

## **ABSTRACT**

The academic achievement of students in mathematics in Public Day Secondary Schools in Meru South Sub County has been low in the National and County Mean score. This persistent poor performance in achievement of students in mathematics in public day secondary schools raises concern as it is experienced in the backdrop of concerted efforts by stakeholders to better achievement in mathematics. This study, therefore, sought to examine the relationship between selected factors and academic achievement of students in mathematics in public day secondary schools in Meru South Sub-County, Kenya. This study adopted a descriptive correlational research survey design. The study population was 1955 respondents comprising of 455 teachers and 1500 form three students in all Public Day Secondary Schools in Meru South Sub County in Tharaka Nithi County. Simple random sampling was applied to select a sample number of teachers and students from the population and this sample formed the group from whom data was collected. Instruments for data collection included questionnaires for both teachers and students. A pilot study was carried out in a purposive sample of two public day secondary schools in Maara Sub County, selected for the researcher's convenience, involving 5 teachers and 15 form three students totaling 20 respondents representing 10% of the sample. To ensure the correct inference about the population, the instruments used were subjected to reliability analysis which was carried out to find out whether the measures of the research instruments would yield the same results on other occasions. The reliability of the instruments was computed using Cronbach's Coefficient Alpha and this calculation obtained a reliability coefficient of  $\alpha = 0.78$  which is greater than 0.70 and thus the instruments were considered acceptable for data collection. Statistical Package for Social Sciences Version 25 which is preferred due to its inbuilt statistical analysis capabilities for quantitative data was used to run analysis where data was summarized using descriptive statistics. Inferential statistics involving use of Pearson's Correlation Coefficient analysis was employed to determine the relationship between various variables, where a probability, P-value less than 0.05 was considered statistically significant. The findings from this study revealed that; all the independent variables, that is; parental-related factors(home set up, household chores and academic support), teacher-related factors(teacher's academic qualification, teaching experience and morale) and student-related factors(student altitude, arithmetic ability and mathematics anxiety), were found to influence academic achievement in mathematics either positively or negatively. This study recommends that parents and guardians should pay more attention to providing learners with adequate study materials to better their performance. Additionally, learners must be provided with ample study time; mathematics learning involves learners making practice on taught concepts that require time to review and understand which requires enough time. It is also important that more emphasis should be paid to training teachers, special workshops, and training sessions that boost Mathematics teaching skills in a highly dynamic world. Learners are urged to develop strong positive attitude towards Mathematics as it yields better academic achievement. In general, the findings of this study call for a combined effort from all stakeholders in education, in their respective roles in a bid to better academic achievement in mathematics