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REVIEWER'S REPORT

Manuscript No.: IJAR-56998

Title: Applied Statistics in Health Research: A Practitioner's Guide to GLM Techniques Using SPSS and SAS"

Recommendation:

Accept as it is .....

Accept after minor revision.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

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

Reviewer's ID: Dr. Sumathi

Detailed Reviewer's Report

1. **A (GLM) is a flexible framework for modeling relationships between a dependent variable and one or more predictors, extending traditional linear regression to cases where the data does not follow a normal distribution. GLMs allow the response variable's error distribution to be non-normal (e.g., binary, count) and use a link function to map the expected value to a linear predictor, enabling robust modeling for logistic and Poisson regressions.**
2. **Analysis of variance is a statistical method used to compare the means of three or more groups to determine if at least one group mean is significantly different from the others. It analyzes variance by comparing between-group variance to within-group variance (F-test), assuming normal distribution, homogeneity of variance, and independence of observations.**
3. **Health research is the systematic investigation of human health issues, aimed at understanding diseases, developing treatments, and improving overall health outcomes. It encompasses clinical trials, data analysis, and population studies to create evidence-based**

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strategies, vaccines, and technologies that enhance care and prevent diseases.

4. **Statistical assumptions are specific conditions—such as normality, linearity, independence, and equal variance—that must be met for statistical models and tests to produce valid, reliable results. They are foundational requirements for parametric tests, ensuring the data fits the mathematical structure of the analysis.**
5. **Multivariate analysis of variance is a statistical technique used to compare multiple continuous dependent variables simultaneously across one or more categorical independent variables. It extends ANOVA by testing if group differences exist on a combined, synthetic dependent variable, handling correlations between outcomes to reduce Type I error.**
6. **Applied Statistics in Health Research involves applying statistical methods to analyze data in medicine and public health, ensuring valid, reproducible evidence-based findings. It connects research design with practical data analysis, crucial for addressing challenges like bias and small sample sizes. Key areas include descriptive, predictive, and prescriptive analytics.**
7. **SPSS (Statistical Package for the Social Sciences) is a powerful software program used for data management, advanced analytics, and predictive modeling. It is widely used by researchers and analysts, particularly in social sciences, to process large datasets through a user-friendly menu-driven interface. It is now officially called IBM SPSS Statistics.**
8. **SAS (Statistical Analysis System) is a powerful software suite used for advanced analytics, data management, business intelligence, and predictive modeling. Developed by SAS institute, it is a industry-standard tool for manipulating, analyzing, and visualizing large datasets, widely utilized in banking, healthcare, and government.**
9. **Key words are excellent!**
10. **Significant points are given.**
11. **Key points with flow chart are good.**
12. **Summary points can be added.**
13. **References should be in alphabetical order.**
14. **After those changes good to publish in your journal.**