

Adolecent Growth Mindset Based on Demographic Factors: A Case Study at SMPN 5 Bandung

^{1*}Moch. Dendi Arief Prawira., ¹Ahman , ¹Eka Sakti Yudha  , ¹Ma'rifatin Indah Kholili  

¹Universitas Pendidikan Indonesia, West Java, Indonesia.

Article Information

ABSTRACT

Received:
July 2026

Accepted:
August 2026

Published:
September 2026

Background: A growth mindset is the belief that potential can be developed through effort, appropriate strategies, and support from others. Despite its importance, research comprehensively examining growth mindset across demographic characteristics is limited. This study aims to describe the growth mindset profile of adolescents based on demographic factors, including gender, age, grade level, family background, school enrollment pathway, and parental income. A cross-sectional quantitative survey design was used involving 699 students from grades VII, VIII, and IX at SMP Negeri 5 Bandung. Data were collected using the Adolescent Growth Mindset Scale, a 32-item scale with strong psychometric properties (Cronbach's $\alpha = 0.95$). Descriptive statistics and multiple linear regression analysis were used to examine demographic differences and predictors of growth mindset. Results indicated that 47.5% of students fell into the Fixed Mindset with Some Growth Ideas category. Higher growth mindset scores were observed among male students, older adolescents, students in higher grade levels, those admitted through merit-based pathways, and students from high-income families. Regression analysis showed that family structure (sig. = 0.028) and paternal bereavement status (sig. = 0.021) significantly contributed to variations in growth mindset, while gender, age, grade level, school entry pathway, and parental income were not significant predictors when analyzed simultaneously. These findings suggest that demographic and family-related factors play a role in shaping adolescents' beliefs about learning and personal development. This study highlights the importance of school counseling and targeted educational interventions to strengthen growth mindsets.

Keywords: Growth Mindset, Adolescents, Demographic Factors, Family Structure, School Counseling.



© 2026 Moch. Dendi Arief Prawira, Ahman, Eka Sakti Yudha, Ma'rifatin Indah Kholili. Published by Institute for Research and Community Services Universitas Muhammadiyah Palangkaraya. This is Open Access article under the CC-BY-SA License (<http://creativecommons.org/licenses/by-sa/4.0/>).

Corresponding Author:

Moch. Dendi Arief Prawira

Guidance and Counseling

[Universitas Pendidikan Indonesia](#)

Dr. Setiabudhi Road, No. 229, Bandung 40154, West Java – Indonesia

Email: prawiradendi.9@upi.edu

Citation Information: Prawira, M. D. A. ., Ahman, A., Yudha, E. S. ., & Kholili, M. I. Adolecent Growth Mindset Based on Demographic Factors: A Case Study at SMPN 5 Bandung. *Suluh: Jurnal Bimbingan Dan Konseling*, 12(1), 88–99. <https://doi.org/10.33084/suluh.v12i1.13250>

INTRODUCTION

Growth mindset is a relatively new psychological concept pioneered by Carol S. Dweck, a psychologist and professor of psychology at Stanford University. Growth mindset is based on the belief that an individual's fundamental qualities can be developed through effort and perseverance ((Dweck, 2016)). According to Dweck, the concept refers to the belief that one's abilities and intelligence can grow through effort, efficacy, and learning from failure. For individuals with a growth mindset, giving up simply does not make sense. Dweck specifically describes adolescence from a mindset perspective, arguing that it is a period filled with opportunities a time to learn new subjects, discover personal interests, and explore future aspirations (Dweck, 2016).

Research on growth mindset demonstrates its relevance to students' developmental tasks and achievements. Studies indicate that growth mindset can enhance resilience (Yeager & Dweck, 2023), self-efficacy (Mandeville et al., 2018), self-development (Glerum et al., 2020), grit in problem-solving (Yalçın & Yilmaz, 2023), self-regulation (Astuti et al., 2024), and perseverance (Mohamoud, 2024). In addition, growth mindset positively influences other aspects of students' lives. Students with a growth mindset tend to experience greater psychological well-being (Ali et al., 2023), improved stress reduction abilities (Meyer & Stutts, 2024), and better mental health maintenance (Blake, 2022; Lai et al., 2022). This is particularly relevant given that mental health has become a major concern in Bandung City in 2026.

Although growth mindset is widely regarded as an important attribute for students, existing data reveal a concerning reality. The 2018 PISA report showed that only 29% of Indonesian students demonstrated a growth mindset (OECD, 2019). This means that the majority of students (71%) exhibited a fixed mindset, which negatively affects reading literacy and academic achievement. Students with a fixed mindset tend to believe that intelligence is static and that they are born with a predetermined set of skills that cannot be changed (Dweck, 2006). They are often concerned about how they will be evaluated and strive primarily to ensure success (Dweck, 2017a).

In contrast, students with a growth mindset view intellectual ability as a malleable trait that can be cultivated and enhanced through effort and personal guidance (Dweck, 2015). They are focused on improvement. For these students, success is defined by

personal growth and development (Dweck, 2017b). Such students are more likely to embrace intellectual challenges as opportunities to learn and grow, and they tend to demonstrate greater resilience when facing setbacks (Yeager & Dweck, 2020). In educational settings, students' mindsets strongly influence learning performance (Dweck, 2017b). Student mindset refers to the attitudes, beliefs, and expectations they hold regarding a particular subject or learning experience (Linklater-Steele et al., 2025; Dweck, 2017a).

Growth mindset is an essential element of deep learning, which has become a major focus of the Ministry of Primary and Secondary Education. Growth mindset aligns with the intellectual development dimension of deep learning. This dimension emphasizes the integration of theory and practice to foster adaptive thinking and creative problem-solving (Kemendikdasmen, 2025). Growth mindset serves as a psychological foundation that encourages students to actively engage in learning, as it promotes the belief that abilities can be developed through effort, motivating students to embrace challenges and learn from failure. Meanwhile, deep learning focuses on creating learning environments and processes that are conscious, meaningful, and enjoyable through the holistic and integrated development of thinking, character and values, emotions and aesthetics, and physical well-being.

The philosophical foundation of deep learning, as outlined in Ministerial Regulation of Primary and Secondary Education No. 13 of 2025, emphasizes that meaningful learning connects educational experiences with cultural, social, and everyday-life contexts. Deep learning motivates students to think critically, analytically, and synthetically when solving complex problems. Furthermore, the psychopedagogical foundation of deep learning draws upon developmental psychology and pedagogy, providing a curriculum framework that supports how individuals learn and develop according to students' needs and capacities.

Research on adolescent growth mindset in Bandung remains limited. This is concerning given that adolescent mental health has become a prominent issue in the city. A total of 71,433 students, ranging from elementary to senior high school levels in Bandung, West Java, were identified as experiencing mental health problems (Costa, 2026). This figure represents 48.19% of the 148,239 students who underwent mental health screening through a free health examination program conducted between August and October 2025. The most significant mental health concerns were found among junior secondary school students (SMP/MTs equivalent), with 49.09% showing indications of mental health disorders. Specifically, among SMP/MTs students, 76.46% experienced mild anxiety, 7.89% severe anxiety, 15.23% mild depressive symptoms, and 7.42% indications of severe depression. Therefore, fostering a growth mindset among students is critically important as a preventive measure against mental health problems. Mental health is essential for quality of life and lifelong development (Lai et al., 2022).

Although numerous studies have examined growth mindset among adolescents, most previous research has investigated demographic variables only partially, focusing on factors such as gender or socioeconomic status in isolation. For instance, Napolitano et al. (2021) examined the psychometric properties of growth mindset among Indonesian adolescents but did not map how the construct varies across demographic subgroups, while Ren et al. (2025) demonstrated an intergenerational transmission of growth mindset from parents to children without accounting for structural family variations such as divorce or parental bereavement. Similarly, Kholili et al. (2025) identified factors shaping high school students' growth mindset from educators' perspectives, leaving the students' own demographic and family-structure profile largely unexplored. There remains a lack of literature that comprehensively integrates macro-level demographic factors (such as grade level, age, and school admission pathway) with complex micro-level domestic dynamics, including variations in family structure (intact versus divorced families), orphanhood status (loss of father or mother), and only-child status. Consequently, understanding of how the broader sociodemographic ecosystem shapes or constrains adolescents' growth mindset remains limited. This study seeks to address this empirical gap by examining the profile of adolescent growth mindset through an integrative, multi-factor demographic approach. The urgency of this study is reinforced by the rising prevalence of adolescent mental health problems in Bandung described above, which makes an evidence base for targeted, demographically informed counseling interventions immediately necessary. The novelty of this study lies in its simultaneous, regression-based integration of macro-level demographic factors and micro-level family dynamics within a single adolescent population, an approach that, to the researchers' knowledge, has not been previously applied in the Indonesian growth mindset literature.

Adolescence is a developmental period marked by rapid cognitive, emotional, and social transformation, during which individuals actively construct beliefs about their own abilities and potential. This period is commonly divided into early adolescence (approximately 10-13 years), middle adolescence (14-17 years), and late adolescence (18-21 years), each characterized by distinct cognitive maturity and identity-formation tasks. Because beliefs about the malleability of ability, that is, growth mindset, are especially formative during the transition from early to middle adolescence, junior secondary school students represent a critical population in which to examine how demographic and family conditions shape this belief system before it consolidates into more stable patterns in later adolescence.

This study aims to investigate and map differences in growth mindset levels among adolescents based on their demographic characteristics. Specifically, it examines the contributions of personal factors (gender, age, and grade level), economic factors (parental income), institutional factors (school admission pathway), and family structure dynamics (intact versus divorced families, orphanhood status, and only-child status) to the development of adolescents' growth mindset. Based on this aim, the study proposes the following hypotheses: (H1) personal factors (gender, age, and grade level), economic factors (parental income), institutional factors (school admission pathway), and family structure dynamics (family structure, orphanhood status, and only-child status) simultaneously have a

significant effect on adolescents' growth mindset; and (H2) each of these demographic factors partially has a significant effect on adolescents' growth mindset.

METHOD

The research employed a cross-sectional design, which is useful for measuring current attitudes or practices and for organizing research and data collection within a relatively short period of time (Creswell, 2012). Data were collected only once over a limited timeframe to obtain information from students. The study adopted a quantitative approach, a type of educational research in which researchers determine the focus of investigation, formulate specific and narrowly defined research questions, collect quantitative (numerical) data from participants, analyze the data using statistical procedures, and conduct the inquiry in an objective and unbiased manner (Creswell, 2012). In this study, the quantitative approach was used to examine the profile of growth mindset among adolescents.

The participants were students in Grades VII, VIII, and IX at SMP Negeri 5 Bandung, consisting of 337 Grade VII students, 210 Grade VIII students, and 152 Grade IX students. Although data collection was conducted within a single institution, SMP Negeri 5 Bandung exhibits a high degree of heterogeneity due to its status as a centrally located public school that attracts students from diverse socioeconomic backgrounds, as reflected in the relatively even distribution of parental income levels and varied admission pathways. Therefore, the sample was considered adequate for mapping the sociodemographic dynamics of growth mindset during early adolescence. In terms of developmental stage, participants ranged from 12 to 17 years of age, with the majority (79.7%) between 12 and 14 years old. Following common developmental classifications, this places the sample predominantly within the early adolescence stage, with a smaller proportion of older Grade IX students (15-17 years) representing the transition into middle adolescence.

The participants consisted of 348 male students and 351 female students. Based on age, the sample included 44 students aged 12 years, 292 students aged 13 years, 223 students aged 14 years, 123 students aged 15 years, 16 students aged 16 years, and one student aged 17 years. Regarding family structure, there were 91 only children, 36 fatherless students (yatim), and 16 motherless students (piatu). Additionally, 92 students came from divorced families, while 607 students came from intact families. Based on school admission pathways, 266 students were admitted through the zoning/domicile pathway, 167 through academic and achievement-based admissions, 6 through the disability affirmative pathway (PDBK), and 162 through the economically disadvantaged affirmative pathway (RMP). In terms of parental income, 66 students reported parental income between IDR 0 and IDR 1,000,000, 124 students between IDR 1,000,000 and IDR 3,000,000, 138 students between IDR 3,000,000 and IDR 5,000,000, 162 students between IDR 5,000,000 and IDR 10,000,000, and 166 students reported parental income exceeding IDR 10,000,000.

The target population consisted of all actively enrolled students at SMP Negeri 5 Bandung during the 2025/2026 academic year, totaling 699 students. The sampling technique employed in this study was total sampling (census sampling). This technique was selected because the researcher included all members of the population who met the inclusion criteria as research participants. Consequently, the sample size was identical to the population size, consisting of 699 students.

Table 1. Demographic Categories

Demographics Category	Specific Characteristics	Frequency (n)	Percentage (%)
Grade Level	Grade VII	337	48,21%
	Grade VIII	210	30,04%
	Grade IX	152	21,75%
Gender	Male	348	49,79%
	Female	351	50,21%
Age	12 Years	44	6,29%
	13 Years	292	41,77%
	14 Years	223	31,90%
	15 Years	123	17,59%
	16 Years	16	2,29%
	17 Years	1	0,14%
Family Structure	Intact Families	607	86,84%
	Divorced Families	92	13,16%
Special Status of Children	Only Child	91	13,02%
	Yatim (Father Deceased)	36	5,15%
	Piatu (Mother Deceased)	16	2,29%
School Admission Pathway	Zoning / Residence	266	38,05%
	Achievement (Report Card & Championships)	167	23,89%
	PDBK Affirmation	6	0,86%
	RMP Affirmation	162	23,18%
	Other	98	14,02%

Parental Income	Rp0 – Rp1.000.000	66	9,44%
	Rp1.000.000 – Rp3.000.000	124	17,74%
	Rp3.000.000 – Rp5.000.000	138	19,74%
	Rp5.000.000 – Rp10.000.000	162	23,18%
	> Rp10.000.000	166	23,75%
	Other	43	6,15%

The quantitative instrument used in this study was the Adolescent Growth Mindset Scale, developed by (Kholili et al., 2025). Because the original scale was developed and validated among senior high school (SMA) students, this study adapted the instrument for use with junior secondary school (SMP) students by simplifying item wording for readability while retaining the original eight-dimension structure and item content; no new items were added or removed. The instrument is categorized as an attitudinal measure, which assesses students' beliefs regarding a particular construct in order to predict their attitudes and behaviors (Creswell, 2012). The selection of the instrument was based on empirical standards in growth mindset research, ease of administration, and its suitability for the context of junior secondary school students.

The instrument measures eight dimensions of growth mindset: belief that basic traits and abilities can be developed (Malleable Traits/MT), belief in effort (BE), meaning of failure (MF), goal orientation (GO), thriving on challenges (TC), pushing beyond perceived limits (PL), intensive drive to learn (DL), and continuous improvement (CI).

The instrument employed a Likert scale. Likert scale scoring can be determined using either an a priori or an a posteriori approach. The a priori approach assigns scores based on predetermined criteria, whereas the a posteriori approach determines scores based on empirical testing of item response patterns. This study adopted the a posteriori approach by establishing scores through an examination of the scoring patterns for each item. The Likert scale was used to measure the attitudes, opinions, and perceptions of individuals or groups regarding a social phenomenon (Sugiyono, 2019). The instrument was a closed-ended questionnaire consisting of statements accompanied by predetermined response options.

The Adolescent Growth Mindset Scale consists of 32 items and uses a four-point response format: Strongly Agree, Agree, Disagree, and Strongly Disagree. A four-point scale was selected to prevent respondents from choosing a neutral response and to encourage them to express a clear position by selecting either agreement or disagreement.

The data obtained from the administration of the instrument were analyzed by classifying students' growth mindset levels into four categories. The total scores were grouped into Strong Growth Mindset, Growth Mindset with Some Fixed Ideas, Fixed Mindset with Growth Ideas, and Strong Fixed Mindset. This categorization is based on the original Carol Dweck's Growth vs. Fixed Mindset Assessment, which consists of 20 items measuring both ability mindset and personality/character mindset. Munika et al. (2022), in their study Validation of the Mindset Scale in the Indonesian Context: A Rasch Model Analysis, also adopted this categorization framework. This classification is further supported by (Dweck, 2017c), who argues that individuals may simultaneously possess elements of both growth and fixed mindsets.

Table II. Mean Calculation Results in the Rasch Model

N	Mean Actual	Mean Measure	SD Measure	Skor Maximal	Skor Minimal
699	103,0	2,04	1,83	7,36	-6,99

The following section presents the scoring categorization formula for growth mindset, which consists of four categories: Strong Growth Mindset, Growth Mindset with Some Fixed Ideas, Fixed Mindset with Some Growth Ideas, and Strong Fixed Mindset.

Table III. Scoring of Growth Mindset Category

Formula	Category
$X \geq \text{Mean} + SD$	Strong Growth Mindset
$\text{Mean} \leq X < \text{Mean} + SD$	Growth Mindset with some Fixed Ideas
$\text{Mean} - 1SD \leq X < \text{Mean}$	Fixed Mindset with some Growth Ideas
$X < \text{Mean} - SD$	Strong Fixed Mindset

The construct validity of the instrument was examined using the Rasch model approach through Winsteps version 5.1.5.1, employing a unidimensionality test. The analysis revealed that the Raw Variance Explained by Measures was 42.9%, indicating that the Adolescent Growth Mindset Scale met the minimum unidimensionality requirement of 20% and was classified as good because it exceeded 40%. The unexplained variance values were as follows: 5.9% for the first contrast, 3.4% for the second contrast, 2.9% for the third contrast, 2.7% for the fourth contrast, and 2.4% for the fifth contrast. Based on the results of the Raw Variance Explained by Measures and the Unexplained Variance in the first through fifth contrasts, the instrument met the required criteria because all

unexplained variance values were below 15%. Item validity was evaluated using Item Fit Order based on three indicators: Outfit Mean Square (MNSQ), Outfit Z-Standardized (ZSTD), and Point-Measure Correlation (PT-Measure Corr.). An item was considered fit if it satisfied at least two of these criteria. The analysis showed that all items met the required fit criteria and were therefore considered suitable for measuring adolescent growth mindset.

In addition to construct validity, content validity was established through expert judgment, in which the adapted item set was reviewed by guidance and counseling experts for relevance and clarity against the eight growth mindset dimensions; items were retained based on expert agreement. Face validity was subsequently examined through a readability trial with a small group of junior secondary school students outside the main sample, confirming that the item wording was clear and comprehensible for this younger age group.

Reliability testing was conducted to determine the extent to which the instrument produced consistent results across repeated measurements. Instrument reliability was assessed using Cronbach's Alpha through Winsteps version 5.1.5.1 within the Rasch measurement framework. Cronbach's Alpha was used to evaluate the overall reliability of both the items and the respondents. The obtained Cronbach's Alpha coefficient was 0.95, indicating an excellent level of reliability. Furthermore, the Person Reliability index was 0.91, reflecting excellent consistency in respondents' answers. The Item Reliability index reached 0.99, indicating exceptional item quality within the instrument. The reliability of the Adolescent Growth Mindset Scale was higher than that of the Mindset Assessment Profile developed by Burgoyne & Macnamara (2021), which reported a reliability coefficient of 0.63, categorized as acceptable. The reliability was also higher than the 8-item Growth Mindset Scale developed by Carol Dweck, which demonstrated a Cronbach's Alpha of 0.81, categorized as very good.

Data analysis in this study employed a quantitative approach using IBM SPSS Statistics 25. Before hypothesis testing, classical assumption tests were carried out to ensure that the data met the requirements for multiple linear regression. Normality of the residuals was examined using the Kolmogorov-Smirnov test, linearity between each independent variable and growth mindset was examined using the Test for Linearity, and multicollinearity among the independent variables was examined using Tolerance and Variance Inflation Factor (VIF) values, with Tolerance > 0.10 and VIF < 10 as the criteria for the absence of multicollinearity. The multicollinearity assumption was fully satisfied for all predictors; the normality and linearity assumptions were partially satisfied, as detailed in the Results section. Given the large sample size (N = 699), regression analysis proceeded on the basis of the Central Limit Theorem, following common practice in survey-based social science research, while the assumption violations are acknowledged as a limitation of this study. Hypothesis testing was conducted through multiple linear regression analysis to examine the influence of independent variables on the dependent variable, both individually (partially) and collectively (simultaneously). According to Ghozali (2018), multiple linear regression is used to measure the strength and direction of the relationship between a dependent variable and two or more independent variables. The statistical analysis procedure consisted of several stages. First, the Coefficient of Determination (R^2) was examined to assess the extent to which the regression model explained variation in the dependent variable (Hair, J. F. et al., 2019). Second, the ANOVA test (F-test) was used to determine whether all independent variables included in the model collectively had a significant effect on the dependent variable (Ghozali, 2018). Finally, the t-test was conducted to evaluate the extent to which each independent variable individually contributed to explaining variation in the dependent variable (Sugiyono, 2019).

RESULTS AND DISCUSSION

Results

The following section presents the results of the analysis of adolescent growth mindset, including the frequency distribution of growth mindset categories, comparisons of growth mindset categories across demographic variables, multiple linear regression analysis, and tests of partial significance.

Table IV. Level of Growth Mindset

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strong Fixed Mindset	57	8.2	8.2	8.2
	Fixed Mindset with some Growth Ideas	332	47.5	47.5	55.7
	Growth Mindset with some Fixed Ideas	215	30.8	30.8	86.4
	Strong Growth Mindset	95	13.6	13.6	100.0
	Total	699	100.0	100.0	

Based on Table IV, a total of 95 students (13.6%) were classified in the Strong Growth Mindset category, 215 students (30.8%) in the Growth Mindset with Some Fixed Ideas category, 332 students (47.5%) in the Fixed Mindset with Some Growth Ideas category, and 57 students (8.2%) in the Strong Fixed Mindset category. These findings indicate that the largest proportion of students fell into the Fixed Mindset with Some Growth Ideas category.

Table V. Comparison of growth mindset

Aspect	N	SD	Min	Max	Mean	Category
Growth Mindset	699	1,83	-6,99	7,36	2,04	Growth Mindset with some Fixed Ideas
Gender						
Male	348	1,99	-6,99	7,36	2,17	Growth Mindset with some Fixed Ideas
Female	351	1,65	-6,99	7,36	1,92	Fixed Mindset with some Growth Ideas
Grade Level						
Class VII	337	1,51	-1,03	7,36	1,78	Fixed Mindset with some Growth Ideas
Class VIII	210	1,83	-1,31	7,36	2,18	Growth Mindset with some Fixed Ideas
Class IX	152	2,34	-6,99	7,36	2,45	Growth Mindset with some Fixed Ideas
Age (in Years)						
12	44	1,72	-1,03	7,36	1,60	Fixed Mindset with some Growth Ideas
13	292	1,57	-1,31	7,36	1,84	Fixed Mindset with some Growth Ideas
14	223	1,88	-1,38	7,36	2,22	Growth Mindset with some Fixed Ideas
15	123	2,22	-6,99	7,36	2,33	Growth Mindset with some Fixed Ideas
16	16	2,09	0,52	7,36	2,24	Growth Mindset with some Fixed Ideas
17	1		1,89	1,89	1,89	Fixed Mindset with some Growth Ideas
Family Structure						
Intact Family	607	1,73	-1,31	7,36	2,07	Growth Mindset with some Fixed Ideas
Divorced Family	92	2,41	-6,99	7,36	1,84	Fixed Mindset with some Growth Ideas
Special Status						
Only Child	91	1,95	-3,04	7,36	2,16	Growth Mindset with some Fixed Ideas
Father Deceased (Yatim)	36	2,04	-1,38	7,36	1,57	Fixed Mindset with some Growth Ideas
Mother Deceased (Piatu)	16	0,76	-6,99	3,90	1,78	Fixed Mindset with some Growth Ideas
Admission Pathway						
Zonasi / Domisili	266	1,88	-6,99	7,36	1,90	Fixed Mindset with some Growth Ideas
Academic and Championship Achievements	167	1,95	-1,31	7,36	2,56	Growth Mindset with some Fixed Ideas
Affirmations PDBK	6	1,04	-0,21	2,74	1,27	Fixed Mindset with some Growth Ideas
Affirmations RMP	162	1,49	-0,83	7,36	1,64	Fixed Mindset with some Growth Ideas
Others	91	1,81	-0,69	7,36	2,25	Growth Mindset with some Fixed Ideas
Parents' Income						
Rp0 – Rp1.000.000	66	1,96	-0,83	7,36	2,05	Growth Mindset with some Fixed Ideas

Rp1.000.000 – Rp3.000.000	124	1,36	-3,04	7,36	1,60	Fixed Mindset with some Growth Ideas
Rp3.000.000 – Rp5.000.000	138	1,91	-6,99	7,36	1,93	Fixed Mindset with some Growth Ideas
Rp5.000.000 – Rp10.000.000	162	1,72	-0,21	7,36	2,20	Growth Mindset with some Fixed Ideas
> Rp10.000.000	166	2,01	-1,01	7,36	2,51	Growth Mindset with some Fixed Ideas
Others	43	1,83	-1,38	7,36	1,28	Fixed Mindset with some Growth Ideas

Demographic groups with mean scores falling within the Growth Mindset with Some Fixed Ideas category included male students, students in Grades VIII and IX, students aged 14–16 years, students from intact families, only children, students admitted through the achievement-based admission pathway, and students whose parents' income ranged from IDR 0–1,000,000 and IDR 5,000,000 to above IDR 10,000,000.

In contrast, demographic groups with mean scores classified as Fixed Mindset with Some Growth Ideas included female students, students in Grade VII, students aged 12–13 years and 17 years, students from divorced families, fatherless (yatim) and motherless (piatu) students, students admitted through the zoning/domicile pathway, the affirmative pathway for students with disabilities (PDBK), the affirmative pathway for economically disadvantaged students (RMP), and students whose parents' income ranged from IDR 1,000,000–3,000,000 and IDR 3,000,000–5,000,000. The following section presents the results of the simultaneous significance test (ANOVA), which was conducted to determine whether all demographic factors collectively have a significant effect on growth mindset.

Table VI. ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
I	Regression	23.112	9	2.568	3.883	.000 ^b
	Residual	455.635	689	.661		
	Total	478.747	698			

a. Dependent Variable: Level of Growth Mindset

b. Predictors: (Constant), Parents' Income, PIATU, Gender, Grade Level, Only Child, Family Structure, Admission Pathway, YATIM, Age (in Years)

Prior to hypothesis testing, classical assumption tests were conducted. The one-sample Kolmogorov-Smirnov test indicated that growth mindset scores deviated significantly from a normal distribution ($K-S = .283$, $df = 699$, $p < .001$; Shapiro-Wilk = .852, $df = 699$, $p < .001$). This departure from normality is common in large samples, where the Kolmogorov-Smirnov test becomes highly sensitive to even minor deviations; given the sample size ($N = 699$), the analysis proceeded on the basis of the Central Limit Theorem, and this reliance is noted as a limitation in the Conclusion. The linearity test showed a significant linear relationship between growth mindset and both grade level ($F = 15.679$, $p < .001$) and age ($F = 13.114$, $p < .001$), with a non-significant Deviation from Linearity for both variables ($p = .480$ and $p = .682$, respectively), confirming that the linearity assumption was satisfied for these two predictors. For school admission pathway and parental income, however, the Deviation from Linearity was statistically significant ($F = 7.632$, $p < .001$, and $F = 8.353$, $p < .001$, respectively), indicating that their relationship with growth mindset is not fully linear; this is addressed further as a limitation of the regression model. For the remaining, dichotomous demographic variables (gender, family structure, orphanhood status, and only-child status), separate linearity decomposition could not be computed because each variable comprised only two categories, for which any relationship is inherently linear by definition. The multicollinearity test showed Tolerance values ranging from .316 to .988 and VIF values ranging from 1.012 to 3.166 for all independent variables, both well within the accepted thresholds (Tolerance > 0.10 and VIF < 10), indicating no multicollinearity problem among the predictors.

Based on the results of the multiple linear regression analysis, the model fit test (F-test) presented in the ANOVA table yielded an F value of 3.883 with a significance level of $p = .000$ ($p < .05$). These results indicate that the demographic factors examined in this study, including gender, grade level, age, family structure, school admission pathway, and parental income collectively have a statistically significant effect on the growth mindset levels of students at SMP Negeri 5 Bandung.

Table VII. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
I	.220 ^a	.048	.036	.81320

Predictors: (Constant), Parents' Income, PIATU, Gender, Grade Level, Only Child, Family Structure, Admission Pathway, YATIM, Age (in Years).

Furthermore, the coefficient of determination test presented in the Model Summary table showed an R Square value of 0.048. This figure indicates that the contribution, or explanatory power, of the demographic variables to growth mindset was 4.8%.

Meanwhile, the remaining 95.2% of the variation in students' growth mindset was influenced by factors outside this demographic model. This finding indicates that inherent demographic characteristics and family background provide only a small contribution, and that students' growth mindset is likely to be more strongly shaped by psychological factors, social interactions, or school-based educational interventions.

Table VIII. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
I	(Constant)	1.204	.552		2.181	.029
	Gender	-.073	.062	-.044	-1.176	.240
	Grade Level	.109	.069	.105	1.591	.112
	Age (in Years)	.062	.059	.069	1.037	.300
	Family Structure	.211	.096	.086	2.200	.028
	YATIM	.347	.150	.093	2.312	.021
	PIATU	.029	.209	.005	.139	.889
	Only Child	-.154	.093	-.063	-1.650	.099
	Admission Pathway	.016	.027	.024	.605	.545
	Parents' Income	.047	.024	.081	1.952	.051

Dependent Variable: Level of Growth Mindset

Based on the Coefficients table, the partial significance test (t-test) was used to examine the effect of each demographic factor on adolescent growth mindset individually. Of the nine demographic variables included in the regression model, two variables were found to have a statistically significant effect at the 5% significance level ($\alpha = 0.05$).

The first variable was family structure (divorce), with a value of $t = 2.200$ and a significance level of $0.028 < 0.05$. This indicates that the structure or form of the family at home makes a meaningful contribution to the development of adolescents' growth mindset. The second variable with a significant effect was fatherless status, or students who had lost their father due to death, with a value of $t = 2.312$ and a significance level of $0.021 < 0.05$. This interesting finding indicates a positive correlation, whereby this status is statistically associated with students' levels of growth mindset, potentially driven by greater demands for independence or resilience in facing life challenges. Meanwhile, parental income was found to be at the threshold of significance, with a value of $p = 0.051$. Although close to the significance threshold, statistically, parental income cannot be considered significantly associated with adolescents' growth mindset.

On the other hand, demographic factors such as gender ($p = 1.240$), grade level ($p = 0.112$), age ($p = 0.300$), motherless status (piatu, loss of mother) ($p = 0.889$), only-child status ($p = 0.099$), and school admission pathway ($p = 0.545$) did not show a statistically significant partial effect on growth mindset. This confirms that biological characteristics (age) and school administrative factors (admission pathway) are not the primary predictors of how adolescents perceive their academic abilities and potential for self-development.

Discussion

The main finding of this study revealed that the majority of students at SMPN 5 Bandung (47.5%) were categorized as Fixed Mindset with Some Growth Ideas, while only 13.6% reached the Strong Growth Mindset category. These findings are consistent with the 2018 PISA report, which indicated that only 29% of Indonesian students possessed a growth mindset (OECD, 2019). This result confirms that fixed mindset is a systemic phenomenon rather than a problem unique to a particular school.

At the macro level, the findings of this study are consistent with the PISA 2018 report, which revealed that only 29% of students in Indonesia possess a growth mindset (OECD, 2019). The alignment between the local data in this study and the national picture confirms that the low prevalence of growth mindset is not an individual or incidental problem that occurs only in certain schools. Instead, this phenomenon underscores the existence of a systemic problem within the national educational landscape. This consistency of data suggests that the curriculum structure, academic climate, and pedagogical traditions widely implemented in Indonesia have not been fully capable of facilitating students' psychological transformation from a fixed mindset toward a strong growth mindset.

The high percentage of students in the fixed mindset with some growth ideas category (47.5%) also reflects what has been identified in the global literature as the phenomenon of a false growth mindset. Students tend to adopt the rhetoric or language of growth mindset conceptually; however, psychologically and behaviorally, they remain trapped in a fear of academic failure. From this perspective, Yeager et al. (2019) assert that mindset interventions cannot stand alone as an individual variable; their effectiveness is highly dependent on the school ecosystem. Competitive school environments often unintentionally reinforce performance-proven goals (a focus on demonstrating ability through grades) rather than learning goals (a focus on the process of mastering competencies).

Consequently, although institutions may have an input of students with high academic abilities, the internalization of a strong growth mindset still faces significant structural barriers.

In the theoretical context, the dominance of fixed mindset found in this study can be explained through Dweck (2006) implicit theories of intelligence. Students in the Fixed Mindset with Some Growth Ideas category operate under the belief that ability is fixed; therefore, they tend to avoid challenges, give up when facing difficulties, and interpret failure as evidence of permanent inability (Dweck, 2006; Dweck & Yeager, 2019). This condition becomes more complex in the context of junior high school, where the transitional phase of adolescent development creates psychological vulnerability that increases sensitivity to social and academic evaluation (Altikulaç et al., 2024).

Influence of Demographic Factors on Growth Mindset

Gender: Consistency and Contextual Nuances

This study found that male students had a higher average growth mindset score ($M = 2.17$) than female students ($M = 1.92$), placing them in different categories males in the Growth Mindset with Some Fixed Ideas category and females in the Fixed Mindset with Some Growth Ideas category. While other studies have reported different findings, the study by Napolitano et al. (2021) found that females in Indonesia demonstrated significantly higher levels of growth mindset than males. This indicates that growth mindset cannot be determined solely by gender. Dweck explains that females belong to groups that are negatively stereotyped as being less capable in mathematics and science. These stereotypes and labels are precisely what growth mindset seeks to challenge.

When individuals have a fixed mindset, both positive and negative labels can disrupt their thinking. When you are given a positive label, you fear losing it, and when you are given a negative label, you fear deserving it (Dweck, 2017b). When people have a growth mindset, stereotypes do not interfere with their performance. A growth mindset removes the power of stereotypes and makes people more capable of resisting them. Individuals with a growth mindset do not believe in permanent inferiority. If they fall behind, they work harder, seek help, and try to catch up. A growth mindset also enables people to take what they can and what they need even from threatening environments (Dweck, 2017b).

Grade Level and Age: Mindset Development as a Longitudinal Process

The findings showing an increase in growth mindset across grade levels (Grade VII = Fixed Mindset with Some Growth Ideas; Grades VIII and IX = Growth Mindset with Some Fixed Ideas) and with increasing age support a developmental perspective that views mindset formation as a longitudinal process. More senior students have accumulated more learning experiences, encountered more academic challenges, and are more likely to have developed more adaptive coping strategies.

Within the framework of adolescent developmental theory, Yeager & Dweck (2020) argue that adolescence is a critical developmental window for mindset formation, in which repeated social and academic experiences progressively shape students' beliefs about their abilities. This implies that mindset interventions implemented earlier, beginning in Grade VII or even at the elementary school level, have the potential to produce greater and more enduring effects than interventions delivered at later developmental stages. These findings also provide an empirical basis for the importance of preventive guidance programs implemented from the moment students first enter junior high school, particularly for students from vulnerable groups.

Family Structure: A Significant Contribution Requiring Special Attention

The partial regression analysis found that family structure (parental divorce) was a statistically significant predictor of growth mindset ($\text{sig.} = 0.028$). Students from divorced families had lower average scores ($M = 1.84$), placing them in the Fixed Mindset with Some Growth Ideas category, compared with students from intact families ($M = 2.07$), who were classified in the Growth Mindset with Some Fixed Ideas category. This finding is particularly interesting because there is no literature that directly discusses the impact of parental divorce on children's growth mindset, even in Carol Dweck's works. In fact, according to Ren et al. (2025), there is a positive relationship between parents' and children's growth mindset.

Parents with a stronger growth mindset tend to adopt more authoritative parenting practices, thereby fostering their children's growth mindset (Ren et al., 2025). This finding implies the importance of the family in developing an individual's growth mindset. The importance of parental presence in shaping children with a growth mindset is reflected in Dweck (2017c) statement: "When parents help their children construct growth-minded ideals, they are giving them something they can strive for. They are also giving their children growing room, room to grow into full human beings who will make their contribution to society in a way that excites them. I have rarely heard a growth-minded parent say, 'I am disappointed in my child.' Instead, with a beaming smile, they say, 'I am amazed at the incredible person my child has become.'"

Fatherless Status as a Significant Predictor

An interesting finding is the statistical significance of orphan status (father deceased) as a predictor of growth mindset ($\text{sig.} = 0.021$), with a positive correlation ($B = 0.347$). On average, students with orphan status were categorized as having a fixed mindset with growth ideas. The absence of a father figure is referred to as fatherlessness. Fatherlessness is the lack of involvement of the father's role and figure in a child's life, either physically or psychologically. A child can be categorized as experiencing a fatherless family condition when they do not have a father figure or do not have a relationship with their father due to divorce, death, or marital problems (Fajarrini & Umam, 2023).

According to Rahayu & Saroinsong (2023), the impacts of fatherlessness include anxiety and depression, loneliness, jealousy, low risk-taking, and reduced involvement in dealing with problems. In fact, risk-taking and the courage to face problems are among the characteristics of a growth mindset. According to Dweck, individuals with a growth mindset, even when they feel pressured, are willing to take risks, face challenges, and continue striving. This finding highlights an important concern regarding how a growth mindset can continue to develop among students who have lost a parent.

School Admission Pathway and Parental Income

Students admitted through the RMP (Students at Risk of Continuing Education) Affirmation pathway—which represents the lower-middle socioeconomic group had a mean fixed mindset score ($M = 1.64$) that was descriptively lower than that of students admitted through the Achievement pathway ($M = 2.56$). This finding strongly resonates with the study by Claro et al. (2016), which used a national sample of high school students in Chile. They found that students from low-income families were less likely to possess a growth mindset than their wealthier peers; however, those who did possess a growth mindset demonstrated significantly better academic achievement, even comparable to that of fixed mindset students from higher-income families.

This finding has highly relevant implications for the context of the present study. Although parental income was not statistically significant in the simultaneous regression analysis ($p = 0.051$, which was at the threshold of significance), the descriptive pattern observed, where growth mindset scores tended to be lower among the group with parental incomes of IDR 1,000,000–5,000,000, indicates the existence of a socioeconomic gradient in mindset formation.

The R Square value of 0.048 obtained in this study further reinforces this perspective: only 4.8% of the variation in growth mindset was explained by the demographic factors examined, while the remaining 95.2% was determined by factors outside the model. This is consistent with the meta-analysis by Burnette et al. (2023), which found that the effects of growth mindset on academic achievement are heterogeneous ($d = 0.14$ for achievement; $d = 0.32$ for mental health) and highly dependent on the context of implementation and the characteristics of the target subgroups. Growth mindset is more likely to be shaped by everyday social interactions, classroom climate, teachers' feedback patterns, and the quality of interpersonal relationships, all of which are domains within the scope of school counselors' work.

CONCLUSION

This study examined the profile of adolescent growth mindset based on demographic factors among 699 students at SMP Negeri 5 Bandung. Overall, a fixed mindset orientation proved considerably more prevalent than a strong growth mindset, a pattern that mirrors the broader national picture and confirms that this is a systemic educational challenge rather than an isolated institutional phenomenon. Family-related conditions, rather than personal or institutional demographic markers, emerged as the more meaningful predictors of adolescents' growth mindset, suggesting that the psychological experience of family instability and parental loss shapes how adolescents come to view their own capacity for growth more strongly than static demographic categories such as gender, age, or admission pathway. This finding challenges the tendency of prior growth mindset research to privilege macro-level demographic categories over the felt reality of the home environment, and calls for theoretical models that more deliberately integrate micro-domestic dynamics. Practically, these results advocate for targeted school counseling interventions prioritizing students from non-intact families, students admitted through the RMP Affirmation pathway, and Grade VII students transitioning into junior secondary school. At the policy level, schools particularly those accepting students through affirmative pathways are encouraged to allocate counseling resources toward structured growth mindset programs as part of a broader educational equity agenda aligned with SDG 10.

This study is not without limitations. First, its cross-sectional design does not permit causal or developmental conclusions about how growth mindset changes over time. Second, data were collected from a single public junior secondary school in Bandung, which may limit the generalizability of the findings to other regions, school levels, or socioeconomic settings. Third, the demographic model explained only a small proportion of the variance in growth mindset, indicating that important psychological and contextual predictors, such as classroom climate, teachers' feedback, and peer relationships, were not captured in this study. Fourth, the classical assumption tests indicated that growth mindset scores departed significantly from a normal distribution and that the relationship between growth mindset and both school admission pathway and parental income deviated significantly from linearity; although the large sample size ($N = 699$) supports the robustness of ordinary least squares estimates under the Central Limit Theorem, these violations suggest that the coefficient estimates for admission pathway and parental income should be interpreted with caution, and future studies may consider non-linear or categorical modelling approaches for these variables. Finally, growth mindset was measured through student self-report, which may be subject to social desirability bias.

Future research should employ longitudinal designs, multi-institutional samples, and more comprehensive models incorporating classroom climate, teacher feedback, and social support variables to deepen understanding of the ecological factors shaping adolescent mindset development.

REFERENCES

- Ali, S., Zarar, N., & Siddiqui, G. K. (2023). Impact of Growth Mind-Set on University Students' Psychological Well-Being. *Annals of Human and Social Sciences*, 4(III), 204–210. [https://doi.org/10.35484/ahss.2023\(4-iii\)19](https://doi.org/10.35484/ahss.2023(4-iii)19)
- Altikulaç, S., Janssen, T. W. P., Yu, J., Nieuwenhuis, S., & Van Atteveldt, N. M. (2024). Mindset profiles of secondary school students: Associations with academic achievement, motivation and school burnout symptoms. *British Journal of Educational Psychology*, 94(3), 738–758. <https://doi.org/10.1111/bjep.12676>.
- Astuti, F. W., Sunawan, & Heru Mugiarto. (2024). Effectiveness of Group Guidance on Growth Mindset for Improving Students' Effort Regulation. *Jurnal Bimbingan Konseling*, 87–94. <https://doi.org/10.15294/a5zmc35>
- Blake, G. T. (2022). *THE RELATIONSHIP OF THE GROWTH MINDSET AND POSITIVE MENTAL HEALTH: A CORRELATIONAL STUDY*.
- Burnette, J. L., Knouse, L. E., Billingsley, J., Earl, S., Pollack, J. M., & Hoyt, C. L. (2023). A systematic review of growth mindset intervention implementation strategies. *Social and Personality Psychology Compass*, 17(2), 1–15. <https://doi.org/10.1111/spc3.12723>
- Claro, S., Paunesku, D., & Dweck, C. S. (2016). Growth mindset tempers the effects of poverty on academic achievement. *Proceedings of the National Academy of Sciences of the United States of America*, 113(31), 8664–8668. <https://doi.org/10.1073/pnas.1608207113>
- Costa, F. M. L. (2026). *t Least 71,000 Students Suffer from Mental Health Problems, What's Happening in Bandung?* <https://www.kompas.id/artikel/en-71433-siswa-terindikasi-masalah-mental-ada-apa-dengan-pelajar-di-bandung>
- Creswell, J. W. (2012). *Educational Research Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Pearson Education, Inc.
- Dweck, C. S. (2006). *Mindset : The New Psychology of Success*. Random House.
- Dweck, C. S. (2015). Growth. *British Journal of Educational Psychology*, 85(2), 242–245. <https://doi.org/10.1111/bjep.12072>
- Dweck, C. S. (2016). *Mindset : The New Psychology of Success*. In Random House (Update). Random House.
- Dweck, C. S. (2017a). From needs to goals and representations: Foundations for a unified theory of motivation, personality, and development. *Psychological Review*, 124(6), 689–719. <https://doi.org/10.1037/rev0000082>
- Dweck, C. S. (2017b). *Mindset : Changing the way you think to fulfil your potential*. Robinson.
- Dweck, C. S., & Yeager, D. S. (2019). Mindsets: A View From Two Eras. *Perspectives on Psychological Science*, 14(3), 481–496. <https://doi.org/10.1177/1745691618804166>
- Fajarrini, A., & Umam, A. (2023). Dampak Fatherless Terhadap Karakter Anak Dalam Pandangan Islam. *ABATA Jurnal Pendidikan Islam Anak Usia Dini*, 3(1), 20–28. <https://doi.org/https://doi.org/10.32665/abata.v2i1.1425>
- Ghozali, I. (2018). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25 (Edisi 9)*. Badan Penerbit Universitas Diponegoro.
- Glerum, J., Loyens, S. M. M., & Rikers, R. M. J. P. (2020). Mind your mindset. An empirical study of mindset in secondary vocational education and training. *Educational Studies*, 46(3), 273–281. <https://doi.org/10.1080/03055698.2019.1573658>
- Hair, J. F., Jr., Babin, B. J., Anderson, R. E., & Black, W. C. (2019). *Multivariate data analysis (8th ed.)*. In Cengage Learning. Cengage Learning. <https://www.cengage.uk/c/multivariate-data-analysis-8e-hair-babin-anderson-black/9781473756540/?searchISBN=9781473756540>
- Kemendikdasmen. (2025). Biro Komunikasi dan Hubungan Masyarakat. *Mendikdasmen Tekankan Peran Deep Learning Dalam Meningkatkan Kualitas Pendidikan Indonesia [Press Release]*. <https://kemendikdasmen.go.id/siaran-pers/11860mendikdasmen-tekanan-peran-deep-learning-dalam-meningkatkan>
- Kholili, M. I., Rusmana, N., Ahman, A., & Budiman, N. (2025). Factors Determining High School Students' Growth Mindset in Surakarta: A Thematic Analysis from Educators' Perspectives. *EDUKASIA Jurnal Pendidikan Dan Pembelajaran*, 6(2), 775–788. <https://doi.org/10.62775/edukasia.v6i2.1524>
- Lai, X., Nie, C., Huang, S., Li, Y., Xin, T., Zhang, C., & Wang, Y. (2022). Effect of Growth Mindset on Mental Health Two Years Later: The Role of Smartphone Use. *International Journal of Environmental Research and Public Health*, 19(6). <https://doi.org/10.3390/ijerph19063355>
- Linklater-Steele, A., Colthorpe, K., & Ainscough, L. (2025). Mindset matters: exploring the link between mindsets, learning intentions, and performance in biomedical science students. *Advances in Physiology Education*, 49(3), 780–788. <https://doi.org/10.1152/advan.00012.2025>
- Mandeville, D., Perks, L., Benes, S., & Poloskey, L. (2018). The Mindset and Intellectual Development Scale (MINDS): Metacognitive Assessment for Undergraduate Students. *International Journal of Teaching and Learning in Higher Education*, Volume 30, 497–50.
- Meyer, H. H., & Stutts, L. A. (2024). The Effect of Mindset Interventions on Stress and Academic Motivation in College Students. *Innovative Higher Education*, 49(4), 783–798. <https://doi.org/10.1007/s10755-024-09706-8>
- Mohamoud, A. M. (2024). The Impact of Growth Mindset Interventions on Students' Motivation, Resilience, and Academic Achievement. *Multidisciplinary Journal of Horseed International University (MJHIU)*, 2(1), 102–125. <https://doi.org/10.59336/7adj0850>
- Munika, C., Suwarjo, S., & Sutanti, N. (2022). Validation of the mindset scale in the Indonesian context: A rasch model analysis. *International Online Journal of Education and Teaching (IOJET)*, 9(4), 1458–1469.
- Napolitano, C. M., Catalán Molina, D., Johnson, H. C., Oswald, F. L., Alejandro Pinzon Hernandez, D., Tiwari, A., De Martino, S., & Trzesniewski, K. (2021). Socioemotional skills in Indonesia Are growth mindset, mastery orientation, and grit promising for

- promoting achievement in the Global South? Psychometric evaluations among Indonesian adolescents. *Handbook of Positive Youth Development*, 1–44. https://doi.org/10.1007/978-3-030-70262-5_2
- Rahayu, P., & Saroinsong, W. P. (2023). Hubungan Fatherless Terhadap Subjective well-being Anak Usia Dini di Wilayah Industri Jawa Timur. *PAUD Teratai*, 12(1). <https://ejournal.unesa.ac.id/index.php/paud-teratai/index>
- Ren, X., Zhao, Q., Wu, D., & Zhang, Q. (2025). An intergenerational transmission of the growth mindset from parents to youngsters: the meditating role of parenting styles. *Current Psychology*, 44(5), 3044–3056. <https://doi.org/10.1007/s12144-025-07302-3>
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Yalçın, S. B., & Yilmaz, E. (2023). A Study on the Predictability of Students' Grit by their Growth Mindset. *Participatory Educational Research*, 10(5), 184–199. <https://doi.org/10.17275/per.23.81.10.5>
- Yeager, D. S., & Dweck, C. S. (2020). What can be learned from growth mindset controversies? *American Psychologist*, 75(9), 1269–1284. <https://doi.org/10.1037/amp0000794>
- Yeager, D. S., & Dweck, C. S. (2023). Mindsets and adolescent mental health. *Nature Mental Health*, 1, 79–81. <https://doi.org/10.1038/s44220-022-00009-5>
- Yeager, D. S., Hanselman, P., Walton, G. M., Murray, J. S., Crosnoe, R., Muller, C., Tipton, E., Schneider, B., Hulleman, C. S., Hinojosa, C. P., Paunesku, D., Romero, C., Flint, K., Roberts, A., Trott, J., Iachan, R., Buontempo, J., Yang, S. M., Carvalho, C. M., ... Dweck, C. S. (2019). A national experiment reveals where a growth mindset improves achievement. *Nature*, 573(7774), 364–369. <https://doi.org/10.1038/s41586-019-1466-y>