ISSN: 2320-5407

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

www.journalijar.com

ISSN NO. 2320-5407

REVIEWER'S REPORT

Manuscript No.: IJAR- 56802

Title: EFFECT OF MACHINE NOISE ON BLOOD PRESSURE: THE CASE OF SAWMILL WORKERS IN BENIN.

Recommendation:
Accept as it is .....
Accept after moderate revision.....
Accept after major revision
Do not accept (*Reasons below*)

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

Reviewer Name: **ANAPANA GOPAL**

Reviewer's Comment for Publication.

1. General Comments

This manuscript investigates the impact of occupational machine noise on blood pressure among sawmill workers in Benin. The topic is highly relevant to occupational health, environmental exposure, and public health, especially in developing countries where workplace safety regulations may be less enforced.

The study combines noise measurement (ISO 9612 standard) with physiological assessment (blood pressure monitoring), which is commendable. However, the manuscript has serious methodological, statistical, and presentation limitations, particularly the very small sample size (n=3) and lack of statistical analysis.

While the study provides preliminary observational insight, it is not sufficient in its current form for strong scientific conclusions.

2. Content and Originality

Strengths:

- Addresses an important issue: occupational noise and hypertension risk.
- Uses real field data from an African industrial setting, which is underrepresented in literature.
- Integrates environmental measurements and physiological response.

Limitations:

- The topic is not novel; many studies have already linked noise exposure to hypertension.
- The study lacks a clear research gap or novelty statement.
- Findings are confirmatory and descriptive, not advancing new theory or methodology.

Conclusion:

- **Originality: Low to moderate**
- Needs stronger positioning in literature (e.g., regional data gap, policy relevance).

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3. Technical Quality

Strengths:

- Use of ISO 9612:2009 for noise measurement is appropriate.
- Use of standard BP measurement guidelines (HAS, SFHTA) is good.

Moderate Concerns:

1. Sample Size (Critical Issue)

- Only 3 workers included for BP analysis.
- Total workforce = 6 → only half sampled.
- No justification for sample size.
- Results cannot be generalized.

2. Study Design Limitations

- Single-day measurement (cross-sectional, very short duration).
- No control group (e.g., non-exposed workers).
- No adjustment for confounders:
  - Age
  - BMI
  - Smoking
  - Stress
  - Physical activity

3. Measurement Issues

- BP measured only twice (before and during work):
  - No repeated measurements across days
  - No resting standardization (e.g., 5 min rest)
- Extremely high values (e.g., 186/160) raise concerns:
  - Possible measurement error
  - No validation or discussion

4. Statistical Analysis (Moderate Weakness)

- No statistical tests:
  - No t-test / paired comparison
  - No confidence intervals
- Claims of "significant increase" are not supported statistically.

5. Noise Analysis

- Noise measurement methodology is acceptable.
- However:
  - Limited number of measurements (3 readings)
  - No variability analysis
  - Uncertainty reported but not interpreted

4. Language and Presentation

Moderate Issues:

- Numerous grammatical and stylistic errors:
  - "This study aims to evaluate…" (ok) but later inconsistent phrasing
  - "which East a threshold" → incorrect
- Inconsistent formatting:
  - Spaces, punctuation, capitalization
- Redundant phrases and repetition

Examples:

- "workers must protect themselves with PICB" → unclear abbreviation

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- "blood pressures" instead of "blood pressure"

Tables & Figures:

- Tables are understandable but:
  - Poor formatting
  - Units missing in some places
- Figures:
  - Basic and not publication-quality
  - No statistical representation

Conclusion:

- Requires moderate English editing and formatting improvement

5. Structure and Organization

Strengths:

- Logical sections present:
  - Abstract, Introduction, Methods, Results, Discussion, Conclusion

Issues:

Abstract:

- Too long and not well structured
- Contains excessive technical detail
- Needs concise summary (objective–method–result–conclusion)

Introduction:

- Reasonable background
- Lacks:
  - Clear hypothesis
  - Defined research gap

Methods:

- Descriptive but:
  - Not standardized
  - Missing key details (sampling rationale, confounders)

Results:

- Mostly descriptive
- No statistical validation
- Tables could be merged/simplified

Discussion:

- Overinterpretation of results
- Weak comparison with literature
- Does not address limitations

Conclusion:

- Repeats findings without critical insight

6. References and Citations

Strengths:

- Includes relevant standards (ISO, WHO-related, HAS)

Issues:

- Inconsistent citation style
- Some references incomplete
- Over-reliance on:
  - Local theses

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  - Non-peer-reviewed sources
- Limited recent high-impact journal citations

Conclusion:

- Needs standardization (APA/Harvard) and strengthening

7. Overall Recommendation

The study addresses an important occupational health issue, especially relevant in developing country contexts. However, due to:

- Extremely small sample size
- Lack of statistical analysis
- Weak methodological rigor
- Language and formatting issues

the manuscript is not suitable for publication in its current form.

Final Decision:
Moderate Revision