A FOUR WAY CATEGORICAL DATA ANALYSIS OF ACADEMIC PERFORMANCE OF STUDENTS

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ABSTRACT

This paper is centered around a four way categorical data analysis of performance of students in a secondary school. It is primarily based on the Chi-Square Test of Independence and also Odds Ratio Test. The test showed that the performance of students was dependent on age, gender and region of origin. It also showed that the performance of Junior school class 1 students was also dependent on age. The odds ratio test was performed and it showed that females from the south in the 16 to 20 years age group have the least pass odds of 0.174 and females from the north between 10 to 15 years have the highest pass odds of 9.009 within the group respectively. We also found out that junior school class one student's odds ratio test showed that students of 12years had the highest pass odds ratio of 1.343.

Keywords: Odds ratio, Test of Independence, Categorical Data, Contingency Table, Four-way Analysis.