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CONFIRMATORY ANALYSIS OF FACTORS AFFECTING RETENTION OF FEMALE STUDENTS IN TERTIARY INSTITUTIONS USING BAYESIAN LOGISTIC REGRESSION MODEL

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Studies have revealed that female students frequently drop out at higher rates than their male counterparts. Female students who drop out of school experience an abnormal socio-economic crisis as a result of their numerous issues. These issues may include discrimination based on gender, social pressures, and restricted access to resources. Addressing these issues is crucial in order to create a more inclusive and equitable educational environment for all students. This study demonstrates that Bayesian logistic regression is a useful and pragmatic alternative for ascertaining the factors affecting female students' retention in higher education. The study was conducted on female students of the University of Lagos. Stratified random sampling was used to obtain a target sample. The primary data were collected using questionnaires and grouped into social demographic variables, academic performance variables and academic related experience variables, based on literatures reviewed. Based on preliminary analysis and the application of Bayesian logistic regression model, the impact of identified significant predictors on female students' retention were analysed. The results identified factors that are statistically significant to students' retention and that the factors that mainly affect female students' retention were more of academic related experience variables. The Bayesian logistic regression provided a way to directly estimate the retention factors, quantify variance components and model parameter uncertainties. The study recommends provision of a support system and assigning female students to their choice of field by interest may help female students' retention.

Keywords: Bayesian Inference, Bayesian Logistic Regression, Stratified Sampling, Students Retention, UNILAG

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