

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Digital therapeutics-based lifestyle intervention for gestational diabetes mellitus prevention of high-risk pregnant women :a study protocol for a non-randomised controlled trial
AUTHORS	Lin, Lihua; Dong, Jia; Wang, Youxin; Song, Li; Ye, Xiaoyan; Chen, Xing; Miao, Chong; Lin, Juan

VERSION 1 – REVIEW

REVIEWER	Wang, Haijun School of Public Health, Peking University, Department of Maternal and Child Health
REVIEW RETURNED	19-Aug-2023

GENERAL COMMENTS	<p>Considering the high prevalence of GDM, the manuscript described an interesting and valuable digital therapeutic-based lifestyle intervention study aiming at decreasing the incidence of GDM. The following are some comments for the authors to revise this article.</p> <ol style="list-style-type: none"> 1. To our knowledges, there are many digital therapeutic-based lifestyles intervention studies which have been conducted to prevent GDM. Considering the inconsistent results and different quality of the studies, more high quality intervention studies are still needed. However, the research gap (the problem this study will solve) was not described in the abstract and the background of the manuscript. Please add the content in these two sections. 2. To let readers learn more from the abstract, more details should be briefly added, for example, multicenter, the sample size, components of lifestyle interventions, etc. 3. Some paragraphs of the introduction should be summarized briefly, for example harmful effects of GDM, risk factors of GDM, et al. 4. In the method section, details about the lifestyle intervention should be described, for example, what are the main components of lifestyles, what kind of exercise, the frequency and last time of exercise, et al. 5. The participants choose the type of intervention according to their wishes to either a digital therapeutic support lifestyle intervention group or a standard health management group. It is non-randomized controlled trial. Did the authors consider the potential between-group difference in baseline characteristics which might influence the effect of intervention and plan to collect
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	these baseline data for comparison or adjustment? Please add the content in the "Data collection and management" section.
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VERSION 1 – AUTHOR RESPONSE

Reviewer Report:

Reviewer: 1

Prof. Haijun Wang, School of Public Health, Peking University

Comments to the Author:

Considering the high prevalence of GDM, the manuscript described an interesting and valuable digital therapeutic-based lifestyle intervention study aiming at decreasing the incidence of GDM. The following are some comments for the authors to revise this article.

1. To our knowledges, there are many digital therapeutic-based lifestyles intervention studies which have been conducted to prevent GDM. Considering the inconsistent results and different quality of the studies, more high quality intervention studies are still needed. However, the research gap (the problem this study will solve) was not described in the abstract and the background of the manuscript. Please add the content in these two sections.

Response: Dear reviewer, thanks for your good suggestions. We have revised the abstract and introduction sections as per your comments in line 35-39 in abstract section and line 138-164 in introduction section.

2. To let readers learn more from the abstract, more details should be briefly added, for example, multicenter, the sample size, components of lifestyle interventions, etc.

Response: We feel great thanks for your professional review work on our article. According to your nice suggestions, we have revised the abstract to include the multicenter, the sample size, components of lifestyle interventions in line 41-49.

3. Some paragraphs of the introduction should be summarized briefly, for example harmful effects of GDM, risk factors of GDM, et al.

Response: We sincerely thank the editor and all reviewers for their valuable feedback that we have used to improve the quality of our manuscript. According to your suggestions, we have revised the introduction section in line 80-84, 85-91, and 123-129.

4. In the method section, details about the lifestyle intervention should be described, for example, what are the main components of lifestyles, what kind of exercise, the frequency and last time of exercise, et al.

Response: Dear reviewer, thank you again for your valuable suggestions. We have added the intervention content in line 251-263.

5. The participants choose the type of intervention according to their wishes to either a digital therapeutic support lifestyle intervention group or a standard health management group. It is non-randomized controlled trial. Did the authors consider the potential between-group difference in baseline characteristics which might influence the effect of intervention and plan to collect these baseline data for comparison or adjustment? Please add the content in the "Data collection and management" section.

Response: According to the associate editor and reviewers' comments, we have made modifications to our manuscript in the Data collection and management section to make our manuscript more rigorous (line 360-373).

