

Peer Review

Review of: "Liver Enzyme and Bilirubin Abnormalities and Associated Factors Among Patients with Liver Disease in a Tertiary Hospital, Northwest Ethiopia: A Cross-Sectional Study"

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Constructive Corrections and Suggestions for Improvement

Your manuscript is **well-structured**, addressing a **critical public health issue** related to **liver function abnormalities in liver disease patients**. The study design is **appropriate**, and the findings provide **valuable insights** into associated risk factors. However, there are **several areas** where **clarifications, refinements, and corrections** are needed to improve clarity, scientific rigor, and readability.

General Comments:

✓ Strengths:

- The **study is relevant**, given the increasing burden of liver disease globally.
- **Methodology is well-documented**, with an appropriate statistical approach.
- **Findings are clearly presented**, using numerical and statistical evidence.

1. Abstract:

✓ Positive Aspects:

- Clearly structured with **background, methods, results, and conclusion**.
- **Findings are numerically supported and statistically relevant**.
 - **Original:**

"Thus, this study aimed to evaluate the extent of liver function abnormalities and their related

factors in patients with liver disease."

- Revised:

"This study aimed to assess the prevalence and determinants of liver function abnormalities in patients with liver disease."

✕ Corrections and Suggestions:

1. Improve sentence clarity:

2. Improve reporting of statistical data:

- Original:

"Among the 307 patients, 117 (38.11%, 95% CI: 32.64%, 43.57%), 212 (69.06%; 95% CI: 63.85%, 74.25%), and 168 (54.72%, 95% CI: 49.12%, 60.32%) had abnormal ALT, AST, and total bilirubin, respectively."

- Revised:

"Among the 307 patients, the prevalence of abnormal ALT, AST, and total bilirubin levels was 38.1% (95% CI: 32.6%–43.6%), 69.1% (95% CI: 63.9%–74.3%), and 54.7% (95% CI: 49.1%–60.3%), respectively."

3. Strengthen the conclusion:

- Original:

"Therefore, clinicians should consider these factors in the management and treatment of patients with liver disease."

- Revised:

"These findings highlight the need for targeted interventions addressing lifestyle factors, viral hepatitis, and anemia in liver disease management."

- Original:

"Liver disease is one of the world's most critical public health problems[2] and can affect liver cells and impair normal liver function[3]."

- Revised:

"Liver disease is a significant global public health concern, leading to impaired hepatic function and systemic complications."

2. Introduction:

✓ **Positive Aspects:**

- Provides a **good overview of liver disease epidemiology.**
- Highlights the **importance of liver function tests (LFTs).**

✗ **Corrections and Suggestions:**

1. **Clarify research gap and justification:**

• **Original:**

"Despite its consequences, information on liver function test abnormalities and associated factors among liver disease patients in the study area is scarce."

• **Revised:**

"Although liver disease is a leading cause of morbidity and mortality, data on liver function test abnormalities and their determinants in Ethiopian populations remain limited."

3. **Expand literature review with recent references (2019–2023) on liver disease prevalence in Africa.**

3. Methods:

✓ **Positive Aspects:**

- Well-documented **study design and setting.**
- Clearly describes **data collection and statistical analysis.**

✗ **Corrections and Suggestions:**

1. **Clarify how patients were selected (consecutive sampling criteria).**

2. **Explain potential biases in sample selection (e.g., exclusion of critically ill patients and pregnant women).**

3. **Justify the use of statistical methods:**

- Explain why **logistic regression** was chosen over other models.
- Mention how **missing data** were handled.

4. Results:

✓ **Positive Aspects:**

- Findings are well-structured and **statistically supported.**

- Tables and figures enhance clarity.

✕ Corrections and Suggestions:

1. Ensure consistency in reporting percentages:

- Example:

- Original:

"Among the study participants, 117 (38.11%) had abnormal ALT, 212 (69.06%) had abnormal AST, and 168 (54.72%) had abnormal total bilirubin."

- Revised:

"Among the 307 study participants, 38.1% (n=117) had abnormal ALT, 69.1% (n=212) had abnormal AST, and 54.7% (n=168) had abnormal total bilirubin."

5. Discussion:

✓ Positive Aspects:

- Findings are compared with previous literature.
- Addresses major risk factors (viral hepatitis, ALD, anemia, lifestyle factors).

✕ Corrections and Suggestions:

1. Avoid vague statements:

- Example:

- Original:

"This study showed that liver disease patients presented substantial liver function abnormalities."

- Revised:

"This study found a high prevalence of liver function abnormalities, with AST being the most commonly elevated biomarker."

6. Conclusion:

✓ Positive Aspects:

- Summarizes key findings effectively.

✕ Corrections and Suggestions:

1. Avoid redundancy:

- The **conclusion repeats information from the discussion**—it should be more concise.
- **Example:**

- **Original:**

"In patients with liver disease, AST followed by bilirubin is increased in the majority of patients."

- **Revised:**

"Elevated AST and bilirubin levels were common in liver disease patients, with viral hepatitis and lifestyle factors playing a significant role."

Declarations

Potential competing interests: No potential competing interests to declare.