

## Research letter

**Final title:** Analysis of strengths, weaknesses, opportunities, and threats: Analytical hierarchy process based dental waste management in Odisha

**Title at submission:** Analysis of strengths, weaknesses, opportunities, and threats: Analytical 2 hierarchy process based dental waste management in Odisha



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**Reviewer:** Prince Kerketta, ORCID: [0000-0003-1119-8000](https://orcid.org/0000-0003-1119-8000)

1 **Comment** Revisions Required.

**Response** Thank you for your feedback. The manuscript has been carefully revised for improved structure, clarity, and completeness. We have enhanced the explanation of the methodology, added supporting details to the results, and ensured the findings are well contextualized.

**Reviewer:** Kaushik Mitra, ORCID: [0000-0002-8865-373X](https://orcid.org/0000-0002-8865-373X)

1 **Comment** The article is somewhat incomplete. Details of SWOT analysis and methodology discussion are not there.

**Response** We acknowledge this observation and have expanded the methodology section substantially. The process of SWOT factor identification, expert selection, pairwise comparison using Saaty's scale, and weight calculation through the Analytical Hierarchy Process (AHP) have been elaborated. Logical consistency ( $CR < 0.1$ ) was also ensured, and Table 1 has been included to summarize the SWOT factors and their weights.

**Reviewer:** Shamsul Gafur Mahmud

1 **Comment** The paper addresses a critical yet overlooked area and uses a valuable methodological approach.

**Response** We are grateful for the encouraging remarks

2 **Comment** Limitations include a small expert sample, insufficient exploration of opportunities, and lack of validation against real-world data.

**Response** The following improvements have been made:

- The sample size limitation and its implications on generalizability have been explicitly acknowledged in the discussion.
- The Opportunities section has been expanded to include examples such as digital waste tracking systems, eco-friendly technologies, and public-private partnerships.
- The need for future studies to validate expert-based findings with real-world waste management performance metrics has been clearly stated.

3 **Comment** The framework could be replicated across other healthcare sectors.

**Response** We agree and have highlighted in the discussion and conclusion that this approach provides a replicable model for evaluating waste management systems in broader healthcare contexts.

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### Ethical approval

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Not applicable