Bridging the gender gap in mathematics: examining STEM enrolment rate by gender in Higher Education, in Italian Provinces

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The paper explores gender differences in STEM (Science, Technology, Engineering, and Mathematics) enrollment by examining factors influencing girls' decisions in secondary education. Stemming from concerns about gender parity in STEM fields, the study aims to study the effect of girls' achievements in math on their likelihood of pursuing STEM majors. It extends this investigation to Italian provinces, analyzing whether regional gender gaps influence female enrollment in STEM. Previous research attributes female underachievement in math to social conditioning and stereotype threat, suggesting a division between gender and math identities. The study contends that gender stereotypes vary geographically and can affect girls' interest in STEM subjects. It posits that a gender-biased environment, exemplified by women's underrepresentation in certain fields, may deter girls from pursuing STEM majors. By focusing on provincial contexts, the research aims to deepen understanding of how personal and contextual factors intersect in shaping girls' STEM enrollment.