

**SEX STEREOTYPES AS PREDICTORS OF MATHEMATICS PERFORMANCE
AMONG SECONDARY SCHOOL STUDENTS OF MACHAKOS COUNTY, KENYA**

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DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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DECLARATION

I declare that this project is my original work and has not been presented in any other university/institution for consideration of any certification. This research project has been complemented by referenced sources duly acknowledged. Where texts, data (including spoken words), graphics, pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited using current APA system and in accordance with anti-plagiarism regulations

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28/04/2017

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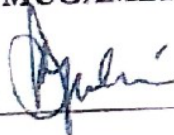
E55/CE/26435/2016

Department of Educational Psychology

This research proposal has been submitted for examination with my approval as the university supervisor.

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ABSTRACT

This study was designed to investigate relationship between sex stereotypes and mathematics performance among secondary school students of Machakos County. It sought to establish how sex stereotype beliefs, stereotype consensus and stereotype threats influence mathematics performance among students. It examined how exposure to negative stereotypes on students' ability in mathematics affected their mathematics performance. The theories used in the study were social cognitive theory (by Bandura, 1986) and self- categorization theory (by Turner, 1987). The study adopted an ex post facto research design and the target population was all the year 2016 form two students in public secondary schools in Machakos County. The study sample involved 250 participants with; 200 students, 30 teachers, and 20 parents from six secondary schools of Matungulu sub county, Machakos County. Purposive, stratified, and simple random sampling procedures were used in the selection of schools and participants. Stratified random sampling was used to identify the six schools for the study from twenty selected schools. These schools were either boarding or day and classified as mixed schools or single sex schools. Simple random sampling was then used to identify the students' participants for the study. The researcher purposely selected the most experienced mathematics teachers based on the years of service in each sampled school. Mathematics performance was obtained from the students' scores in a Sit-In-CAT. The students also filled a Stigma Consciousness Questionnaire (SCQ) whose scale measured the extent of self-categorization and how it influenced their performance. Some selected parents, teachers, and the sample students filled Mathematics as a Sex Domain (MSD) questionnaire whose scale measured their beliefs in sex differences and mathematics performance. Piloting was done on 30 participants and the instruments adjusted accordingly to improve on validity and reliability. Data was coded, tabulated, scored and keyed in the computer. Analysis was done using the Statistical Package for Social Sciences (SPSS). Data was analyzed using both descriptive and inferential statistics. Demographic information of the participants was descriptively presented in tables, graphs and percentages. Stereotype beliefs from the MSD questionnaire were analyzed using independent samples t-tests by comparing the mean scores for participants' beliefs in sex differences and mathematics performance. Stereotype threats to students' mathematical abilities were analyzed using the independent samples t-tests by calculating mean score differences between boys' and girls' performance in the Sit-In test. The Chi-square analysis was used to study relationship between sex differences and stereotype consensus among students from the SCQ questionnaire, and analyzed their contributions to mathematics performance according to their respective scores in the test. The major findings were that female students showed a weaker identification with mathematics than did their male peers; the parents and teachers supported these beliefs. This was also evident in the females' mathematics poor performance compared to males under a stereotype threat. Additionally, females displayed high stigma consciousness in their mathematics abilities, therefore had higher levels of sex stereotype consensus compared to their counterparts. It was therefore concluded that sex stereotype beliefs, threats, and consensus are predictors of poor mathematics performance among high school students. Based on the findings, it was recommended that all education stakeholders should combine forces in establishing favorable school and home environments that nurture the development of intrinsic motivation and positive attitudes towards learning of mathematics, in order to help students overcome the maladaptive effects of sex stereotypes on mathematics.