Reviewer's report

Title: Illness beliefs and the sociocultural context of diabetes self-management in British South Asians: A mixed methods study

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Reviewer: Val Morrison

Reviewer's report:

Gaining a better understanding of the illness and medication beliefs of non-Western populations living in cultures with dominant Western medical models and traditional healthcare systems, is important and thus this paper potentially addresses an important question. The title suggests it will ask -what is the role of illness beliefs in the diabetes self management of British South Asians? It also suggests the study asks of the role played by sociocultural context in influencing both these beliefs and self management behaviour.

Unfortunately however the design does not enable true testing of these longitudinal questions. However the authors describe the study as 'exploratory' and thus it should be read in this manner.

In terms of compulsory revisions there are a few broad areas in need of improvement:

1. Whilst the introduction presents a nicely up to date summary of the role cognitions play in diabetes self management, and contextualises those within the common sense model of illness SRM (which indeed needs tested in non Caucasian samples), there is a lack of theoretical positioning here in terms of what the authors seek to do- are they theory testing or theory building? Sociocultural context appears to be operationalised as social network- I would like to see greater consideration of other aspects of sociocultural context eg socioeconomics, language barriers, healthcare access etc.

2. The authors report a mixed method study where a purposive sample of British South Asians diagnosed with Type II diabetes complete a series of questionnaires, with a subsample also completing a social network survey and semistructured interview. This latter component has quite a few limitations. The abstract states that 'thematic analysis' is employed, and indeed this seems to be what is presented. However the methods section states that thematic analysis "using principles of Grounded Theory..." is employed, The authors do not seem to be employing GT principles in the development of their study, nor in the theorising following analysis. For example, a theory of 'balancing beliefs' could be considered as emergent in these data whereby the sample seem to try to fit their lay models of illness and alternative therapies within a dominant medicalised culture. How does this fit with the CS-SRM model appropriately described for the quantitative study.
3. I feel the authors 'triangulation' of findings, and theoretical considerations are underplayed and thus the contribution of the data to current understanding is currently limited. Greater consideration needs to be given to the 'grounded theory' principles.

4. In terms of the sample and potential confounds there is an issue regarding comorbidity -84% of the sample have 2 or more conditions! Although this is considered in the quantitative analyses it is not clear how the assessments used were worded and thus how the data are to be interpreted. Was the IPQ-R worded so that participants responded solely in relation to their diabetes (as the extra fatalism items were)? Line 258 in Results suggests that 'diabetes' was used in the fatalism items but I don't think this is the case for B-IPQ. If true then what you may have are generic 'illness' beliefs e.g. illness concerns, associating with health outcomes or social network variables, and NOT diabetes beliefs per se. The discussion of these data and the qualitative data need to reflect more on the challenges of comorbidity, and be clear as to the wording of measures used. Without this it is hard to judge what the findings mean.

5. Are multivariate analyses sufficiently powered? Was comorbidity controlled for in the first or second step (after age, time since diagnosis etc)? Given other significant correlates how were the regressions constructed? These data are not presented/reported in a standard manner.

6. throughout the authors need to present summary as to the direction of effects

7. Information is needed as to the sampling frame- how many were approached in order to achieve the final sample i.e. what was the response rate? Although qualitative studies do not claim representativeness, this information is useful when considering the quantitative findings

8. The qualitative data present emergent themes relating to fatalism, behaviour change influences in the family, balancing different illness models/use of alternative therapies and are well supported by quoted material. However there is no sense of the commonality of the themes, i.e. did they exist in all/most/many/few transcripts; were there a few participants for whom the wives influence on eating, for example, was salient, and others where they took more self-control? How did this fit with those participants own' quantitative data ie their scores on the BIPQ for example? Did fatalism and behaviour change co-exist within a family unit and create conflict or was the incongruence accepted?

The discussion is generally appropriate to the findings and makes a good effort to consider implications without over-stating them. Perhaps I was expecting greater reflection on the two data type- greater triangulation, and certainly more explicit consideration of what these findings 'mean' for the CSM SRT, and also perhaps greater sociocultural analysis of the immediate context of where participants resided (ratio of Asian: Caucasian population, local culturally appropriate services etc).

Minor essential revisions
1. the language and sentencing needs attention; there are many errors/omissions, repetitions e.g. line 105 "...has also been reported to management practices.."?; line 365-367, has "..the quantitative study" twice; line 397-8 reads "...for instance their such as..." etc. Proof reading and also considering sentence structure/flow, is essential

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

**Quality of written English:** Needs some language corrections before being published

**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