Reviewer's report

Title: Factors influencing participation in a vascular disease prevention lifestyle program among participants in a cluster randomized trial

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Reviewer: Elizabeth Venditti

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Minor Essential Revisions

1. Page 2 -Abstract. Results. The authors should give the N of referred patients to LMP (197) in the abstract otherwise the reader may erroneously look at the methods section above (as I did) and try and extrapolate this from the cluster randomization (e.g. 16 X 160).

2. Page 4-Introduction. Paragraph 3. The authors present their rationale for the need to focus on dose and reach as the field moves from efficacy to translation/dissemination studies in diabetes prevention and cardiovascular risk reduction. This is indeed an important data gap to examine in order to advance the field. However the references given in the third paragraph (6,8,12) do not do a good job of supporting the statement that "low overall participation rates are often reported" (e.g. rates of lifestyle participation in the intial year of DPP are not reported at all in the reference given --Knowler et al, 2002; they are reported in Wing et al, 2004 as very high (95%). I think that with some additional literature review and data reporting the authors could make a better argument (e.g. research on clinical trials focuses on treatment efficacy and attendance rates tend to be higher.....but in the real world the attendance is more variable and it is not always clear how to best engage individuals in intensive interventions). More to the point, the authors could also then report on the actual attendance or completion rates in the translation/dissemination studies they have already cited (14-20). They could then note that there is a wider range of engagement (e.g. 50-80%) and that is important to try and better understand the predictors of such engagement through quantitative and qualitative analysis.

3. Results/Discussion. While several of the findings are not particularly novel, the authors present a wide range of mixed methods data (about both practice characteristics and individual participant characteristics) that may be useful to those in the lifestyle dissemination field. I think the discussion section could be more concise and stronger in the following ways:

a. In the intro paragraph of the discussion the authors states that "patients who were older, did not work and had higher levels of psychological distress were significantly more likely to attend". In the second paragraph however, it is stated that "age was not a significant independent predictor" in the quantitative analysis. The table does show that the cutpoints shown are not significant. Might age have been significant is examined as a continuous variable? These seem not to be the
best cutpoints (in several other studies is seems it is the over 60 category is most predictive). In this study the mean age is 58 so it may have made more sense to compare those above and below the mean.

b. Paragraph 3 --and the hypothesized association with neurotic personality seems quite speculative (it kind of stuck out to me, in an otherwise straightforward, data driven report). Personality traits were not measured in this study --just psychological distress---and there isn't any signal from the qualitative analysis regarding neuroticism. I think the authors are on stronger footing emphasizing the social support/group facilitation factors and how that may be related to attendance, particularly among distressed individuals. There is also a stronger medical iterature supporting this association. My recommendation would be to then just leave it at the final sentence "Further research is warranted to explore the associatons between psych distress and use of preventive health services---including the characteristics of the practices".

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