

Meta-Analysis Study

Deidre Norman

University of Mary Washington

February 20, 2018

“I hereby declare upon my word of honor that I have neither given nor received unauthorized help on this work.”

Deidre Norman

Reference

Ma, X. (1999). A meta-analysis of the relationship between anxiety toward mathematics and achievement in mathematics. *Journal for Research in Mathematics Education*, 30(5), 520.

Retrieved from

<http://ezproxy.umw.edu/login?url=https://search.proquest.com/docview/223492863?accountid=12299>

Summary

In this meta-analysis study, Xin Ma evaluates twenty-six studies involving the relationship between math anxiety and achievement in mathematics for elementary and secondary students. With previous findings, Ma took note that a majority of studies utilized outdated instruments or paid close attention to students of higher education. Thus, Ma studied databases from 1975 to the present day before deciding on the studies with a median year of 1991. Here, it became evident that several variables impacted students' levels of math anxiety, including gender, social background, academic background, and grade level. Nevertheless, these findings may differ given the type of instrument used to measure math anxiety, such as the Mathematics Anxiety Rating Scale (MARS). Despite that, these instruments still reach the conclusion that math achievement weighs heavily on students' levels of math anxiety. The lower the levels of anxiety the higher level of mathematics achievement. Although certain treatments may reduce anxiety few programs mentioned skill development. Overall, math anxiety begins around fourth grade for a majority of students and continues to form throughout early secondary schooling, which leads students to avoid mathematics courses.

Implications

This study indicates that a majority of studies that deal with math anxiety look at the aftermath to consider causes instead of preventing math anxiety. Math anxiety can occur during any math course early on in a student's life and is influenced by the level of anxiety the teacher may have toward math. With this implication, reducing math anxiety in teachers in elementary and middle schools may support students in the long run.