World Journal of Diabetes Manuscript NO: 60226 entitled "Coffee consumption and risk of type 2 diabetes mellitus in Asian: A meta-epidemiological study of population-based cohort studies"

Dear Editor,

I really appreciate the editor and the reviewers' valuable advice and I has revised the manuscript according to your suggestions. The amendments are highlighted in yellow in the revised manuscript. My response to your questions are in blue. Here are the point to point reply to your questions as follows.

Reviewer #1:

Scientific Quality: Grade D (Fair)

Language Quality: Grade C (A great deal of language polishing)

Conclusion: Major revision

Specific Comments to Authors: Thank you for the opportunity to review the article entitle "Coffee Consumption and Risk of Type 2 Diabetes Mellitus in Asian: A Meta-epidemiological Study of Population-based Cohort Studies ". Coffee is still an interesting topic that arouse a lot of public attention. This paper investigated its effect on T2D in Asian people with summarisation from previous studies. However, several concerns are raised to be addressed:

1. Introduction: "….as well as Europeans and Americans through a systematic review published in 2018" Please also add the estimate for Europeans and Americans.

[Response 1] According to the suggestion, I inserted the estimates like this "as well as Europeans (sRR=0.69, 95% CI: 0.62-0.75) and Americans (sRR=0.74, 95%

CI: 0.65-0.84)"

2. "Because South-East Asia and Western Pacific Regions were estimated to have more than 50% of cases being undiagnosed", This sentence did not indicate the disease undiagnosed which might cause confusion for readers, please revise it.

[Response 2] The sentence has been changed to the following sentence to prevent misunderstanding of context. "The Western Pacific region has the largest number of people with diabetes as reported by the International Diabetes Federation Diabetes Atlas [1]; "

3. "Also, results of dose-response meta-analysis (DRMA) by sex in Calström et al. [8] showed that 'there was indication of a stronger association in women in the dose–response analysis per additional cup per day of coffee (P for difference by sex=0.03).' " Please remove the quote mark and revise this sentence.

[Response 3] The quote mark as well as 'in the dose–response analysis per additional cup per day of coffee' in the sentence were removed.

4. "….in the risk of T2DM on coffee consumption" "The risk of T2DM on coffee consumption" might cause misunderstanding, please revise it.

[Response 4] I revised the sentence like that "it is necessary to determine whether there is a difference in the risk of T2DM between men and women in Asian population according to coffee consumption."

5. "This strategy reflects the fact that published papers would cite previously published studies conducted with the same hypothesis [16]. " In my opinion this sentence could be removed.

[Response 5] According to the suggestion, I deleted the sentence.

6. Could authors make the selection criteria in more details?

[Response 6] I marked the two selection criteria. And I added the exclusion criteria. "the following selection criteria – (1) a population-based prospective cohort study evaluating the association between coffee consumption and T2DM risk in the Asian population (2) studies reporting the adjusted RR and its 95% CI for potential confounders. Therefore, retrospective cohort studies, case-control studies, studies involving non-Asians, or studies that did not adjust for potential confounders were excluded.

7. Please provide a flowchart for procedure of selecting the final included studies; and a table for the basic information of included studies.

[Response 7] According to the suggestion, I added the flowchart showing the process of selection process as Figure 1. And I tried to show the extracting information of each cohort through Figure 2.

8. I suggest the authors to report the test for heterogeneity in either I-square or p-value.

[Response 8] I-squared values showing the level of heterogeneity were shown in summary effect size in Result, Figure 2, and Table 1. And Table 2 had the P-value of heterogeneity.

9. I would suggest the author to evaluate and discuss the quality of included studies more.

[Response 9] The aim was to draw a new finding from the previous systematic reviews through further analysis. Thus my manuscript's study design is not a systematic review and meta-analysis, but a meta-epidemiological study, as the title showed (Reference 9,10). First, the author reinforced the selection criteria and then selected only cohort studies in which potential confounders. Second, the quality level of each cohort was evaluated by the adjusting level of the

confounders- smoking status, drinking habit, and family history. Third, results of subgroup analysis by confounders were shown in Table 1. Fourth, the extraction information was presented in Figure 2. Finally, the author described the effect of quality level in Discussion such as "Considering that smoking and alcohol status would be highly related to coffee consumption, LAS and LAA in each study were evaluated, and then subgroup analysis was performed. However, the preventive effect remained regardless of the LAS, LAA, as well as FHX. What these results are robust is to support the conclusion that coffee consumption would have a protective effect on T2DM in Asian."

10. The authors could discuss the potential mechanism of coffee on T2D instead of only comparing the previous studies.

[Response 10] Based on the aim and meta-epidemiological design, the author stressed the comparison to previous systematic reviews. As the suggestion, the author added the sentence containing possible mechanism of coffee in diabetes risk in the 'Comparison to previous evidence'. "Natella and Scaccini [25] summarized the five effects of coffee in the modulation of diabetes risk – effects on glucose metabolism, thermogenic effect, antioxidant effect, anti-inflammatory effect, and chelating effect."

11. The first paragraph of "comparison to previous evidence" should be rephrased because it convey implicit information.

[Response 11] The sentence has been revised to the following sentence. "The results of this study consisting of 12 cohorts were consistent with the results of the study by Calström et al. [8], which consisted of seven cohorts, in a meta-analysis comparing the highest to lowest coffee consumption."

Reviewer #2:
Scientific Quality: Grade B (Very good)

Language Quality: Grade A (Priority publishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: Very interesting topic. Nice study, well conducted. Original study, producing novel findings for Asian populations. In particular, veru interesting the aspects of gender-oriented differences.

[Response] I appreciate it. I will do my best with your great encouragement.

4 LANGUAGE QUALITY

Please resolve all language issues in the manuscript based on the peer review report. Please be sure to have a native-English speaker edit the manuscript for grammar, sentence structure, word usage, spelling, capitalization, punctuation, format, and general readability, so that the manuscript's language will meet our direct publishing needs.

5 EDITORIAL OFFICE'S COMMENTS

Authors must revise the manuscript according to the Editorial Office's comments and suggestions, which are listed below:

(1) Science editor: 1 Scientific quality: The manuscript describes a meta-analysis (not evidence review) of the coffee consumption and risk of type 2 diabetes mellitus in Asian. The topic is within the scope of the WJD. (1) Classification: Grade B and Grade D; (2) Summary of the Peer-Review Report: Coffee is still an interesting topic that arouses a lot of public attention. This paper investigated its effect on T2D in Asian people with summarisation from previous studies. The questions raised by the reviewers should be answered; and (3) Format: There are 2 tables and 1 figure. A total of 27 references are cited, including 7

references published in the last 3 years. There are 2 self-citations. 2 Language evaluation: Classification: Grade A and Grade C. A language editing certificate issued by Grammarly was provided. 3 Academic norms and rules: No academic misconduct was found in the CrossCheck detection and Bing search. 4 Supplementary comments: This is an invited manuscript. No financial support was obtained for the study. The topic has not previously been published in the WJD 5 Issues raised: (1) The authors did not provide original pictures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor; and (1) The "Article Highlights" section is missing. Please add the "Article Highlights" section at the end of the main text. 6 Re-Review: Required. 7 Recommendation: Conditional acceptance.

(2) Editorial office director: I have checked the comments written by the science editor. The authors need to provide the Biostatistics statement and PRISMA 2009 Checklist statement.

[Response] The study design of this manuscript's study design is not a systematic review and meta-analysis, but a meta-epidemiological study, as the title showed (Reference 9,10). The author checked the items on table 1 suggested by Reference 10.

	Proposed item	Check
Title	Identify the report as a meta-epidemiologic study	Y
Abstract	Provide a structured summary	Y
Introduction		
rationale	Describe the rationale	Y
objectives	Provide an explicit statement of the goal	Y

Methods		
protocol	Indicate if a protocol exists, if and where it can be accessed	N (If)
eligibility criteria	Specify study characteristics used as criteria for eligibility with a rationale	Y
information sources	Describe all information sources	Y
search	Present full electronic search strategy	Y
study selection	Describe the process for selecting studies for inclusion	Y
data collection process	Describe method of data extraction from reports	Y
data item	List and define all variables	Y
risk of bias	If risk of bias assessment of individual studies was relevant to the analysis, describe the items used and how this information is to be used during data synthesis	Y
summary measures	State the principal summary measures	Y
synthesis of results	Describe the statistical or descriptive methods of synthesis	Y
Results		
study selection	Give numbers of studies assessed for eligibility and included in the study, with reasons for exclusions at each stage, ideally with a flow diagram	Y (Fig 1)

study characteristics	For each study, present characteristics for which data were extracted and provide the citations.	Y (Fig 2)
risk of bias	If risk of bias assessment of individual studies was used in the meta-epidemiological analysis, report risk of bias indicators	Y (Fig 2)
results of individual studies	Present data elements used in the meta-epidemiological analysis from each study	Y (Fig 2)
synthesis of results	Present results of statistical analysis done,	Y (Fig 2)
additional analysis	Give results of additional analyses, if done	Y (Table 1, 2)
Discussion		
summary	Summarise the main findings and compare them	Y
limitations	Discuss limitations at research methodology level	Y
conclusions	Provide general interpretation	Y
Funding	Describe sources of funding	Y

(3) Company editor-in-chief: I have reviewed the Peer-Review Report, the full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Diabetes, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s)

for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. However, the quality of the English language of the manuscript does not meet the requirements of the journal. Before final acceptance, the author(s) must provide the English Language Certificate issued by a professional English language editing company. Please visit the following website for the professional English language editing companies we recommend: https://www.wjgnet.com/bpg/gerinfo/240.

[Response] I requested to improve the quality of my manuscript in English to Editage (www.editage.co.kr). I attached 'the letter from the editor' by Editage.