Academic Acceleration in Gifted Youth and Fruitless Concerns Regarding Psychological Well-Being: A 35-Year Longitudinal Study

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Introduction

Background: Academic acceleration is effective for the academic development of intellectually precocious youth (Assouline et al., 2015; Lubinski, 2016; National Mathematics Advisory Panel, 2008; Steenbergen-Hu et al., 2016). However, concerns about acceleration harming the psychological well-being of gifted youth later in life are widespread. They are found in high impact scientific outlets (Pekrun et al., 2019), New York Times Best Sellers (Gladwell, 2013), and among parents, teachers, and counselors (Wood et al., 2010).

Current Work: Does academic acceleration for gifted youth harm their psychological well-being 35 years later?

• Study I: Study of Mathematically Precocious Youth (SMPY) sample of 1636 participants (top 1% of ability). A series of three operational replications of successively more able participants identified over 1972-1983.
• Study II: Constructive replication with 478 top STEM graduate students identified in 1992.

Methods

<table>
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<tr>
<th>Predictor 1</th>
<th>Age of High School Graduation</th>
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<td>Predictor 2</td>
<td>Acceleration Composite (= 4 X Grades Skipped + AP Courses + College Courses)</td>
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<td>Outcome</td>
<td>Age-50 Psychological Well-Being (Core-Self Evaluations, Psych. Flourishing, Positive Affect, Life Satisfaction, and Negative Affect (Reversed))</td>
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Results

Figure 1. Scree plot and parallel analysis on the correlation matrix of the indicators of psychological well-being for Studies 1 and 2. Only the first eigenvalue is above what would be expected by chance, suggesting a unidimensional structure underlying the five indicators of psych. well-being.

Figure 2. Tukey box-and-whisker plots of the relationship between psychological well-being, age of high school graduation, and the acceleration composite in Studies 1 and 2. Sample sizes appear below the box. Horizontal lines represent medians; hinges represent the interquartile range (IQR); upper and lower whiskers extend to the furthest point within 1.5 X IQR from the median; all other data points are outliers.

Figure 3. Structural equation modeling results for the relationships between psychological well-being, SES, and acceleration composite (top) and age of high school graduation (bottom) for Study 1 and Study 2. All path coefficients are from the standardized solution. Only one path broke the “small” effect threshold, and this path (.13 from acceleration composite to psychological well-being in Study 2) suggested that more acceleration was associated with enhanced well-being.

Discussion

Findings:

• Study I: Early life academic acceleration did not relate (positively or negatively) to psychological well-being later in life. This was true for two measures of acceleration, five measures of psychological well-being, a principal component of well-being, and in a latent model setting.
• Study II: The results of Study 1 were replicated in an independent sample that was identified as at promise: graduate students attending a top STEM graduate program in 1992.

Implications:

• Fears of the harmful effects of academic acceleration on psychological well-being are not empirically supported.
• Gifted students should be allowed to proceed through curricula at their desired paces.

References & Acknowledgements


This research was supported by a National Science Foundation (NSF) Graduate Research Fellowship, a research and training grant from the John Templeton Foundation, and Vanderbilt’s Kennedy Center for Research on Human Development.