

The Interplay between Science Knowledge, Socioeconomic Status, and Religiosity: A Regression Analysis

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Science literacy and knowledge are dismally low in the United States, with some estimates claiming that less than 30% of the population is scientifically literate. To be able to resolve this problem, we must first understand what factors affect basic scientific knowledge. Nationally representative survey data from the General Social Survey (GSS) were used as indicators of basic science knowledge, religiosity (religious service attendance), and socioeconomic status. Based on other research, we expected that higher scores on the socioeconomic index (SEI), a variable encompassing education, income, and occupational prestige, would result in higher science knowledge scores. We also expect that increased religiosity would result in lower science knowledge scores, due to the science denial that occurs in some religious sects. Regressing science knowledge on the main effects and interaction between socioeconomic status and religiosity against the science knowledge indication supports the expected trends, but also reveals unexpected nuances. The impact of religiosity was not eliminated by the impact of SEI, conflicting with the stereotype of the religious lower class and wealthy agnostic intellectual. If the stereotypes were accurate, one of the factors should have fallen out of significance in this model. Instead, both were strengthened compared to simple linear regression models. Religiosity and SEI did not interact significantly, meaning the impact of religiosity on science knowledge did not depend on the SEI level. The general trend of lower science knowledge with higher religiosity, and higher science knowledge with higher SEI, was also more nuanced than expected. Many individuals across the spectra of socioeconomic status and religiosity performed well, suggesting that there is much more to the story of who understands science than is initially apparent.