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# International Journal of Advanced Research

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## REVIEWER'S REPORT

Manuscript No.: IJAR-57122

**Title: Clinical presentation of vitamin B12 deficiency in pediatric patients at a tertiary care centre**

**Recommendation:**

Accept after minor revision……

| Rating | Excel. | Good | Fair | Poor |
|---|---|---|---|---|
| Originality | | | ✓ | |
| Techn. Quality | | | ✓ | |
| Clarity | | | ✓ | |
| Significance | | | ✓ | |

Reviewer's ID: JPR-198

## *Detailed Reviewer's Report*

This manuscript presents a hospital-based cross-sectional study of 110 pediatric patients (0–18 years) with vitamin B12 deficiency, focusing on clinical presentation, dietary patterns, and associated factors. The study highlights the association of vegetarian diet, maternal deficiency, and nutritional status with vitamin B12 deficiency.

**Major Comments**

**Methodology**

- **Sample size calculation** is mentioned but not clearly explained. The authors state "Sample size calculation for a continuous outcome measure was done" but do not provide the assumed parameters (e.g., expected prevalence, margin of error, confidence level). This should be clarified.
- The study is hospital-based and cross-sectional, which limits generalizability.
- The definition of vitamin B12 deficiency is inconsistent: WHO cutoff mentioned earlier, but study-specific cutoff not clearly defined.
- **Inclusion/exclusion criteria** are too brief. "Non-nutritional causes of vitamin B12 deficiency" should be explicitly listed (e.g., pernicious anemia, malabsorption syndromes, post-surgical causes).
- Inclusion criteria are unclear and potentially biased: Only *admitted children* were included → may represent more severe cases.

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- **Timeline inconsistency:** The abstract states data collection from 1 June 2025 to 31 December 2025, but the methods section says 01 July 2025 to 31 December 2025. Please correct.

. S**tatistical Analysis Issues**

- Statistical methods are poorly described:
  - No mention of specific tests (Chi-square, t-test, etc.)
  - No confidence intervals reported
- Results state "statistically significant ($p<0.05$)" without:
  - Exact p-values
  - Test statistics
- Correlation analysis is mentioned but no correlation coefficient (r value) provided.

**Interpretation and Discussion**

- The manuscript lacks a proper Discussion section:
  - Results are not compared with existing literature.
  - No explanation of unexpected findings (e.g., microcytic anemia in B12 deficiency cases).

**Conceptual and Clinical Issues**

- Presence of microcytic hypochromic anemia in large proportion (page 7) contradicts classical B12 deficiency (macrocytic anemia) without explanation.
- Possible coexistence of iron deficiency is not explored.
- Neurological manifestations reported are very low (3%), which is unusual and not discussed.

**Minor Comments**

- **Abstract:** The "Conclusions" section should be reworded to reflect key findings, not general statements. Also, the abstract lacks numerical results (e.g., prevalence of neurological symptoms, mean vitamin B12 level).
- **Keywords:** Add "children" and "adolescents" as keywords.
- **References:** Some references are incomplete (e.g., no journal name or volume for ref #10). Please standardize formatting.
- **Limitations:** The authors mention lack of MMA and homocysteine measurement — this is a major limitation and should be discussed in more depth, including its impact on diagnostic accuracy.