

# The relative age effect and its influence on academic performance

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**Introduction and Purpose** The policy of school organisation for grouping students in the same academic year is based on date of birth. The differences in the experiences and maturation of older students involve a relatively better performance in academic settings, which is known as the relative age effect (RAE). This effect is more important the younger the student is. The goal of this study is to identify the connections of influence that RAE, socioeconomic status (SES), and type of institution have on academic performance in a school population of eighth graders. **Methods** The study is based on a population-based, representative sample of 15,234 8th graders (50.4% female; average age = 13.61 years) in the 2011 National System of Quality Assessment in Education Survey (SIMCE) from Chile. The SIMCE for global academic performance consists of 4 tests: reading, mathematics, social studies, and science. All tests consist of multiple-choice and closed questions. In addition, in order to have the information of general academic performance, an extra variable expressing the average score of each student was created. Also, the SIMCE includes additional variables for the evaluation process such as SES or type of school. Students were assigned to one of five age groups in terms of date of birth (G1, G2, G3, G4, and G5), in which students belonging to G1 are the oldest and students belonging to G5 are the youngest. **Results** The results achieved in the structural equation modelling indicate a good global fit. Individual relationships show significant effects of the three variables observed on academic performance, although SES received the highest values. The influence of RAE took place both in the full sample and sub-samples composed according to the SES and academic performance, showing higher values for students with lower scores. Although the influence of RAE decreases when SES is controlled, its effect is still significant and contributes to additionally explain the performance. **Conclusions** The RAE remains, even with residual values, an explanatory factor in academic performance even in eighth graders. Since the

RAE decreases as the influence of schooling increases, the potential adverse effects for some students would be placed in previous and initial moments of formal schooling. These findings may be useful into taking steps towards flexibilisation on age of entry in compulsory schooling. Moreover, the need to implement early, comprehensive evaluation systems which include aspects related to neurodevelopment in order to provide maximum information to parents and educators is also drawn.

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