

Growth Under Pressure: A Cross-Cultural Review of Parenting, Adversity, and Academic Anxiety in Shaping Adolescent Mindsets

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ABSTRACT

The interplay between parenting styles, adversity, and academic anxiety in shaping growth mindsets among adolescents across diverse cultural contexts is always an area of concern. Adverse life events, such as trauma or chronic family stress, often undermine adolescents' belief in their capacity for development, with academic anxiety serving as a critical mediating factor that discourages risk-taking and persistence. Socioeconomic status and gender are identified as important moderators, with youth from disadvantaged backgrounds and girls in stereotype-threatened domains facing unique barriers but also demonstrating significant gains from targeted interventions. Following the guidelines of the PRISMA model synthesising evidence from 98 empirical studies published between 2015 and 2025, this systematic review investigates how supportive, autonomy-promoting parenting consistently fosters a growth mindset, while harsh or neglectful parenting is linked to fixed beliefs and increased anxiety. The findings emphasize the need for holistic approaches that address family dynamics, stress management, and classroom climate to cultivate resilient, growth-oriented attitudes in adolescents. Practical implications include the recommendation for integrated interventions involving both parental education and school-based supports to effectively promote growth mindsets and reduce academic anxiety. The review also notes limitations, such as language and cultural bias in the literature and the predominance of correlational research designs, and calls for more longitudinal and experimental studies to clarify causal pathways. Overall, the review underscores that adolescent mindsets are not innate traits but are shaped by complex, modifiable environmental factors.

Keywords: *Growth Mindset, Parenting Styles, Academic Anxiety, Adolescence, Adversity*

Adolescence is a developmental period during which individuals form beliefs about themselves, including whether their abilities are fixed or can be developed—a concept known as growth mindset. In recent years, research has increasingly highlighted how external factors such as parenting styles, life experiences, and academic environments shape these beliefs. Understanding the mechanisms that influence mindset

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development is crucial, as a growth mindset has been linked to greater resilience, academic achievement, and emotional well-being among adolescents.

This systematic review synthesizes findings from 98 studies published between 2015 and 2025, examining how adolescents' growth mindsets are influenced by three key domains: the home environment, personal adversity, and classroom experiences. Across diverse cultural contexts, supportive parenting—particularly that which encourages autonomy and frames failure as a learning opportunity—emerges as a consistent predictor of growth mindset. Conversely, harsh, controlling, or neglectful parenting tends to reinforce a fixed mindset, often by undermining self-efficacy and increasing anxiety.

In addition, life stressors—such as trauma, chronic family conflict, or social instability—can erode adolescents' belief in personal growth, especially when these events contribute to heightened classroom anxiety. Anxiety acts as a critical mediating factor, explaining how adverse environments can discourage risk-taking and persistence, two behaviors essential for cultivating a growth-oriented outlook.

Finally, the impact of these influences is not uniform. Socioeconomic status (SES) and gender often moderate the relationship between external influences and mindset development. Youth from lower SES backgrounds or girls in stereotype-threatened domains (e.g., math) may face additional barriers but also stand to benefit significantly from interventions.

This review explores these interconnected pathways, providing insight into how to support mindset development during a formative stage of life.

METHODOLOGY

Search Strategy

This systematic review was conducted following the PRISMA 2020 guidelines. A comprehensive literature search was carried out across major electronic databases: PsycINFO, PubMed, ERIC, Google Scholar, Semantic Scholar, ResearchGate, and Scopus, covering the period from January 2015 to January 2025. The search included combinations of the following keywords and Boolean operators: ("growth mindset" OR "implicit theories of intelligence") AND ("parenting styles" OR "family environment") AND ("adolescents" OR "youth" OR "teenagers") AND ("life events" OR "adversity" OR "stress" OR "trauma") AND ("academic anxiety" OR "test anxiety" OR "classroom anxiety").

Inclusion and Exclusion Criteria

Studies were included if they:

- Focused on adolescents (ages 10–19).
- Examined growth mindset as a primary or secondary outcome.
- Investigated parenting styles, life events, and/or academic anxiety as influencing variables.
- Were empirical, peer-reviewed articles published in English.
- Employed quantitative, qualitative, or mixed-methods designs.

Exclusion criteria included:

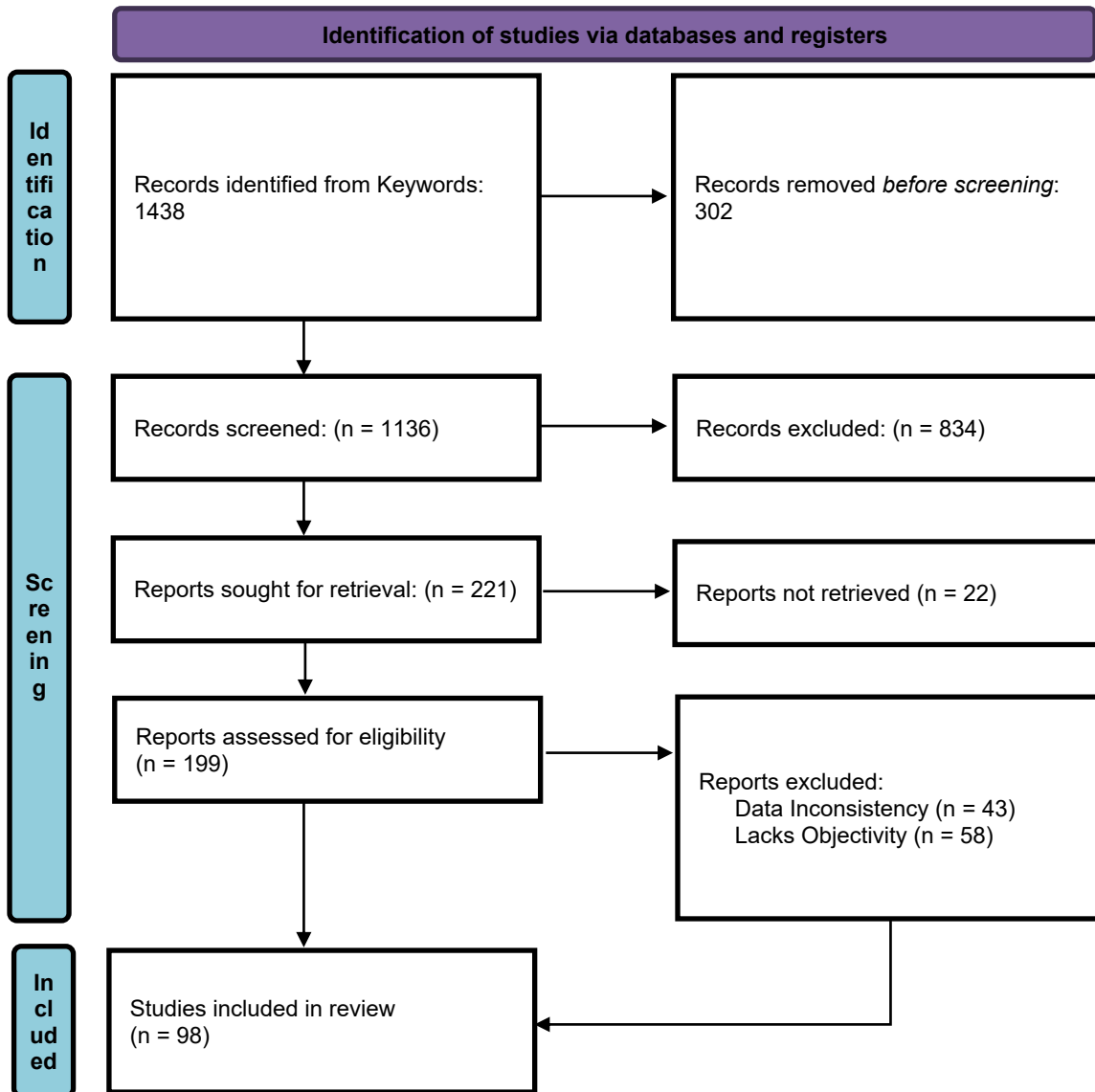
- Studies not focused on adolescents.

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- Opinion papers, editorials, or theoretical-only publications.
- Articles lacking full-text access or methodological clarity.

Procedure

Initial database searches yielded 1,438 records. After removing duplicate entries ($n = 302$), 1,136 titles and abstracts were screened. A total of 221 articles were selected for full-text review, of which 98 met the final inclusion criteria. The screening and selection process is illustrated in the PRISMA flow diagram (see Figure 1).



Data Extraction and Synthesis

A standardized extraction form was used to collect key data from each study, including authors, year, sample characteristics, context, variables examined, methods used, and key findings. Thematic synthesis was then applied to identify recurring patterns across studies, grouped under the following categories: parenting influence, life stress/adversity, academic anxiety mediation, and moderating effects of SES and gender.

RESULTS

Major Themes and Findings

Recent research (2015–2025) suggests that adolescents' **growth mindsets** – their belief that abilities can be developed – are significantly shaped by both family environment and life experiences. In particular, **parenting styles** and reactions to children's challenges can either foster a growth mindset or encourage a fixed mindset. At the same time, adverse **life events** or stressors in adolescence (e.g. trauma, chronic stress) tend to undermine a youth's growth mindset, often **mediated by academic anxiety**. Anxiety in the classroom appears to be a key pathway: a harsh or unsupportive environment can increase students' **classroom anxiety**, which in turn saps their confidence and motivation to learn, reinforcing fixed beliefs. By contrast, supportive parenting and positive coping with stress can reduce anxiety and bolster the belief in self-improvement. Finally, demographic factors like **socioeconomic status (SES)** and **gender** can moderate these relationships. Studies across diverse contexts (North America, East Asia, Europe, Latin America) show that youth from disadvantaged backgrounds and girls in certain academic domains may face additional hurdles in developing or benefiting from a growth mindset. Below, we detail these themes and highlight key studies (summarized in the table at the end) that investigate how parenting, life events, anxiety, SES, and gender interact to influence adolescents' growth mindsets.

Influence of Parenting Styles on Growth Mindset Development

Parents play a crucial role in shaping an adolescent's mindset toward abilities. Research indicates that **supportive, autonomy-encouraging parenting** is associated with more adaptive motivational beliefs (including a growth mindset), whereas **controlling or punitive parenting** may contribute to a fixed mindset or fear of failure in children (Xu & Xu, 2024). For example, Haimovitz and Dweck (2016) found that it's not parents' own intelligence beliefs per se, but rather how they **view and react to failure**, that predicts children's mindsets. Parents who see failure as a learning opportunity (an "enhancing" experience) tend to respond with support and problem-solving, and their children are more likely to believe intelligence is malleable. In contrast, parents who view failure as something debilitating or shameful often react with criticism or overreaction, and their children more often develop a fixed view of ability (Xu & Xu, 2024). This suggests that everyday parenting practices – e.g. whether a parent punishes mistakes or frames them as growth opportunities – can "teach" implicit beliefs about learning.

Empirical studies in different cultures reinforce this link. In a **longitudinal study in Korea** following ~4,400 students from late childhood into adolescence, **authoritative parenting** (high warmth and reasonable structure) was positively associated with the adolescents' growth mindset (Lee & Man, 2024). Over the middle school years, both perceived parental authoritativeness and students' growth mindset levels showed small declines, but teens who started with more **supportive parenting** tended to start higher in growth mindset and have better mental health. Notably, a higher initial growth mindset mediated the relationship between authoritative parenting and **lower depression** in adolescence (Lee & Man, 2024). This implies that one reason *why* authoritative parenting benefits teens' well-being is that it instills a resilient, growth-oriented outlook, which protects against problems like depression. Conversely, **authoritarian or rejective parenting** (low warmth, high criticism) appears detrimental. A recent large survey of Chinese high schoolers (ages 14–19) found that a **"rejective" parenting style** – characterized by criticism, shaming, and lack of support – significantly *predicted* higher academic anxiety in students (Li et al., 2025). In that study, the effect of harsh parenting on anxiety was **indirectly** explained by children's poorer self-

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concept and coping skills (i.e. negative parenting eroded adolescents' self-confidence and positive coping, which in turn fuelled anxiety) (Li et al., 2025). The result was a kind of vicious cycle: unsupportive parenting heightened students' anxiety about school, likely making them less inclined to embrace challenges for fear of failure. Taken together, these findings underscore that **warm, responsive parenting fosters a growth mindset** and emotional security, whereas **harsh or neglectful parenting undermines the confidence and risk-taking** needed for a growth mindset.

Impact of Life Events and Stressors on Adolescent Mindset

Beyond the home, adolescents' own life experiences – especially **stressful or traumatic events** – can influence the development of a growth mindset. Several studies link **high levels of stress or adversity** with a more pessimistic, fixed outlook on personal ability. For instance, a 2023 study by Lurie et al. examined teens with diverse histories of **childhood adversity** (including abuse, neglect, violence exposure, etc.). They found that adolescents who had experienced significant threat-related trauma showed markedly **lower growth mindset** about intelligence than their peers (Lurie et al., 2023). In other words, chronic or severe stress in one's life can instill a sense that abilities and life outcomes are beyond one's control. Importantly, that lower growth mindset in turn was associated with worse academic performance and higher internalizing symptoms (like anxiety and depression) (Lurie et al., 2023). Statistically, the researchers observed that growth mindset **mediated** the effect of childhood trauma on academic and mental health outcomes – *especially for anxiety*. Youth with more traumatic life events were more prone to anxiety and school problems, *in part because* those experiences had eroded their belief in growth and improvement (Lurie et al., 2023). This finding aligns with the idea that adversity can lead to learned helplessness (“nothing I do will matter”), whereas a growth mindset might buffer against that by reinforcing a sense of control. It also suggests that interventions targeting mindset could help mitigate trauma's negative impact on teens (Lurie et al., 2023).

Parallel results come from studies on more commonplace stress. For example, research on adolescents facing high **family or social stress** finds that those who nonetheless maintain a growth mindset cope better. Walker and Jiang (2022) reported that among high schoolers, family-related stress (e.g. conflict, instability) was linked to increases in behavior problems **only for those with a weaker growth mindset**, whereas adolescents who believed they could change and manage their thoughts/behaviors were less affected by family stress (Lurie et al., 2023). This protective effect wasn't observed for peer-related stress, highlighting that the type of stressor matters. Other studies focusing on **academic setbacks** similarly note that a growth mindset can foster resilience – students with growth-oriented beliefs are more likely to respond to a poor grade by working harder or trying new strategies, rather than giving up. On the flip side, significant **life changes or failures** can shake one's confidence: without supportive influences, a teenager might interpret a major setback as evidence of personal inability, thus reinforcing a fixed mindset. In summary, experiencing **adversity or stress** during adolescence often poses a threat to the development of a growth mindset. Teens who lack resources or support may internalize these difficulties as personal limitations. However, if they (or their environment) manage to frame challenges as surmountable, they are more likely to retain a growth-oriented approach. This dynamic underlines why mindset is now studied as a potential lever for **promoting resilience** in youth who face difficult life events (Lurie et al., 2023).

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Classroom Anxiety as a Mediating Factor

Why do parenting and life events have such an impact on adolescents' motivational mindset? One key **mechanism** proposed by recent studies is **academic anxiety**. **Classroom or test anxiety** can mediate (explain) the link between external influences and a student's mindset and achievement. The logic is that both negative parenting and stressful experiences tend to raise a young person's anxiety levels – especially in performance settings like school – and that anxiety in turn makes the student more likely to avoid challenges, doubt their abilities, and adopt a fixed mindset. Supporting this, researchers have documented clear connections between parenting styles, anxiety, and academic outcomes. A study of Romanian students (Albulescu et al., 2023) found that low parental monitoring and involvement correlated with **higher test anxiety**, which was associated with poorer performance; in fact, test anxiety **partially mediated** the relationship between a lack of parental support and low academic achievement. This suggests that one reason uninvolvement (or harsh) parenting hurts school performance is that it leaves the child fearful and anxious in evaluative situations, undermining the confidence needed to persist and improve. Likewise, as noted above, the Chinese study by Li et al. (2025) demonstrated that a **rejective parenting style elevates students' academic anxiety**, which can lead to *learned helplessness* in the classroom (Li et al., 2025). The authors point out that anxious students often develop **self-doubt and avoidant behaviors**, which directly conflict with a growth mindset. If a teen is preoccupied with worry about failing or being judged (hallmarks of **evaluation anxiety**), they are less inclined to take on new challenges or persist through difficulty – behaviors essential for developing a growth-oriented belief system.

In the context of **traumatic life events**, anxiety also plays a role. Lurie et al. (2023) found that traumatized youth had higher anxiety *and* lower growth mindset, with evidence that these are linked. One way to interpret the mediation is: **stressful life events -> heightened anxiety -> less confidence in growth**. It's plausible that chronic stress biologically primes adolescents to be in "fight or flight" mode, making them more sensitive to threats (like a difficult exam) and less psychologically open to struggle through a learning curve. Over time, this anxious mindset solidifies into a belief that "if I'm not immediately good at this, I'll never be," reflecting a fixed view of ability. In support of this, meta-analyses find that youth with higher growth mindset tend to report **lower anxiety levels**, and vice versa (a moderate negative correlation) (Lurie et al., 2023) (Schroder et al., 2019). Importantly, some intervention studies indicate that teaching a growth mindset can *reduce* adolescents' anxiety and stress perceptions. For example, a mindset intervention with teens by Schleider et al. (2019) showed modest reductions in anxiety/depressive symptoms, suggesting that changing one's beliefs about personal changeability can alleviate the worry that comes with academic pressures. In summary, **academic anxiety is a crucial mediating factor**: it is both a product of one's environment (parenting, life events) and a predictor of one's willingness to embrace a growth mindset.

Reducing excessive classroom anxiety – through supportive parenting, teaching coping skills, or cultivating a safe learning atmosphere – may thus be a strategic way to nurture growth mindsets in students who would otherwise be fearful of failure.

Moderating Effects of Socioeconomic Status and Gender

Not all adolescents are equally affected by these dynamics; **socioeconomic and gender factors** can moderate the impact of parenting, stress, and anxiety on mindset (and vice versa). **Socioeconomic status (SES)** often shapes the mindset environment in important

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ways. A landmark study by Claro, Paunesku, and Dweck (2016) surveyed over 160,000 Chilean students and found that **family SES was positively correlated with growth mindset** – students from wealthier families were more likely to believe in malleable intelligence, whereas those from low-income backgrounds more often endorsed a fixed mindset (Claro et al., 2016). In fact, the lowest-income students were more than twice as likely to agree that intelligence is fixed compared to the highest-income students (Claro et al., 2016). This disparity likely reflects differences in exposure to resources, encouragement, and examples of growth. Moreover, the **academic consequences** of mindsets interacted with SES. Claro et al. showed that at every income level, students with a growth mindset earned higher test scores than those with a fixed mindset – and this effect was **especially pronounced among the poor**, effectively narrowing the achievement gap (Claro et al., 2016). In other words, a growth mindset appeared to **buffer** the impact of poverty on performance. Later studies (e.g. Yeager et al., 2019) similarly found that growth mindset interventions in schools tend to yield the **biggest gains for lower-SES students**, presumably because these students face more structural obstacles and have more to gain from a boost in academic tenacity. On the flip side, some research has cautioned that simply **promoting growth mindset without addressing context** may not uniformly help under-resourced students. For instance, a study by Sisk et al. (2018) reported that mindset was a stronger predictor of achievement in higher-SES students than in low-SES students (suggesting that if one’s environment lacks basic support, just having a growth belief might not fully translate to better grades) (King & Trinidad, 2021). Nonetheless, the consensus is that **socioeconomic context profoundly influences both the formation of mindsets and the extent to which those mindsets affect outcomes**. Adolescents in poverty may require extra support to develop a growth mindset, but when they do, it can be particularly empowering (Claro et al., 2016).

Gender is another moderating factor, often intertwined with domain-specific stereotypes. Overall, boys and girls report similar *general* mindset levels in many studies (any small differences are usually not statistically significant) (Sigmundsson et al., 2021). However, gender differences emerge in how mindset interacts with **specific academic domains and anxieties**. A clear example is in mathematics: girls, who commonly face the stereotype that “math ability is innate, and boys are better at it,” may experience a **fixed mindset in math** as especially harmful. A 2020 study of German tenth-graders by Heyder et al. found that holding a fixed mindset about math (believing math ability is innate rather than learnable) was associated with **lower self-confidence and motivation in math class for females**, but not for males (Hyder et al., 2020). In contrast, in a subject like language arts (which has no “girls can’t do it” stereotype), a fixed mindset didn’t particularly hurt either gender (Hyder et al., 2020). The authors concluded that a **fixed mindset imposes an extra burden on girls in stereotypically male domains**, likely by exacerbating performance anxiety and discouraging effort, whereas boys in those domains don’t face the same added pressure (Hyder et al., 2020). This finding has been echoed in research on **STEM education**, where girls with a growth mindset are more likely to persist in challenging STEM courses and report less anxiety, compared to girls who believe their abilities are fixed. Gender can also moderate responses to stress: a study of Chinese migrant adolescents noted that the benefits of a “stress-is-improving” mindset for well-being differed by gender (with one gender deriving more protective benefit, though results varied by context) (Walker & Jiang, 2022). In practical terms, **girls might need additional encouragement to adopt a growth mindset in areas like math and science**, to counteract societal messages that could otherwise induce a fixed mindset and anxiety. Boys, of course, are not immune to fixed

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mindsets, but the domains in which they feel stereotyped (if any) may differ. It's also worth noting that some studies on parenting suggest parents may (consciously or not) send different messages to sons vs. daughters. For instance, if parents are more protective of daughters and more encouraging of sons to take risks, this could influence the development of mindset and academic anxiety along gender lines. However, research in this specific area is still emerging. What is clear is that **effective interventions** should be mindful of these moderating factors: for students from disadvantaged or stressful backgrounds, addressing environmental barriers and anxiety triggers is key, and for female students in particular domains, **creating a growth-mindset culture that actively refutes stereotypes** can be crucial.

CONCLUSION

This review synthesizes evidence from 98 studies to highlight how parenting styles, life stressors, and classroom anxiety shape adolescents' growth mindset development. The findings converge on the idea that mindset is not simply a personal trait, but a malleable belief system deeply shaped by relational and environmental contexts. Supportive parenting, positive coping with adversity, and low classroom anxiety appear critical in fostering a resilient, growth-oriented outlook in youth.

Practical Implications

Interventions aimed at fostering growth mindset in adolescents should not occur in isolation from their broader developmental context. Parenting education programs that teach constructive responses to failure, along with school-based supports for managing academic anxiety, may be particularly effective. Additionally, tailored support for low-SES youth and stereotype-vulnerable groups (e.g., girls in STEM) can help ensure that mindset interventions translate into meaningful academic gains.

Limitations and Future Directions

Several limitations must be acknowledged. First, the review relied primarily on studies published in English, which may introduce language and cultural bias. Additionally, while correlational designs dominate the existing literature, more longitudinal and experimental studies are needed to clarify causality and temporal pathways. Future research should also explore how digital and social media environments interact with parenting and anxiety to shape adolescents' beliefs about growth and learning.

REFERENCES

- Albulescu, I., Labar, A.-V., Manea, A. D., & Stan, C. (2023). The Mediating Role of Anxiety between Parenting Styles and Academic Performance among Primary School Students in the Context of Sustainable Education. *Sustainability*, 15(2), 1539. <https://doi.org/10.3390/su15021539>
- Bahník, Š., and Vranka, M. A. (2017). Growth mindset is not associated with scholastic aptitude in a large sample of university applicants. *Personal. Individ. Differ.* 117, 139–143. doi: 10.1016/j.paid.2017.05.046
- Barber, B. K., and Olsen, J. A. (2004). Assessing the transitions to middle and high school. *J. Adolesc. Res.* 19, 3–30. doi: 10.1177/0743558403258113
- Bian, L., Leslie, S.-J., & Cimpian, A. (2018). Evidence of bias against girls and women in contexts that emphasize intellectual ability. *American Psychologist*, 73(9), 1139–1153. <https://doi.org/10.1037/amp0000427>. DOI: 10.1037/amp0000427

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- Blackwell, L. S., Trzesniewski, K. H., and Carol, S. D. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: a longitudinal study and an intervention. *Child Dev.* 78, 246–263. doi: 10.1111/j.1467-8624.2007.00995.x
- Bowers, A. J. (2010). Grades and graduation: a longitudinal risk perspective to identify student dropouts. *J. Educ. Res.* 103, 191–207. doi: 10.1080/00220670903382970
- Burnette, J. L., Forsyth, R. B., Desmarais, S. L., and Hoyt, C. L. (2019). Mindsets of addiction: implications for treatment intentions. *J. Soc. Clin. Psychol.* 38, 367–394. doi: 10.1521/jscp.2019.38.5.367
- Burnette, J. L., O’Boyle, E. H., VanEpps, E. M., Pollack, J. M., and Finkel, E. J. (2013). Mind-sets matter: a meta-analytic review of implicit theories and self-regulation. *Psychol. Bull.* 139, 655–701. doi: 10.1037/a0029531
- Burnette, J. L., Pollack, J. M., Forsyth, R. B., Hoyt, C. L., Babij, A. D., Thomas, F. N., et al. (2020). A growth mindset intervention: enhancing students’ entrepreneurial self-efficacy and career development. *Entrep. Theor. Pract.* 44, 878–908. doi: 10.1177/1042258719864293
- Canning, E. A., Muenks, K., Green, D. J., and Murphy, M. C. (2019). STEM faculty who believe ability is fixed have larger racial achievement gaps and inspire less student motivation in their classes. *Sci. Adv.* 5:eaa4734. doi: 10.1126/sciadv.aau4734
- Chestnut, E. K., & Markman, E. M. (2018). “Girls are as good as boys at math” implies that boys are probably better: a study of expressions of gender equality. *Cognitive Science*, 42(7), 2229–2249. <https://doi.org/10.1111/cogs.12637>.
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 9(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5. DOI: 10.1207/S15328007SEM0902_5
- Claro, S., Paunesku, D., and Dweck, C. S. (2016). Growth mindset tempers the effects of poverty on academic achievement. *Proc. Natl. Acad. Sci. USA* 113, 8664–8668. doi: 10.1073/pnas.1608207113
- Degol, J. L., Wang, M.-T., Zhang, Y., & Allerton, J. (2018). Do growth mindsets in math benefit females? Identifying pathways between gender, mindset, and motivation. *Journal of Youth and Adolescence*, 47(5), 976–990. <https://doi.org/10.1007/s10964-017-0739-8>. DOI: 10.1007/s10964-017-0739-8
- Durik, A. M., Vida, M., & Eccles, J. S. (2006). Task values and ability beliefs as predictors of high school literacy choices: a developmental analysis. *Journal of Educational Psychology*, 98(2), 382–393. <https://doi.org/10.1037/0022-0663.98.2.382>. DOI: 10.1037/0022-0663.98.2.382
- Dweck, C. S. (2000). *Self theories: their role in motivation, personality and development*. Philadelphia, PA: Psychology Press.
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York, NY: Random House.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95(2), 256–273. <https://doi.org/10.1037/0033-295X.95.2.256>. DOI: 10.1037/0033-295X.95.2.256
- 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>. DOI: 10.1177/1745691618804166
- Dweck, C. S., and Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychol. Rev.* 95, 256–273. doi: 10.1037/0033-295X.95.2.256

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- Dweck, C. S., and Reppucci, N. D. (1973). Learned helplessness and reinforcement responsibility in children. *J. Pers. Soc. Psychol.* 25, 109–116. doi: 10.1037/h0034248
- Dweck, C. S., and Yeager, D. S. (2019). Mindsets: a view from two eras. *Perspect. Psychol. Sci.* 14, 481–496. doi: 10.1177/1745691618804166
- Dweck, C. S., Chiu, C.-Y., and Hong, Y.-Y. (1995). Implicit theories and their role in judgments and reactions: a word from two perspectives. *Psychol. Inq.* 6, 267–285. doi: 10.1207/s15327965pli0604_1
- Dweck, C. S., Hong, Y., and Chiu, C. (1993). Implicit theories individual differences in the likelihood and meaning of dispositional inference. *Personal. Soc. Psychol. Bull.* 19, 644–656. doi: 10.1177/0146167293195015
- Eccles (Parsons), J. S., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., & Meece, J. L., et al. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motives* (pp. 75–146). San Francisco: Freeman.
- Else-Quest, N. M., Hyde, J. S., & Linn, M. C. (2010). Cross-national patterns of gender differences in mathematics: a meta-analysis. *Psychological Bulletin*, 136, 103–127. <https://doi.org/10.1037/a0018053>. DOI: 10.1037/a0018053
- Gaspard, H., Dicke, A.-L., Flunger, B., Schreier, B., Häfner, I., Trautwein, U., & Nagengast, B. (2015). More value through greater differentiation: gender differences in value beliefs about math. *Journal of Educational Psychology*, 107, 663–677. <https://doi.org/10.1037/edu0000003>. DOI: 10.1037/edu0000003
- Gniewosz, B., Eccles, J. S., & Noack, P. (2015). Early adolescents' development of academic self-concept and intrinsic task value: the role of contextual feedback. *Journal of Research on Adolescence*, 25, 459–473. <https://doi.org/10.1111/jora.12140>.
- Good, C., Aronson, J., & Inzlicht, M. (2003). Improving adolescents' standardized test performance: an intervention to reduce the effects of stereotype threat. *Journal of Applied Developmental Psychology*, 24(6), 645–662. <https://doi.org/10.1016/j.apdev.2003.09.002>.
- Gouëdard, P. (2021). 'Can a growth mindset help disadvantaged students close the gap?'. *PISA in focus*, 112. Paris: OECD Publishing.
- Gunderson, E. A., Hamdan, N., Sorhagen, N. S., & D'Esterre, A. P. (2017). Who needs innate ability to succeed in math and literacy? Academic-domain-specific theories of intelligence about peers versus adults. *Developmental Psychology*, 53, 1188–1205. <https://doi.org/10.1037/dev0000282>. DOI: 10.1037/dev0000282
- Haimovitz, K., and Dweck, C. S. (2016). Parents' views of failure predict children's fixed and growth intelligence mind-sets. *Psychol. Sci.* 27, 859–869. doi: 10.1177/09567976166639727
- Haimovitz, K., and Dweck, C. S. (2017). The origins of children's growth and fixed mindsets: new research and a new proposal. *Child Dev.* 88, 1849–1859. doi: 10.1111/cdev.12955
- Hecht, C. A., Yeager, D. S., Dweck, C. S., and Murphy, M. C. (2021). Beliefs, affordances, and adolescent development: lessons from a decade of growth mindset interventions. *Adv. Child Dev. Behav.* 61, 169–197. doi:10.1016/bs.acdb.2021.04.004
- Heyder, A., Kessels, U., & Steinmayr, R. (2017). Explaining academic-track boys' underachievement in language grades: not a lack of aptitude but students' motivational beliefs and parents' perceptions? *British Journal of Educational Psychology*, 87, 205–223. <https://doi.org/10.1111/bjep.12145>. DOI: 10.1111/bjep.12145

Growth Under Pressure: A Cross-Cultural Review of Parenting, Adversity, and Academic Anxiety in Shaping Adolescent Mindsets

- Heyder, A., Weidinger, A. F., Cimpian, A., & Steinmayr, R. (2020). Teachers' belief that math requires innate ability predicts lower intrinsic motivation among low-achieving students. *Learning and Instruction*, 65, 101220 <https://doi.org/10.1016/j.learninstruc.2019.101220>. DOI: 10.1016/j.learninstruc.2019.101220
- Heyder, A., Weidinger, A.F. & Steinmayr, R. (2021). Only a Burden for Females in Math? Gender and Domain Differences in the Relation Between Adolescents' Fixed Mindsets and Motivation. *J Youth Adolescence* 50, 177–188. <https://doi.org/10.1007/s10964-020-01345-4>
- Hu, L.-t, & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6, 1–55. <https://doi.org/10.1080/10705519909540118>. DOI: 10.1080/10705519909540118
- Hwang, N., Reyes, M., & Eccles, J. S. (2019). Who holds a fixed mindset and whom does it harm in mathematics? *Youth & Society*, 51(2), 247–267. <https://doi.org/10.1177/0044118X16670058>. DOI: 10.1177/0044118X16670058
- Judd, F. (2017). "Growth mindset and adult learners in higher education." in *Global conference on education and research (GLOCER 2017)*. pp. 1–13. Google Scholar
- Kigel, R. M., McElvany, N., & Becker, M. (2015). Effects of immigrant background on text comprehension, vocabulary, and reading motivation: a longitudinal study. *Learning and Instruction*, 35, 73–84. <https://doi.org/10.1016/j.learninstruc.2014.10.001>. DOI: 10.1016/j.learninstruc.2014.10.001
- Kim, S., Yun, J., Schneider, B., Broda, M., Klager, C., and Chen, I. C. (2022). The effects of growth mindset on college persistence and completion. *J. Econ. Behav. Organ.* 195, 219–235. doi: 10.1016/j.jebo.2022.01.002
- King, R & Trinidad, J. (2021). Growth mindset predicts achievement only among rich students: examining the interplay between mindset and socioeconomic status. *Social Psychology of Education*, 24. DOI: 10.1007/s11218-021-09616-z.
- Knigge, M., & Hannover, B. (2011). Collective school-type identity: predicting students' motivation beyond academic self-concept. *International Journal of Psychology*, 46(3), 191–205. <https://doi.org/10.1080/00207594.2010.529907>. DOI: 10.1080/00207594.2010.529907
- Ku, Y. R., and Stager, C. (2022). Rethinking the multidimensionality of growth mindset amid the COVID-19 pandemic: a systematic review and framework proposal. *Front. Psychol.* 13:572220. doi: 10.3389/fpsyg.2022.572220
- LaCosse, J., Murphy, M. C., Garcia, J. A., and Zirkel, S. (2021). The role of STEM professors' mindset beliefs on students' anticipated psychological experiences and course interest. *J. Educ. Psychol.* 113, 949–971. doi: 10.1037/edu0000620
- Lauermann, F., Tsai, Y.-M., & Eccles, J. S. (2017). Math-related career aspirations and choices within Eccles et al.'s expectancy–value theory of achievement-related behaviors. *Developmental Psychology*, 53, 1540–1559. <https://doi.org/10.1037/dev0000367>. DOI: 10.1037/dev0000367
- Lee S., Sung-Man B. (2024). The longitudinal mediating effect of growth mindset on the relationship between authoritative parenting style perceived by adolescents and depression. *Current Psychology*, 43(36), 28728-28737.
- Leslie, S. -J., Cimpian, A., Meyer, M., & Freeland, E. (2015). Expectations of brilliance underlie gender distributions across academic disciplines. *Science*, 347(6219), 262–265. <https://doi.org/10.1126/science.1261375>. DOI: 10.1126/science.1261375
- LeTendre, G. K., Hofer, B. K., & Shimizu, H. (2003). What Is Tracking? Cultural Expectations in the United States, Germany, and Japan. *American Educational*

Growth Under Pressure: A Cross-Cultural Review of Parenting, Adversity, and Academic Anxiety in Shaping Adolescent Mindsets

- Research Journal, 40(1), 43–89. <https://doi.org/10.3102/00028312040001043>. DOI: 10.3102/00028312040001043
- Li, D., Li, W., Lin, X., Zhu, X. (2025). Associations between Rejective Parenting Style and Academic Anxiety among Chinese High School Students: The Chain Mediation Effect of Self-Concept and Positive Coping Style. *International Journal of Mental Health Promotion*, 27(1), 1–17. <https://doi.org/10.32604/ijmh.2024.058744>
- Lurie, L. A., Hangen, E. J., Rosen, M. L., Crosnoe, R., & McLaughlin, K. A. (2023). Reduced growth mindset as a mechanism linking childhood trauma with academic performance and internalizing psychopathology. *Child abuse & neglect*, 142(Pt 1), 105672. <https://doi.org/10.1016/j.chiabu.2022.105672>
- Master, A., & Meltzoff, A. (2020). Cultural Stereotypes and Sense of Belonging Contribute to Gender Gaps in STEM. *International Journal of Gender, Science and Technology*, 12(1), 152–198. <http://genderandset.open.ac.uk/index.php/genderandset/article/view/674>
- Meyer, M., Cimpian, A., & Leslie, S.-J. (2015). Women are underrepresented in fields where success is believed to require brilliance. *Frontiers in Psychology*, 6, 235 <https://doi.org/10.3389/fpsyg.2015.00235>. DOI: 10.3389/fpsyg.2015.00235
- Möller, J., Pohlmann, B., Köller, O., & Marsh, H. W. (2009). A meta-analytic path analysis of the internal/external frame of reference model of academic achievement and academic self-concept. *Review of Educational Research*, 79(3), 1129–1167. <https://doi.org/10.3102/0034654309337522>. DOI: 10.3102/0034654309337522
- Moorman, E. A., & Pomerantz, E. M. (2010). Ability mindsets influence the quality of mothers' involvement in children's learning: an experimental investigation. *Developmental Psychology*, 46(5), 1354–1362. <https://doi.org/10.1037/a0020376>. DOI: 10.1037/a0020376
- Mosanya, M. (2021). Buffering academic stress during the COVID-19 pandemic related social isolation: grit and growth mindset as protective factors against the impact of loneliness. *Int. J. Appl. Posit. Psychol.* 6, 159–174. doi: 10.1007/s41042-020-00043-7
- Muenks, K., Canning, E. A., LaCosse, J., Green, D. J., Zirkel, S., Garcia, J. A., et al. (2020). Does my professor think my ability can change? Students' perceptions of their STEM professors' mindset beliefs predict their psychological vulnerability, engagement, and performance in class. *J. Exp. Psychol.* 149, 2119–2144. doi: 10.1037/xge0000763
- Myers, C. A., Wang, C., Black, J. M., Bugescu, N., and Hoefl, F. (2016). The matter of motivation: striatal resting-state connectivity is dissociable between grit and growth mindset. *Soc. Cogn. Affect. Neurosci.* 11, 1521–1527. doi: 10.1093/scan/nsw065
- Park, D., Gunderson, E. A., Tsukayama, E., Levine, S. C., and Beilock, S. L. (2016). Young children's motivational frameworks and math achievement: relation to teacher-reported instructional practices, but not teacher theory of intelligence. *J. Educ. Psychol.* 108, 300–313. doi: 10.1037/edu0000064
- Paunesku, D., Walton, G. M., Romero, C., Smith, E. N., Yeager, D. S., and Dweck, C. S. (2015). Mind-set interventions are a scalable treatment for academic underachievement. *Psychol. Sci.* 26, 784–793. doi: 10.1177/0956797615571017
- Paunesku, D., Walton, G. M., Romero, C., Smith, E. N., Yeager, D. S., & Dweck, C. S. (2015). Mind-set interventions are a scalable treatment for academic underachievement. *Psychological Science*, 26(6), 784–793. <https://doi.org/10.1177/0956797615571017>. DOI: 10.1177/0956797615571017

Growth Under Pressure: A Cross-Cultural Review of Parenting, Adversity, and Academic Anxiety in Shaping Adolescent Mindsets

- Porter, T., Catalán Molina, D., Cimpian, A., Roberts, S., Fredericks, A., Blackwell, L. S., et al. (2022). Growth-mindset intervention delivered by teachers boosts achievement in early adolescence. *Psychol. Sci.* 33, 1086–1096. doi: 10.1177/095679762111061109
- Prenzel, M., Salzer, C., Klieme, E. & Koller, O. (Eds.) (2013). PISA 2012 - Fortschritte und Herausforderungen in Deutschland [PISA 2012 – Progress and challenges in Germany]. Munster: Waxmann.
- Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: the state of the art and future directions for psychological research. *Developmental Review*, 41, 71–90. <https://doi.org/10.1016/j.dr.2016.06.004>. DOI: 10.1016/j.dr.2016.06.004
- Rattan, A., Savani, K., Komarraju, M., Morrison, M. M., Boggs, C., & Ambady, N. (2018). Meta-lay theories of scientific potential drive underrepresented students' sense of belonging to science, technology, engineering, and mathematics (STEM). *Journal of Personality and Social Psychology*, 115(1), 54–75. <https://doi.org/10.1037/pspi0000130>. DOI: 10.1037/pspi0000130
- Reber, A. S. (1967). Implicit learning of artificial grammars. *J. Verbal Learn. Verbal Behav.* 6, 855–863. doi: 10.1016/S0022-5371(67)80149-X
- Rege, M., Hanselman, P., Solli, I. F., Dweck, C. S., Ludvigsen, S., Bettinger, E., et al. (2021). How can we inspire nations of learners? An investigation of growth mindset and challenge-seeking in two countries. *Am. Psychol.* 76, 755–767. doi: 10.1037/amp0000647
- Reilly, D., Neumann, D. L., & Andrews, G. (2019). Gender differences in reading and writing achievement: evidence from the National Assessment of Educational Progress (NAEP). *American Psychologist*, 74(4), 445–458. <https://doi.org/10.1037/amp0000356>. DOI: 10.1037/amp0000356
- Romero, C., Master, A., Paunesku, D., Dweck, C. S., and Gross, J. J. (2014). Academic and emotional functioning in middle school: the role of implicit theories. *Emotion* 14, 227–234. doi: 10.1037/a0035490
- Savvides, H., and Bond, C. (2021). How does growth mindset inform interventions in primary schools? A systematic literature review. *Educ. Psychol. Pract.* 37, 134–149. doi: 10.1080/02667363.2021.1879025 Crossref Full Text | Google Scholar
- Schmidt, S., Ennemoser, M., & Krajewski, K. (2013). Deutscher Mathematiktest für die neunten Klassen [German math test for ninth graders]. Göttingen, Germany: Hogrefe.
- Schneider, W., Schlagmüller, W., & Ennemoser, M. (2007). Lesegeschwindigkeits- und Verständnistest für die Klassen 6-12 [Reading speed and comprehension test for class levels 6–12]. Göttingen, Germany: Hogrefe.
- Schöne, C., Dickhäuser, O., Spinath, B., & Stiensmeier-Pelster, J. (2002). Die Skalen zur Erfassung des schulischen Selbstkonzepts (SESSKO) [Scales for the Assessment of School-Related Competence Beliefs]. Göttingen, Germany: Hogrefe.
- Seo, E., Shen, Y., & Alfaro, E. C. (2019). Adolescents' beliefs about math ability and their relations to STEM career attainment: joint consideration of race/ethnicity and gender. *Journal of Youth and Adolescence*, 48(2), 306–325. <https://doi.org/10.1007/s10964-018-0911-9>. DOI: 10.1007/s10964-018-0911-9
- Sigmundsson, H., Guðnason, S., & Jóhannsdóttir, S. (2021). Passion, grit and mindset: Exploring gender differences. *New Ideas in Psychology*, 63, 100878. <https://doi.org/10.1016/j.newideapsych.2021.100878>
- Sisk, V. F., Burgoyne, A. P., Sun, J., Butler, J. L., & Macnamara, B. N. (2018). To what extent and under which circumstances are growth mind-sets important to academic

Growth Under Pressure: A Cross-Cultural Review of Parenting, Adversity, and Academic Anxiety in Shaping Adolescent Mindsets

- achievement? Two meta-analyses. *Psychological Science*, 29(4), 549–571. <https://doi.org/10.1177/0956797617739704>. DOI: 10.1177/0956797617739704
- Sisk, V. F., Burgoyne, A. P., Sun, J., Butler, J. L., and Macnamara, B. N. (2018). To what extent and under which circumstances are growth mind-sets important to academic achievement? Two meta-analyses. *Psychol. Sci.* 29, 549–571. doi: 10.1177/0956797617739704
- Skaalvik, S., & Skaalvik, E. M. (2004). Gender differences in math and verbal self-concept, performance expectations, and motivation. *Sex Roles*, 50(3/4), 241–252. <https://doi.org/10.1023/B:SERS.0000015555.40976.e6>. DOI: 10.1023/B:SERS.0000015555.40976.e6
- Spinath, B., & Steinmayr, R. (2012). The roles of competence beliefs and goal orientations for change in intrinsic motivation. *Journal of Educational Psychology*, 104, 1135–1148. <https://doi.org/10.1037/a0028115>. DOI: 10.1037/a0028115
- Steffens, M. C., & Jelenec, P. (2011). Separating implicit gender stereotypes regarding math and language: Implicit ability stereotypes are self-serving for boys and men, but not for girls and women. *Sex Roles*, 64, 324–335. <https://doi.org/10.1007/s11199-010-9924-x>. DOI: 10.1007/s11199-010-9924-x
- Steinmayr, R., & Spinath, B. (2010). Konstruktion und erste Validierung einer Skala zur Erfassung subjektiver schulischer Werte (SESSW) [Construction and first validation of a scale assessing subjective educational task values]. *Diagnostica*, 56, 195–211. <https://doi.org/10.1026/0012-1924/a000023>. DOI: 10.1026/0012-1924/a000023
- Steinmayr, R., Michels, J., & Weidinger, A. (2017). Fa(ir)bulous: Faire Beurteilungen des Leistungspotenzials von Schülerinnen und Schülern [Fa(ir)bulous- Fair judgments of students' academic potential]. Technische Universität Dortmund. https://www.stiftungmercator.de/media/downloads/3_Publikationen/2017/Dezember/Fairbulous_Studie.pdf.
- US Bureau of Labor Statistics (2020). Employment in STEM occupations. <https://www.bls.gov/emp/tables/stem-employment.htm>
- US Department of Labor (2017). Employment and earnings in select occupations. <https://www.dol.gov/agencies/wb/data/employment-earnings-occupations>.
- Walker, K. A., & Jiang, X. (2022). An examination of the moderating role of growth mindset in the relation between social stress and externalizing behaviors among adolescents. *Journal of adolescence*, 94(1), 69–80. <https://doi.org/10.1002/jad.12006>
- Wang, M.-T., & Degol, J. (2013). Motivational pathways to STEM career choices: using expectancy-value perspective to understand individual and gender differences in STEM fields. *Developmental Review*, 33(4), 304–340. <https://doi.org/10.1016/j.dr.2013.08.001>. DOI: 10.1016/j.dr.2013.08.001
- Wang, M.-T., & Degol, J. L. (2016). Gender gap in Science, Technology, Engineering, and Mathematics (STEM): current knowledge, implications for practice, policy, and future directions. *Educational Psychology Review*, 1–22. <https://doi.org/10.1007/s10648-015-9355-x>. DOI: 10.1007/s10648-015-9355-x
- Watt, H. M. G. (2006). The role of motivation in gendered educational and occupational trajectories related to maths. *Educational Research and Evaluation*, 12(4), 305–322. <https://doi.org/10.1080/13803610600765562>. DOI: 10.1080/13803610600765562
- Watt, H. M., Shapka, J. D., Morris, Z. A., Durik, A. M., Keating, D. P., & Eccles, J. S. (2012). Gendered motivational processes affecting high school mathematics participation, educational aspirations, and career plans: a comparison of samples from Australia, Canada, and the United States. *Developmental Psychology*, 48, 1594–1611. <https://doi.org/10.1037/a0027838>. DOI: 10.1037/a0027838

Growth Under Pressure: A Cross-Cultural Review of Parenting, Adversity, and Academic Anxiety in Shaping Adolescent Mindsets

- Weiner, B., and Kukla, A. (1970). An attributional analysis of achievement motivation. *J. Pers. Soc. Psychol.* 15, 1–20. doi: 10.1037/h0029211
- Wigfield, A., Tonks, S., & Klauda, S. L. (2016). Expectancy-value theory. In K. R. Wentzel & D. B. Miele (Eds.), *Handbook of motivation in school*. 2nd ed. (pp. 55–74). New York, NY: Routledge.
- Xu J and Xu W. (2024). Hot topics and frontier evolution of growth-mindset research: a bibliometric analysis using CiteSpace. *Front. Psychol.* 15:1349820. doi: 10.3389/fpsyg.2024.1349820
- Yeager, D. S., and Dweck, C. S. (2012). Mindsets that promote resilience: when students believe that personal characteristics can be developed. *Educ. Psychol.* 47, 302–314. doi: 10.1080/00461520.2012.722805
- Yeager, D. S., Hanselman, P., Walton, G. M., Murray, J. S., Crosnoe, R., Muller, C., & Dweck, C. S. (2019). A national experiment reveals where a growth mindset improves achievement. *Nature*, 573, 364–369. <https://doi.org/10.1038/s41586-019-1466-y>. DOI: 10.1038/s41586-019-1466-y
- Yeager, D. S., Romero, C., Paunesku, D., Hulleman, C. S., Schneider, B., Hinojosa, C., et al. (2016a). Using design thinking to improve psychological interventions: the case of the growth mindset during the transition to high school. *J. Educ. Psychol.* 108, 374–391. doi: 10.1037/edu0000098
- Yeager, D. S., Trzesniewski, K. H., and Dweck, C. S. (2013). An implicit theories of personality intervention reduces adolescent aggression in response to victimization and exclusion. *Child Dev.* 84, 970–988. doi: 10.1111/cdev.12003
- Yeager, D. S., Walton, G. M., Brady, S. T., Akcinar, E. N., Paunesku, D., Keane, L., et al. (2016b). Teaching a lay theory before college narrows achievement gaps at scale. *Proc. Natl. Acad. Sci. USA* 113, E3341–E3348. doi: 10.1073/pnas.1524360113

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