EXAMINATION OF RESEARCH DESIGNS, STATISTICAL METHODS, AND TYPE OF STATISTICAL SOFTWARE USED IN ARTICLES PUBLISHED BY THE JOURNAL OF ADULT EDUCATION (JAET) IN TANZANIA

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ABSTRACT

This study aimed to identify research designs, statistical methods, and the type of statistical software used in the articles published in the Journal of Adult Education (JAET) in Tanzania. This study analyzed six (6) articles published in the JAET in 2018, 2019, 2021, 2022, 2023 and 2024. The study used documentary analysis as the research method. Frequencies and percentages were calculated according to the type of research design used, the statistical method and the type of statistical software used. A total of 55 articles were evaluated (n=6 in 2018, n=11 in 2019, n=11 in 2021, n=12 in 2022, n=9 in 2023, and n=6 in 2024 in which 16 (34.8%) were descriptive design, 14 (30.4%) were case study designs, 5(10.9%) cross-sectional designs. Others were; 1(2.2%) exploratory design, 1(2.2%) explanatory designs, 2(4.3%) sequential exploratory design, 2(4.3%) multiple case study, 2(4.3%) descriptive case study designs, 1(2.2%) convergent mixed research, 1(2.2%) convergent parallel design and 1(2.2%) a survey design. The three most common statistical methods used were descriptive statistics 17(68%), parametric inferential statistics 3(12%), and predictive statistical correlation 3(12%). Overall, SPSS was the most popular statistical software followed by Excel and other software. Generally, descriptive statistics was the most frequent statistical analysis method in the published articles while descriptive and case study designs were common study designs. This study shows that a diverse variety of statistical methods have been used in JAET and a slight frequency improved from 2018 to 2024. Choosing the appropriate software for any researcher is critical. Software requirements must be assessed based on the nature of applications, objectives of the study statistical, computational, and ease of operation to the common researcher. Knowledge regarding statistical methods related to contingency tables, t-tests- test and ANOVA, and regression needs to be updated for the scholars and researchers at the Institute of Adult Education.

Keywords: Statistical methods, research design, software, JAET, Tanzania.