Reviewer’s report

Title: Behavioural Lifestyle Intervention Study (BLIS) in patients with type 2 diabetes in the United Arab Emirates: A randomized controlled trial

Version: 0 Date: 26 Jul 2015

Reviewer: Yvonne L. Eaglehouse

Reviewer's report:

Overall, a well-written manuscript that addresses an important gap in knowledge: feasibility of culturally tailored lifestyle interventions for patients with type 2 diabetes. I feel that the manuscript should be considered for publication, given the following minor issues are satisfactorily addressed:

P6, Settings and Participants: Please provide more information on how patients were identified as potential participants in the study. How or when were patients referred to the clinic? What types of patients attend this clinic (newly diagnosed, physician referred, patients identified by PCP as needing managed care, etc.)

What efforts were taken to recruit patients? Were patients informed of the study when they arrived at the clinic for their first visit? Who contacted patients about potential eligibility? Were flyers, letters, mailings, direct PCP referrals, etc. used?

P9, Outcome measures: Please provide more information on the questions used to assess physical activity. What intensity of exercise was collected? Was a standard question used? How valid and reliable was this measure?

P10, Statistical analysis: The sample size recruited (n=35) was less than that needed (n=50) based on power calculations for the primary outcome. Please address this issue in the discussion and include information on efforts taken to recruit and retain the target sample size of 50. If information on recruitment barriers was collected, this should be included in the manuscript as it will provide important process information for future translation efforts.

P11, L226: There were significant differences in weight and blood pressure between the intervention and control groups. This indicates that the randomization method selected may not have been effective. This should be addressed particularly when presenting the corresponding results for weight loss and blood pressure. Was physical activity similar between randomized arms? This information is missing from Table 1 and should be provided since it is a secondary outcome.

P11, L241-242: The authors reported no significant changes in weight during the intervention. More information on adherence to the intervention (number of sessions completed) and
adherence to calorie goals would be helpful in speculating why a change in weight was not observed. Also, it needs to be addressed that the baseline weight between the intervention and control groups was borderline significant (p=0.06), with nearly a 10 kg difference between intervention and controls.

Additionally, the following minor revisions should be considered by the authors:

P2, L44: Remove "all of"; since you haven't explicitly stated the other outcomes that will be assessed, it is cleaner and clearer to make a direct statement.

P2, L45: Please define measures that are collected and evaluated at 1 year follow-up.

P3, Results: Either present mean change at both 6 and 12 months or present mean values at baseline, 6, and 12 months to make the results consistent across time points.

P3, L65-66: Focus less on global rates and more on prevalence of type 2 diabetes in UAE to give the readers a better idea of the potential impact of your intervention.

P4, L79: add comma after "problem solving" since statement "which help patients...." in L80 pertains to "stimulus control" only.

P5, L93: behavioural lifestyle interventions for "patients with" type 2 diabetes...

P5, L94: Do the authors mean to say that only a few trials have been conducted that measure glycaemic control as the primary outcome? Later in the discussion the authors mention other translation trials that report weight loss as a result of behavioural interventions for patients with type 2 diabetes. Please be clear and concise about the literature being referenced.

P5, L98: Replace "all" with "these 3 trials". The term "all" is too broad and sweeping of a statement and indicates that authors have reviewed all relevant literature.

P5, L104: Consider replacing "ran" with "offered" or "conducted".

P7, L138: 17% attrition is redundant of the 83% who completed the trial.

P7, L155: change "achieving" to "achieve"

P8, L173: How much time was allocated for each session?

P9, L199: Change "all of the patients" to "study participants"

P9, L199: Change "all of the measures" to "the outcome measures"

P9, L200: Change last sentence to "all of the enrolled participants were invited to attend a follow-up visit at 1 year". As demonstrated in Figure 1, not all of the patients at the clinic attended a visit at 1 year. The original sentence is misleading.
P11, L233: At what time point?

P11, L236: Please clarify to the reader that the comparison being made is between those with a diabetes duration more than and less than 5 years.

P12, L256: Please list other sources of carbohydrates evaluated; this will give the reader a better idea of what sources are included in the "total carbohydrate" metric.

P12, L257: Carbohydrate intake from dairy also reduced as per Table 3.

P13, L266: Was the treatment effect significant?

P13, L271: Control group had significantly lower diastolic BP at baseline compared to intervention group. This should be addressed in discussion.

P14, L303. Please provide references for statement in L302-303.

P15, L317: One could argue whether the observed weight loss in this study is considered modest. The observed changes in weight were not significant and the study was also not powered to evaluate weight loss.

P16, L346-347: Please provide references.

P26, Table 1: Patients enrolled in this study were relatively younger than those enrolled in the larger clinical trials (DPP, DPS, Look Ahead); some of the published literature on clinical and observational studies have demonstrated that older adults report higher adherence to dietary goals and thus report greater success at meeting weight loss goals (see Wing et al.2004, Obesity Res). The authors may want to consider this in the discussion and talk about potential barriers to adherence in this younger Emirati sample.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an**
additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

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