentions as opposed to behaviors among these individuals (since there was little potential for variability with regard to their behaviors). Behavioral intentions are important determinants of behavior change across a wide number of health-related behaviors including skin cancer prevention behaviors (for example, see references 14 and 15 in the manuscript).

2. A conceptualized framework is vague and lacks concrete outcome parameters that have clinical utility. The correlates are described as novel, however, these really do not appear to novel or unique in this regard. These correlates are essentially "normal" behavior, ie: to be fearful of going to the doctor as they may find something that is deemed suspicious. How they are related to TCE and SSE have indeed been examined in other studies, as have other correlates of behavior.

Response: As outlined in the paper, the conceptual framework for the study was based on well-established health behavior theories (i.e., the Preventive Health Model and the Theory of Planned Behavior). Several of the correlates we examined were novel (e.g., fear of TCE, distress about the patient’s melanoma, family support for TCE and SSE, and family recommendations for SSE), insofar as there is a lack of prior research examining their associations with skin cancer screening intentions or behaviors among individuals at increased risk for melanoma. The reviewer is correct that the correlates could perhaps be characterized as “normal” behavior. However, as outlined in the Discussion section, the study results have public health and clinical implications for how to promote skin cancer screening among at risk family members.

3. Methods: Why such a wide range of melanoma patient (3 months to 7 years)? Is this intentional? If not, this would appear to skew the data as the correlates of behavior will be related to the time from the melanoma patients diagnosis and treatment. For example, are intentions associated with the time of diagnosis of the melanoma patients?

Response: We did indeed intend to survey family members of patients at varying time points since their melanoma diagnosis. We agree with the reviewer that the participants’ skin cancer screening intentions could vary according to the time since the proband’s diagnosis. Thus, the time since the proband’s diagnosis was included as a predictor variable in the regression analyses. In the initial regression analyses, total cutaneous examination intentions were higher among participants for whom the proband was diagnosed more recently (see page 8). This association fell just short of statistical significance in the final multiple regression model shown in Table 2. The time since the proband’s diagnosis was not associated with skin self-examination intentions.

4. Methods: The numerous abbreviations and acronyms result in difficult reading.

Response: Three abbreviations are used multiple times in the manuscript: FDR = first-degree relative; TCE = total cutaneous examination; SSE = skin self-examination. These are
standard abbreviations that are used in other research articles. Thus, we prefer to retain the abbreviations in the manuscript.

5. Measures: How is the level of distress gauged? What is the significance of mild to moderate distress?

**Response:** The level of distress was assessed using a single item, “How distressed are you currently about the diagnosis and treatment of your family member’s melanoma?” A 5-point response scale was used, from 1 = *not at all distressed* to 5 = *extremely distressed*. As noted in the Results section (see page 8), the mean reported level of distress was 2.8, indicating a moderate amount of distress. The single item we used does not provide sufficient information to determine the clinical significance of the distress, which we have now added as a study limitation (see page 11). We included the measure of distress to examine whether family members with greater levels of distress were more likely to intend to be screened for skin cancer. However, distress was not associated with either total cutaneous or skin self-examination intentions.

6. What is meant by "physician support"? family support?

**Response:** Physician support refers to the participants’ perceptions as to the extent to which their doctor would want them to have a skin examination. Similarly, family support refers to participants’ perceptions regarding the extent to which family members would want the participant to have skin cancer screening. We added clarification regarding the meaning of physician and family support to the Measures section (see page 6). Sample items assessing physician support and family support are also provided in Table 1.

7. Discussion: The concluding paragraph is almost self-fulfilling in nature. Indeed, health care providers should be aware of the factors proposed. And yes, they may not be more motivated to engage in early detection. As a clinician, this is a common finding among family members for the reasons stated. It would have been interesting to look at many other known factors which affect this behavior, such as those without insurance, hence no money or means to see a dermatologist. Additionally, they may live far away from a clinician willing to perform a full body skin exam. Time away from work, fear of if they find something, how will they pay for it then. Lack of access to a dermatologist (waiting periods are often longer than 6 months, or will not see patients without insurance).

**Response:** The concluding paragraph synthesizes the primary results of the study and outlines several implications for future research. The reviewer notes several factors that may be associated with total cutaneous examination intentions/behaviors. The measure of total cutaneous examination barriers used in the current study included items that focused on the expense of being screened as well as the inconvenience of screening. Expense and inconvenience were among the four most highly endorsed barriers and this is now noted on page 8 (see also our response to Reviewer #1, Comment 1.). Additionally, participant’s health insurance status was examined as a potential correlate of TCE (and SSE) intentions (see Methods section, page 6). Insurance status was not associated with TCE intentions,
which we now explicitly state on page 8. We did not directly assess participants’ access to a dermatologist, and this has been added as a study limitation (see page 11).

8. Conclusions: Most clinicians already encourage FDR's to undergo TCE's as suggested, highlighting the benefits etc...Lastly, most physicians already realize the shortcomings in regards to patient and family education and community outreach.

**Response:** It is perhaps not as clear-cut as the reviewer suggests that most physicians across specialties (e.g., family medicine, dermatology, etc.) routinely counsel FDRs regarding total cutaneous examinations. In the current study, the measure of physician support for total cutaneous examinations had a mean of 3.00 (on a 1 to 4 scale) (and a standard deviation of 0.90), which corresponded to perceiving “some support” for screening.

**Additional Changes**

The title page now includes the requested information. The names of the committees which granted ethical approval for the research are listed on page 6 of the manuscript.

Thank you for your consideration of this revised submission.

Sincerely

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