

This manuscript needs to be expanded significantly to include:

1. the role of SGLT2 inhibitors in PCOS. SGLT2 inhibitors improve glucose metabolism via an insulin independent mechanism. If effective, this would suggest that insulin independent improvement in glucose metabolism may be an effective strategy to ameliorate PCOS. see: <https://doi.org/10.3390/biomedicines11040998>
2. Bariatric surgery can divert the absorption of glucose from the proximal to the distal intestine with beneficial effects on PCOS.. see:<https://doi.org/10.4239%2Fwj.v3.i4.71>, alpha glucosidase inhibitors have a similar mechanism of action, see: <https://doi.org/10.1093/humrep/16.10.2066>
3. GWAS studies that identify colocalization of loci for PCOS and T2D, see: <https://doi.org/10.3389/fgene.2022.905716>
4. insulin resistance treatment for all PCOS patients, see: <https://doi.org/10.1016%2Fj.fertnstert.2011.11.036>

Even though the above may not be directly related to the overall thrust of the manuscript, they can provide data to deconstruct or deconvolute which factors most affect PCOS resolution. I suggest that the author also include a correlation (colinearity) matrix with the features being insulin sensitivity, glucose metabolism, carbohydrate restriction (ketogenic diet), weight loss, nutritional (vitamin) deficiency and genetic loci. A semi-objective score can be assigned to colinearity among these categories using the data from the references in the manuscript. For example, weight loss may not show a colinearity with the ketogenic diet but may be colinear with insulin sensitivity or glucose metabolism. The features with the largest added colinearity may hence prove better (or worse) targets than the ketogenic diet to alleviate PCOS. Alternatively, the ketogenic diet may be combined with one or more of these factors to achieve the greatest probability of success.

Another quantitative means of comparison such as Pugh matrix can also be presented. The author has an opportunity to present an in depth quantitative analysis of whether a ketogenic diet can increase fertility but the manuscript is weak on presenting this analysis in an incisive manner. The ‘efficacy’ ‘input’ and ‘sustainability’ factors appear subjective and not of much use to the scientific community.

In summary, this manuscript has much potential that is not exploited. I encourage the author to explore quantitative or semi-quantitative methods to present the conclusion using the methods described above, or other suitable methods. I also want to see more content and references added (points 1 through 4).

The author has addressed the previous comments. However, the formatting of the manuscript needs attention. References within the manuscript must be numbered (not referenced by author). A ‘clean’ copy of the manuscript needs to be provided (without comments etc. embedded or attached in the margins). In addition, the pugh matrix needs to be overall scored per each attribute and the sum of the results presented.

The pugh matrix presented is incorrect. Please present valid contextual categorization, and results for the pugh matrix per my earlier review.

In addition, the pugh matrix needs to be overall scored per each attribute and the sum of the results presented.

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1. Since your efficacy and impact categories are similar, please remove the impact category and replace with ‘comparative advantage’ category. I have already done this for the 3 pugh matrices. Please examine the pugh matrices to see that they still convey what you want to convey in the manuscript. Please also incorporate the reference from Table 1 into the manuscript.
 2. Replace your figure 1 with the new categories.
 3. Rearrange the text so that each category contains the text appropriate to it. Make sure that the manuscript is written in 3rd person, past perfect tense.
 4. Provide your school affiliation

accepted
