Author’s response to reviews

Title: Factors that influence dietary behavior toward iron and vitamin D consumption based on the theory of Planned Behavior in Iranian adolescent girls

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Author’s response to reviews:

Dear Editor-in-Chief

The authors considered all the comments of the reviewers and responded to them. Also, this article was edited again for proper English language, grammar, punctuation, spelling, and overall style by Professor Gordon Ferns who is the native authors of this manuscript.

Best regards

The authors

Response to Reviewer 1

Dear Professor/Dr,

We would like to thank you for careful and thorough reading of this manuscript and for the thoughtful comments and constructive suggestions, which help to improve the quality of this manuscript. We tried to answer to all valuable comments/suggestions/queries and all answers to comments are highlighted within the document by yellow color. Also, this article was edited
Comment 1: In the abstract section, the background needs to be more shrinked and precised. Also, the conclusion and signification need to be more clarified.

Reply: Based on this comment the background and conclusion was rewritten. Page 2, Lines 37-42. Page 2, Lines 50-53.

Comment 2: Page 3, Line 54: "Children who are entering adolescence need to have an adequate consumption of micronutrient because they are going through many significant physical and intellectual changes", add this reference in which it compares the effect of dietary pattern on the children health:


Reply: The further information was added to compare the effect of dietary pattern on the children using recommended articles and other relevant source. Page 3, Lines 59-62.

Comment 3: Page 3, Line 57: "The transition to adulthood is also considered to be a critical time for dietary intervention to improve long-term health behavior and responsibility for diet" add this references in which it is confirming that the dietary intervention can improve the long-term health behavior in adulthood:


Reply: Based on this comment, relevant information was explained. Page 3, Lines 63-65.

Comment 4: Page 3, Line 68: "Studies show that vitamin D deficiency among women population more the men in Iran since they are less exposed to sunlight due to the hijab veil" need more clarification because as you are studying the adolescents and you mentioned "Hijab viel" in
which it mainly covering the head, not the entire body and not the only reason as references 12 and 13 mentioned. I suggest you to recheck the above sentence with finding the prober explanation for the differences in the Vitamin D levels between males and females.

Reply: Despite sufficient level of sunlight in Iran, the considerable prevalence of vitamin D deficiency may due to the types of clothing, dietary habits (low consumption of dairy products and seafood), lifestyle, air pollution, inadequate vitamin D intakes, skin pigmentation, disorders in the vitamin D metabolism, or even the increase in the vitamin D catabolism. Likewise, numerous studies in Iran showed that prevalence of vitamin D deficiency among female’s population more than the males in Iran. This is explained in terms of social obligations and cultural aspects. In Iran, women and girls (age > 9 years) are instructed to dress full body covering that is usually dark and solid in coloration. This degree of covering allows for the entire face to be revealed, while continuing to cover the hair by wearing a scarf. Studies have clearly indicated that this skin covering is main risk factor for vitamin D deficiency because it limits exposure to the sun and the level of vitamin D absorption.

Pages 3 and 4, Lines 81-89.

Comment 5: Also, in Page 3, Line 69: "more the" should be" more than the".

Reply: We corrected this point.

Comment 6: Generally, in introduction section, more details about the relations between Vit. D and Iron deficiency should be added. And some explanation about foodstuffs with the relationship to health and specially deficiencies need to added


Reply: According to this comment, further information about the relations between Vit. D and Iron deficiency was added, and some details about foodstuffs with the relationship to health was also added. Page 3, Lines 68-74

Comment 7: Page 7, Line 144: "12.76(0.63), 43.32(5.64), and 39.22(5.41)" spaces need to be rechecked and for such errors in all the manuscript.

Reply: We considered this points. Page 7, Lines 163-166

Comment 8: Figure 1 resolution need to be rechecked and adjusted.

Reply: We considered this points.

Response to Reviewer 2

Dear Professor/Dr,

We would like to thank you for careful and thorough reading of this manuscript and for the thoughtful comments and constructive suggestions, which help to improve the quality of this manuscript. We tried to answer to all valuable comments/suggestions/queries and all answers to comments are rewritten within the document by red color. Also, this article was edited again for proper English language, grammar, punctuation, spelling, and overall style by Professor Gordon Ferns who is the native authors of this manuscript.

Best regards

The authors

Comment 1: There is not a clear formulation of the hypothesis of this work. The authors formulate the aim as "to examine potential determinants that influence dietary behavior toward iron and vitamin D consumption in Iranian girls; and to examine whether the constructs from TPB could be used to enhance behavioral intentions and attitude toward Iron and vitamin D intake in adolescent girls.", but examination of potential determinants or "examine whether the
constructs from TPB could be used to enhance behavioral intentions and attitude” is not a scientific endeavour. The authors should formulate a testable and falsifiable hypothesis.

Reply: Based on this valuable comment, we rewritten hypothesis and aims as follow: In this study, we hypothesized TPB could be a fundamental framework to identify and explain the main effective determinates that might affecting iron and vitamin D intake in Iranian female adolescent. With a view to providing a basis for future studies aimed to (1) test the fit of the TPB; (2) to explore potential determinants that influence dietary behavior toward iron and vitamin D supplementation in female adolescents; and (3) to estimate the extent of the relationship between supplementation knowledge, attitudes, subjective norms, and perceived control of behavior and intention towards intake of vitamin D and iron supplements. Pages 4 and 5, lines 106-112.

Comment 2: The paper does not describe the presence of a clear analysis plan. Therefore, a p-value of 0.05 is not acceptable (a post-hoc change to methods section claiming the presence of a priory analysis plan is not acceptable). The authors can well have tried over 20 different statistical methods before finding an outcome with a p-value < 0.05. Therefore, the p-value should be set 0.001 to ensure that these results are not the result of a by chance finding and the text should adjusted accordingly.

Reply: According to this comment, the p-value of 0.001 (in both regression and SEM model) was considered for interpretation. Page 6, lines 150-151.

Comment 3: The statement "However, the regression model demonstrated that only 2.3% of total variance of behavioral intention was predicted by socio-demographic variables." Is an oversimplified observation. The authors used a linear regression model, but if the relationship between behavioural and socio-demographic variables does not have to be a linear relationship. In that case the socio-demographic variables could be a much better predictor. This was not tested. The author should be very careful in drawing conclusions from this.

Reply: In this study, association between socio-demographic variables and intention behaviors was not our target. We only tested this association via regression model to understand whether socio-demographic variables are significantly affecting intention behaviors toward supplement intake or not? Our results showed that insignificant effects (p<0.001) of socio-demographic variables on behavioral intention (only 2.3% of the total variance of intention). In this population, all demographic variables were not found to be associated to behavioral intention at significant level of 0.001, and only residency location, father and mother’s age were found to be associated to behavioral intention at the significance level of 0.05 (Table 3). Page 7, Lines 166-170.

Further, based on this valuable comment, we tested linear relationship between each demographic variable and behavioral intention via linear regression model (please see table A in the word file of response to Reviewer 2, uploaded in supplementary section) and scatter plots.
Results showed that all demographic variables were not found to be associated to behavioral intention at significant level of 0.001. Thus, we did not use these variables for interpreting and discussion.

Comment 4: There is an error in table 4, the row "knowledge Perceive behavior control" has two different values 0.410 (used to calculate the direct effect) and 0.401 (used to calculated the total effect). The percentages calculated therefore also incorrect. It was not possible to check anything else, but it is slightly worrying that the only numbers that could be recalculated were wrong.

Reply: We corrected this point in the table 5.

Comment 5: The authors are quite liberal with the precision of their estimates. It would be good if the authors could limit their number to only 2 (so 32% instead of 32.4%) and even better would be to include confidence intervals. Especially for the number predicting the variations of their behavioral intention the 74%, is that ± 5% or ±25%?

Reply: We limited all numbers with precision of my estimate in all parts of manuscript.

Also, we included confidence interval for the number (here is R2) that predict the variation of individual’s behavioral intention. R2 = 74%, with Confidence intervals 95% is that 0.697-0.777, with Confidence intervals 99% is 0.683-0.788. We only consider confidence interval 99% in this manuscript. Page 8, Lines 185-193.

Comment 6: The authors could tone down the discussion. This is only a small study and there is no proof that these results are generalizable.

Reply: Based on this comment, we deleted some sentence from discussion and re-written based on new concept.

Comment 7: The conclusions need to be aligned with hypothesis not with the aim.

Reply: Conclusions was rewritten based on this comment. Page 11, Line 271.

Comment 8: The authors need to make the raw (anonymised) data available so that their modelling can be independently tested and verified.

Reply: We added further data into table 1. If need to add further information, please inform us. The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.
Response to Reviewer 3

Dear Professor/Dr,

We would like to thank you for your positive feedback and for the thoughtful comments and constructive suggestions, which help to improve the quality of this manuscript. We tried to answer to all valuable comments/suggestions/queries and all answers to comments are written within the document by using Italic format. Also, this article was edited again for proper English language, grammar, punctuation, spelling, and overall style by Professor Gordon Ferns who is the native authors of this manuscript.

Best regards

The authors

Comment 1: on title: please include your study area and if possible year.

Reply: Study area was added into title.

Comment 2: Background: please show the gap clearly. What is already known and what new knowledge this work will provide?

Reply: In this concept further information was added. Pages 3 and 4, Lines 81-89.

Comment 3: Methods: please put the sampling techniques and sample size part in few sentences. you shouldn't include those all procedures. And change the heading participants and sampling to study population and sampling technique

-- make a new heading like data collection and include questionnaire, demographic factors etc under it.

-- Remove ethical consideration from methods and put above the references incorporating with ethical consideration you had there.

Reply:

1-The heading participants and sampling changed to study population and sampling technique. Page 5, Line 114.

2-The sampling techniques and sample size part Rewritten again. Page 5, Lines 115-124.

3-Ethical consideration Removed from methods and put above the references. Page 12, Line 297.

Comment 4: Results: -- change characteristic of participants to socio-demographic characteristics...
-- Please your result part must be sufficiently. You should put every finding there in text, tables and figures.

1-The heading characteristic of participants changed to socio-demographic characteristics. Page 7, Line 162.

2-We considered this points and put more finding of tables and figures in the text. Page 7, Lines 166-170. Pages 7 and 8, Lines 177-193.