

Gender-Based Performance in Mathematical Facts and Calculations in Two Elementary School Samples From Chile and Spain: An Exploratory Study

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Abstract

Gender differences in mathematical performance are not conclusive according to the scientific literature, although such differences are supported by international studies such as the Trends in International Mathematics and Science Study (TIMSS). According to TIMSS 2019, fourth-grade male students outperformed female students in Spanish-speaking countries, among others. This work approaches the study on gender difference by examining the basic calculation skills needed to handle more complex problems. Two international samples of second and third graders from Chile and Spain were selected for this exploratory study. Tests on basic mathematical knowledge (symbolic and non-symbolic magnitude comparisons, fluency, and calculation) were administered. The tests did not show significant difference or size effect between genders for mean performance, variance in the distribution of performance, or percentiles. As noted in the existing literature on this topic and reiterated by these findings, great care should be exercised when reporting on possible gender differences in mathematical performance, as these can contribute to low self-concept among female students. © Copyright © 2021 Pina, Martella, Chacón-Moscoso, Saracostti and Fenollar-Cortés.

Author keywords

calculation; children; gender differences; mathematical fluency; primary education