Author's response to reviews

Title: Not all coping strategies are created equal: a mixed methods study exploring physicians’ self reported coping strategies

Authors:

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Version: 2 Date: 28 May 2010

Author's response to reviews: see over
May 27th, 2010

Dear Editors,

Thank you for inviting us to resubmit our paper **MS: 1839256701351583** Not all coping strategies are created equal: a mixed methods study exploring physicians' self reported coping strategies.

In this cover letter, we address each comment made by the editorial team and provide an itemized listing of the subsequent changes in the manuscript. Our responses are outlined in italics.

We have also submitted the revised version of the manuscript written in consideration of the constructive and helpful comments from the 3 referees and the associate editor with the major changes highlighted in yellow.

We thank you again for this opportunity to revise and resubmit this paper and hope that our work meets your expectations.

Yours sincerely,

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Referee 1
Reviewer's report
Title: Not All Coping Strategies are Created Equal: A Two-Staged Mixed Methods Study of Physicians' Self Reported Coping Strategies
Version: 1 Date: 9 March 2010
Reviewer: Amy Baernstein
Reviewer's report:
The study is well-conducted and clearly reported. The conclusions are somewhat predictable but it is useful to demonstrate that physicians' coping strategies are the same as general strategies described in psychology literature.
My biggest criticism is that the authors found a CORRELATION between certain strategies and burnout, but in many places state that this is CAUSATIVE. This is an important, unsupported assumption. In my opinion this must be remedied before publishing the paper. Specific instances include:
pg 13. "In order of effectiveness" and "least effectively" should be "Most correlated..." "least correlated..."
pg 14. "increased" should be "higher"; "effective in reducing burnout" should be "associated with less burnout"; "beneficial in reducing the frequency of" should be "correlated with lower"
pg 14. "coping strategies that are helpful in reducing feelings of burnout...several are actually harmful" this is totally unsupported.
pg 14. "enhanced the frequency of" should be "were correlated with"
pg 16. Last 2 sentences are again unsupported; should re-phrase as "If it is determined that this correlation indicates causation, then we could educate physicians about the effectiveness..." or something similar.
Table 3. "Effective coping stragies that significantly reduce burnout" is NOT accurate. It should be "Coping strategies that are correlated with lower burnout," as so forth with all 4 headings.
Along these same lines, the authors should specifically state that while some coping strategies are associated with less burnout, this does not prove causation.
For example, they have not demonstrated that using humor mitigates against burnout; it is possible that burned-out physicians find it difficult to find humor in their situation.
Authors’ Response: The paper has been rewritten to reflect that all the findings between certain coping strategies and burnout/emotional exhaustion are correlations and not causative and each instance noted by the reviewer in her report was changed. We have added a statement on page19 specifically stating that while some coping strategies are associated with more or less burnout, this does not prove causation.
A second criticism is that it is not clear how the research team generated the list of 80 potential participants (pg 4.) More detail is needed on how these individuals were selected. On page 6 they state "the research team may have selected physicians known to them..." Did they? If so this should be stated. This should be clarified also on page 16.
Authors’ Response: We have clarified how the research team generated the list of 80 potential participants under the section on Participants on page 7, under Bias on page 9, and under the section on study limitations on page 19.

A third criticism is that it is not clear why the list of "physician coping strategies while at work" in table 2 is different from the categories in figure 1a. It seems they should be the same (as they are for table 2 and figure 1b.) If they are the same, table 2 is not needed as it is redundant with figure 1.

Authors’ Response: The physician coping strategies used while at work in the original Table 2 (from the interview data) were worded to capture the five major interview themes. The seven survey items reflect these themes but are worded slightly differently to capture some of the more specific examples reported by the physicians. We agree with the reviewer that Table 2 is redundant and have removed it from the paper.

Referee 2
Reviewer's report
Title: Not All Coping Strategies are Created Equal: A Two-Staged Mixed Methods Study of Physicians' Self Reported Coping Strategies
Version: 1 Date: 12 March 2010
Reviewer: Isabelle Bragard
Reviewer's report:
Major compulsory revision
Page 6: Is this instrument measuring burnout validated (factorial analysis)? Why the authors did not use a validated measure such as Maslach Burnout Inventory? Some explanations are needed.

Authors’ Response: There are several reasons why we decided to use the Barnett et al. modified measure of the Maslach Burnout Inventory. One is that half of the original MBI items do not directly ask about the respondent’s feelings and another is that the response categories are not mutually exclusive, both of which are corrected for in the Barnett et al. revised version (refer to Barnett, Brennan and Gareis (1999). “A Closer Look at the Measurement of Burnout”. Journal of Applied Behavioral Research, 4(2):65-78). The Barnett et al. version of the MBI revised the original 16 items of MBI-GS by ensuring all items directly assess respondents’ feelings and that the response categories are mutually exclusive, thereby not inflating measurement error. They then compared the results for both the original and revised MBI items and showed that they are highly correlated, have similar factor structures, inter-factor correlation patterns, reliability and construct-related evidence of validity. They conclude that the revised items correct the flaws identified in the original MBI items while retaining its psychometric strengths.
In addition, we limited our operationalization of burnout to Emotional Exhaustion due to space limitations in the survey for physicians as this particular type of sample is known to be particularly prone to low response rates (Asch et al., 1997; Cohen and Patten 2005; Cummings et al. 2001). The survey needed to be brief in order to maximize the response rate. Since the survey covered several different topics beyond those presented in this paper, a decision was made to cover a broader range of variables using fewer items, rather than including a limited number of exhaustive “gold standard” measures (Cohen and Patten, 2005). We chose to only include the five items tapping the emotional exhaustion dimension of burnout, which appears to be the best understood and critical in understanding the burnout process (Rohland, Kruse & Rohrer, 2004). Lastly, Barnett et al. assessed the factor structure of their modified measure on physicians and their spouses, which we also felt was particularly relevant to our sample.

In our analyses, we conducted confirmatory factor analysis of the 5 items by means of maximum likelihood estimation and all 5 items have acceptable factor loadings (all greater than .8) on a single factor. In addition, as reported in our paper, the inter-item reliability is .90, which is comparable to those reported for the emotional exhaustion subscale for the original (α =.86) and revised (α =.89) MBI (Barnett et al., 2005).

We have revised the paper to clarify all of these points. Pages 8-9

Minor essential revision
Page 22: In Table 3, please add p value for each correlation.
Authors’ Response: These have been added. Please note, this table has been renumbered as Table 2

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Referee 3
Reviewer’s report
Title: Not All Coping Strategies are Created Equal: A Two-Staged Mixed Methods Study of Physicians’ Self Reported Coping Strategies
Version: 1 Date: 22 March 2010
Reviewer: Tulin Tunc
Reviewers report:
1. The paper is well-written in general however in the background some additional information is needed.
2. The authors referred to Canadian health system in their comments in regards to their sample population. It would be nice to know some background information about their sample organizations: Did they include university referral centers? Were they located in a rural area? Was there a shortage of stuff? Were the physicians full time or part time office based etc.
Authors’ Response: Additional background information has been added on page 6 describing the health region where the study took place. The question pertaining to the shortage of staffing is somewhat difficult to respond to as this may vary across the health region. In the province of Alberta during the study period, it was widely reported that there was a shortage of physicians. We have expanded on the description of our participants on page 11 for the interviews and on page 14 for the survey.

3. It is not clear how the authors correlated the coping strategies with burnout. Burnout is not a unique entity and has three dimensions: emotional exhaustion, depersonalization, and lack of personal accomplishment. What is the relationship between the coping strategies and three dimensions of burnout?

Authors’ Response: Please see the above response. We have clarified that we focus on only one dimension of burnout, namely emotional exhaustion and provided our rationale on pages 8-9. Consequently, we have not correlated the coping strategies with all three dimensions of burnout. Moreover, we did not include measures of depersonalization or lack of personal accomplishment in our survey in order to minimize the length of the questionnaire as noted above.

4. It is not clear how the authors graded the burnout level? It is important in judging the level of burnout in relation with these coping strategies.

Authors’ Response: We did not explicitly include the response categories for burnout in our measurement section in the original version of our paper but did indicate they were the same ones used for the coping strategy items. We have added the response categories for the burnout items that include never (coded 1), not very often (coded 2), sometimes (coded 3), often (coded 4), and most of the time (coded 5). page 9. Since this is an ordinal-level scale, we can simply describe the frequency of burnout in terms of being more or less frequent in relation to the coping strategies that are used more or less often. Thus, it is more accurate to say that the items measure the frequency of feeling emotionally exhausted and in order to clarify this, we have changed the wording throughout the manuscript to reflect this.

5. The authors should include the validity and test-retest reliability of the survey instrument that they used.

Authors’ Response: The validity and reliability of the MBI-GS are well-established. We provide information regarding the confirmatory factor analysis and inter-item reliability for our specific sample page 9. We cannot report test-retest reliability since we have cross sectional data.

6. There is no information on the impact of demographic characteristics on coping strategies and burnout. Was there any significant correlation with any demographic data and burnout or coping strategies?

Authors’ Response: We have revised the paper to better reflect the primary objective of
this paper, which is to explore the coping strategies that physicians use in response to work-related stress based on qualitative interview data. The secondary objectives of this paper are to use the questionnaire data based on a broader more representative sample to see how often physicians use the different strategies and how they are related to feelings of emotional exhaustion, a key symptom of burnout. The focus remains on exploring physicians’ coping strategies, rather than attempting to explain burnout among physicians or developing a model to do so.

Associate Editor’s comments

This paper examines an interesting topic, and the use of a mixed methods design could be potentially beneficial. However, there are a number of problems with the design as well as how the mixed methods study is justified and described. My specific comments are below:

Abstract: What is a "two staged, mixed methods cross-sectional observational study?" The authors should use more acceptable design types to describe their mixed methods study; e.g., sequential exploratory instrument development design (e.g., Creswell & Plano-Clark, 2007) or some other connotation (e.g., QUAL-->quan) to portray the theoretical drive (see Morse & Niehaus, 2009) and sequencing of the study.

Authors’ Response: We have revised the manuscript using the terminology “Qualitative and Quantitative” components of the mixed methods as descriptors throughout.

Background: what is the justification for a mixed methods study? Please clarify. Simply stating, as in the Discussion, that a mixed method design is justified simply because it has not been done before with this population is not sufficient.

Authors’ Response: We have added the following section at the end of the background to clarify this point on pages 4-5.

The primary objective of this mixed methods study is to explore how a sample of physicians describe their personal coping strategies for dealing with work related stress, both while they are at work and after leaving work. The secondary objective is to document how often these different coping strategies are used as well as their correlation with burnout in terms of how often they feel emotionally exhausted from their work. A mixed methods design was used. The qualitative component, using face to face interviews, allows us to explore the coping strategies that physicians actually use in response to their work-related stress and facilitates the construction of survey items that better represent the coping strategies physicians typically use. The quantitative component, using a survey questionnaire, allows us to document how often physicians use these coping strategies based on a larger, more representative sample, as well as conduct statistical analyses to explore the relationships between the coping strategies and physicians’ feelings of...
emotional exhaustion.

- Methods: please see my comment in the Abstract above; a more appropriate description of the mixed methods design (a visual aid, such as a flow chart of the design, would also be effective; see Creswell & Plano-Clark, 2007) is necessary to better portray the intention of this study as well as the point of interface (e.g., "mixing") and where it occurs.

Authors’ Response: We have added a flow chart (see Figure 1) of both components of the mixed study method that illustrates where the study interface occurs.

- What steps were taken to ensure rigor in both study components (e.g., validity)? Please describe.

Authors’ Response: We apologize, but we are not quite certain that we understand this question. Please see comments above re the measurement tools chosen for burnout/emotional exhaustion. The rigor of this study is also evidenced by its methodology being reviewed and funded by a highly competitive research body (AHFMR) and reviewed and approved by a stringent ethical review committee at the University of Calgary and by the vast research experience of the inter-disciplinary research team.

- Was only one open-ended question used in stage 1? How is that a sufficient qualitative approach to elicit themes? More detail on the methodology used in the qualitative component is required (e.g., semi-structured interview? Phenomenology? etc.).

Authors’ Response: The data analyzed for this paper stems from a mixed methods study of physician wellness. During the qualitative component of the study, we conducted interviews to explore physicians’ 1) perceptions of the link between their wellness and quality of patient care; 2) their work activities, workload and work time; 3) what they enjoy about their work; 4) their stresses; and 5) their coping strategies and support systems. During the interviews, physicians were asked to describe their day-to-day work experiences and well as the most stressful aspects of their job. Following this, we explored the coping strategies physicians use by asking: “What do you do after a bad or hard day at work? How do you cope while you are at work, and what do you do when you leave work?”, which is the focus of this paper. If needed, prompts were used to encourage participants to elaborate on the strategies they identified to provide more detail, clarification was sometimes needed in regards to whether the strategy was used at home or at work or both, prompts were used to remind respondents to identified any strategies they use after they leave work, clarification was also sought in regards to whether or not respondents’ stress overflows outside of their work time in order to better understand their responses in regards to coping outside of work. We have added more detailed information in this regard on pages 5-6, and 7-8 outlining this, which should help to explain the context.

- Was any effort made to validate the new scale? e.g., face, content,
criterion (predictive or concurrent), construct (convergent, discriminant), etc? It does not appear to.

Authors’ Response: As clarified above and on pages 8-9 of the paper, we did not use a new scale, but rather a revised version of the emotional exhaustion subscale of the Maslach Burnout Inventory (General Survey). Internal consistency of the items was demonstrated by the reliability coefficient of .90. Convergent validity was demonstrated by the results of the confirmatory factor analysis.

-Bias: The bias statement for the qualitative component appears to use quantitative standards; please clarify.

Authors’ Response: Again we apologize but we are unsure as to the concern you are raising and how to respond to it. We have revised the bias section which may have addressed your concerns. Page 9

-Why only use correlations in this size of a sample? Clearly, prior research has been conducted on burnout in physicians, and there are likely other factors related to burnout other than coping that should be considered. A more detailed and rigorous analysis plan is needed.

Authors’ Response: This paper is presented as more of an exploratory paper than a confirmatory model testing one. Our goal was to use the qualitative interview data to identify the coping strategies that physicians actually use and then to initially explore how they are related to feelings of emotional exhaustion. Due to journal space limitations on paper length, we do not feel we can realistically review, analyze and interpret a full-blown model of burnout and this is not the intent of the paper. Rather, our primary goal is to identify the coping strategies that physicians use in response to their day-to-day work stress. We hope that we have been able to more clearly convey this point with the changes is the wording that we have made throughout the paper, including the title and the description of the objectives.

- The correlations presented are fairly weak, and one suspects Type I error occurring in this study. This suggests that there remains a large amount of variance in burnout that these models do not account for. Such a limitation also implies that the mixed methods design did not capitalize on the qualitative component very effectively; the strict focus on coping did not allow for a more thorough analysis of burnout among physicians to determine what contributes to such an outcome.

Authors’ Response: As indicated above, it is not the purpose of this paper to develop and test a model of burnout. As you note, the focus is on the coping strategies that physicians use and a secondary goal is to explore their relationships with burnout in a preliminary way.

In addition to my comments, please address each of the reviewers’ comments in
detail. In particular, the use of causative language when a simple correlation analysis was used (Dr. Baernstein) and critical psychometric issues with the outcome measure (Dr. Bragard and Dr. Tunc) require careful attention. All of these points are excellent, and should be incorporated in any revision.

Authors’ Response: Please see the above responses to the comments posed by the three reviewers. We were most appreciative of the constructive comments and feel that the manuscript has been greatly strengthened accordingly.