

Review of: "Empowering Women in Mathematics: Shaping a New STEM Paradigm for 2047"

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Potential competing interests: No potential competing interests to declare.

The manuscript "Empowering Women in Mathematics: Shaping a New STEM Paradigm for 2047" addresses an important and timely topic that is highly relevant to the STEM community.

However, there are several points that need improvement.

- "Objectives of study": the objectives are clearly explained and relevant, but in fact, they are not really developed in the manuscript. I suggest adding a section focusing on the current statistics of women in mathematics (and/or STEM) in India, with appropriate references. This would be one of the main parts of the manuscript: only by knowing the actual statistics can it be determined if there is indeed an underrepresentation of women in STEM in India, and then it will be a starting point to propose and implement possible solutions.
- The table is not referenced in the text; it should be included in the statistics section. Also, the values in the table are for the USA and Unesco, which I think is very confusing and not relevant to the current study. My advice is to include only statistics relevant to India, such as percentages of: 1) women enrolled in mathematics studies at the university, 2) women graduates, 3) women researchers and professors. An analysis of the evolution of women's career paths could show whether there is a clear "leaky pipeline". The paper asserts that there is an underrepresentation of women in STEM in India, but without any referenced statistics, this is just a vague assertion. Please provide more information on the Indian context.
- "Case Study Problem": this does not seem relevant to the manuscript; I suggest removing this section and focusing only on women in STEM/mathematics. Instead, it might be interesting to include additional information about the initiative "Beti Bachao, Beti Padhao", which is mentioned several times in the text, as a case study. Or even mention other initiatives in India, such as this one: <https://womenforstemindia.org.in/>
- In "Opportunities for Women Mathematicians in Contemporary Times": I suggest adding references to each point. For example, avoid sentences like: "Some organizations offer specific grants..." which organizations? Be more specific.
- In the introduction, the references need to be improved. Consider including references relevant to women in mathematics in the world, and then focus on India. Perhaps the following resources could be useful:
 - <https://www.mathunion.org/cwm>
 - https://commission.europa.eu/document/download/965ed6c9-3983-4299-8581-046bf0735702_en

