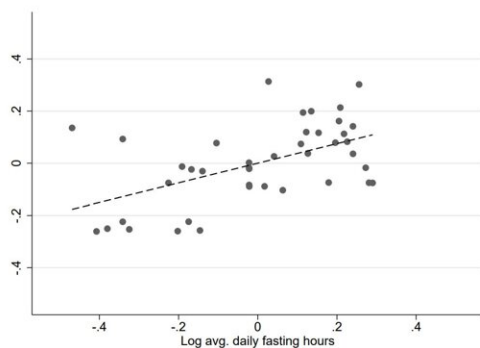
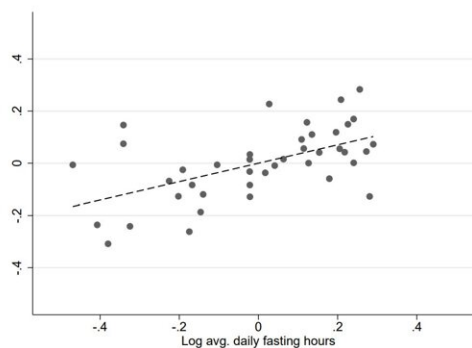


# Study: Better school performance seen after intensive religious fasting

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(a) Reading score



(b) Math score

Performance gaps and Ramadan fasting hours (PISA reading and math scores)  
 Note:: Scatter plot of country-year performance gaps in reading and math scores, respectively, between students whose parents are from Muslim countries and all other students and logarithm of average daily fasting hours during Ramadan before test was taken. Country-year performance gaps and log average daily fasting hours are adjusted by country means. Credit: *Journal of Economic Behavior & Organization* (2022). DOI: 10.1016/j.jebo.2022.10.025

More than one billion Muslims are fasting every year in the ninth month of the Islamic calendar, Ramadan. In addition to abstaining from food and drink every day between sunrise and sunset, many believers participate more than usual in social activities during that time. This includes, for example, the daily fast-breaking with friends and family or

with the congregation after the service.

In a recent study, economists from Konstanz, Cologne and Bern come to the following conclusion: The social aspects of Ramadan, in particular, appear to have a positive impact on the school performance of adolescent believers. The research results were published in the *Journal of Economic Behavior and Organization*.

## **Improved performance through increased social capital**

In the study, the researchers examine the question of whether Ramadan fasting has an effect on the school performance of eighth graders that lasts beyond the fasting period and whether this effect is related to the intensity of fasting.

Their finding: Although the physically demanding fasting is known to have negative effects on concentration during the fasting period, students in Muslim countries performed better in the international school performance survey TIMSS (Trends in International Mathematics and Science Study) after intensive Ramadan fasting than after a less intensive Ramadan.

Because more intensive fasting is also associated with increased participation in [religious activities](#) such as [religious services](#), the authors suggest that the increased school performance is due in particular to the social aspects of fasting.

"Our research suggests that engaging in [religious practice](#) promotes the formation of a shared identity among [school students](#) and increases social capital that is useful for educational success. This includes, for example, contact with other [young people](#) of higher socio-[economic](#)

[status](#), support and assistance, or recognition and knowledge," specifies Guido Schwerdt, professor in the Department of Economics at the University of Konstanz.

## Why Ramadan as a case study?

As the Islamic calendar and the solar calendar differ, Ramadan takes place a few days earlier each year in the solar calendar. Since the length of the day depends on the season, daily Ramadan fasting hours also vary from year to year. "This results in natural variations over the years in the intensity of fasting among believers in a given region, which we linked to school performance data collected after each Ramadan," Schwerdt explains.

The analysis of the multi-year TIMSS data revealed in detail that increased fasting intensity is associated with better school performance in countries with a majority Muslim population. In countries where the majority are non-Muslim, there was no such effect.

"Using multi-year PISA data from eight Western European countries, we were additionally able to show that adolescents with parents from countries with a Muslim majority performed better on the PISA test in years with longer daily fasting relative to other adolescents than in years with low fasting intensity," Schwerdt adds.

This effect is greater in schools with a high proportion of Muslim students than in schools with a lower proportion—another indication that the social aspects of religious activity and the formation of a common identity play a role here.

**More information:** Erik Hornung et al, Religious practice and student performance: Evidence from Ramadan fasting, *Journal of Economic Behavior & Organization* (2022). [DOI: 10.1016/j.jebo.2022.10.025](https://doi.org/10.1016/j.jebo.2022.10.025)

Provided by University of Konstanz

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