Author’s response to reviews

Title: Osteoporosis knowledge and beliefs in diabetic patients: a cross sectional study from Palestine

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Author’s response to reviews:

Editor Comments:

General notes:

This IS A CROSS-SECTIONAL study. There are no predictions..predicted..etc. they are ASSOCIATIONS! All terminology surrounding predictive needs to be changed.

Response: Revised manuscript did not include any term pertaining to predition.

Abstract comments:

1) Pls. specify the context regarding the association mentioned.. i.e. higher total belief scores? (meaning what?)

Multivariate linear analysis indicated that age and employment status were significant predictors of total belief scores in females.

Same here.. what about the belief, provide more context:

Advancing age (p=0.018) and being employed (p=0.04) had significant positive effect on belief model.

Response: Based on editorial recommendation, all sections pertaining to MV analysis were deleted including the statements mentioned above which were part of the abstract
Introduction comments:

1) there is some improvement in the references, however the discussion regarding DM and osteoporosis is still not quite right.

Instead of providing so many references - study the very high quality summaries in nature etc.

a) you have not mentioned the role of poor glycemic control (i.e. Increased fracture risk in type 2 diabetes may be driven by poor glycemic control), the higher risk of falls due to DM complications, the side effects of medications

b) I don't think your statement here is correct

In type II DM the increased levels of insulin, obesity and increased bone mineral density are supposed to increase bone formation [13-19].

I would instead phrase that despite higher BMD,

for e.g. pls read this new review article (https://dmsjournal.biomedcentral.com/articles/10.1186/s13098-017-0274-5)

Circulating levels of biochemical markers of bone formation and resorption are decreased in diabetes [7]. It is speculated that low turnover of bone in diabetes may lead to defective microfracture repairs and, hence, to their accumulation, contributing to decreased bone quality

Response: Introduction was revised with more details on role of DM in osteoporosis. New references (Meta – analysis) were added.

2) you mention fracture risk for Type 1 but not type 2. Pls provide this for Type 2 as well.

E.g. de Liefde et al. - type 2 diabetes had 69% increased fracture risk than those without diabetes despite having higher BMD

- e.g. Janghorbani - meta-analysis of 12 studies reported a relative risk of 1.7 (95% confidence interval: 1.3–2.2) for hip fracture in both men and women with T2D.

Response: see revised intro

3) Would delete this whole paragraph:

Given the increasing numbers of people with DM and the expected increase in proportion 90 of elderly people in most world regions, prevention of osteoporosis, which starts with 91 knowledge and beliefs deserves more global attention. Previously published literature
92 found a deficit in the knowledge of both the general population and among health
93 care professionals about osteoporosis and that such deficit should be addressed [26].
94 Literature in osteoporosis in general and in diabetic patients in Arab countries is scarce
95 [27]. Understanding the knowledge and belief about osteoporosis in different ethnic groups
96 is important in order to tailor interventional educational program according to ethnic
97 variations.

4) rephrase as:

Osteoporosis knowledge studies have been examined in various diseases including cancer,
thalassemia, and HIV patients [33-35]

Response: Done, see revised intro

<<has anyone else looked at OP knowledge in DM??>> If not, say so, if yes, mention briefly (and any differences of this study).>>

Response: Done, see revised intro

5) Last sentence intro - Very long and cumbersome, pls rephrase as:

Our results will guide the design of future programs and educational materials promoting
behaviours that can ultimately slow down and prevent 115 osteoporotic complications and
therefore improve the quality of life of diabetic patients.

Response: Done, see revised intro

METHODS Comments:

1) RE: using the raosoft for sample size. I feel like there is information missing. With 5% margin and 95% CI, that program would ask <<How many people are there to choose your random sample from? >>

An estimate of 240 people, would suggest that you had approximately 635 people in the target "population"? At your clinic is this accurate?

I would suggest that the underlying "population" actually should have been individuals in this region of Palestine who have DM - and that may very well be a close approximation to actually shows up in your clinic.
Can you provide more details about this.

Response: Details were added to clarify this point. see revised method

2) Rewrite as:

The OHBS consists of 42 items divided into seven subscales: susceptibility, seriousness, benefits of exercise, benefits of calcium intake, barriers of exercise, barriers of calcium intake and health motivation.

Response: Done

3) Rewrite/Add to:

Ethical approval for this study was received from the XXX?? which one?? Institutional Review Board (IRB).

Response: clarified. See revised section

4) rewrite as:

Descriptive statistics including mean ± standard deviation (SD) or frequency (%) were presented for each variable, stratified by gender. Scores for all subscales were tested for normality using Komogrov Smirnov test and were found to be not normally distributed. Bivariate analysis was conducted using Mann-Whitney U Test for categorical variables and Spearman correlation for continuous variables. Correlation between total knowledge scores and various belief subscales were carried out using Spearman correlation.

Response: Re-written.

TAKE OUT the multivariable analysis in this descriptive paper. This is a small sample and how you selected and entered variables requires more description.

For example, you included clinically important variables (age, sex, XXX) and other variables that were significant in bivariate analyses ??

Then was it a stepwise, or did you just enter all those and retain??

Also - so you did the MV analysis for the total OBHS scores?

Why was this not done for the OKT?

**I recommend to simply take out the MV component of this very descriptive paper.**

Could simply look at associations with education, gender and age as has been proven in past.
If you do wish to keep it in, pls provide evidence that a statistician has been consulted.

Response: MV component was deleted from the whole manuscript.

Conclusion Comments

5) DELETE: "The sample size of participants could impose certain limitations regarding statistical analysis. Therefore, results obtained here cannot be generalized to diabetic patients in Palestine.

6) This is the opposite to what I would expect. IF you believe this to be the case, you need to explain it further.

It could be argued that those selected by convenience sampling represent diabetic patients who are jobless or elderly or not well educated.

Response: Conclusion section was revised.

7) Table 1 is still not correctly formatted. Pls see attachment and use this as the template for "table 1".

Table 1 was revised.