# Hidden costs of overparenting: Children feel worse about their abilities when adults take over for their peers

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#### Abstract

Overparenting undermines children's self-efficacy and motivation. However, little research has explored whether its negative impacts extend beyond the home and affect not only overparented children, but also their peers. Here, we test the hypothesis that 6- to 8-year-old children attribute peer success to internal (ability) rather than external (parental intervention) causes and that this attribution leads children to form negative beliefs about their own competencies. In Experiment 1, children were more likely to spontaneously attribute outstanding peer performance to internal causes (ability) than external ones (parental intervention). In Experiment 2, children reported lower self-perceived abilities when they learned that peers outperformed them due to internal (ability) versus external (parental intervention) causes. Together, these findings reveal an unintended consequence of overparenting: Intervening to enhance one child's performance leads peers to feel worse about their abilities, potentially harming their self-concept and future motivation.

**Keywords:** overparenting, social comparison, competence, causal attributions

# Introduction

Imagine that an elementary school student attends her first science fair. She sets up her poster presentation, feeling proud of her work — until she looks around. The other posters are exceptional: far more complex and polished than her own. How might the student think about her own abilities in light of this comparison? And how might her perspective change if she learned the truth - that her peers' parents had intervened and created those impressive posters for them? In this scenario, the parents' behavior aligns with overparenting — a growing trend where adults intervene excessively in children's everyday lives and complete developmentally appropriate tasks for them (Doepke & Zilibotti, 2019). Prior work reveals that overparenting undermines the motivation and cognitive development of children whose parents engage in these behaviors (Joussemet, Koestner, Lekes, & Landry, 2005; Leonard, Martinez, Dashineau, Park, & Mackey, 2021; Love, May, Cui, & Fincham, 2020). However, here we propose that overparenting has a broader, often overlooked impact beyond the home, negatively affecting not only the children directly involved but also their peers.

Seminal research on the correspondence bias (also known as fundamental attribution error) shows that children and adults alike have a tendency towards making internal, rather than external, causal attributions to explain others' behavior (Miller, 1984; Ross, 1977). For instance, elementary school students are more likely to attribute other children's academic success to internal factors (ability, effort) compared to external factors (luck) (Frieze & Snyder, 1980). In the case of overparenting, the correspondence bias may similarly lead children to assume that their peer's superior performance results from internal causes, like being smart, rather than external ones, like adult intervention.

Critically, this bias to attribute the exceptional work of others to internal, rather than external causes may negatively influence children's self-concept, particularly in the context of peer comparisons. With age, children increasingly engage in social comparisons with their peers and use those comparisons to inform representations of their own competence (Boissicat, Pansu, & Bouffard, 2020; Dijkstra, Kuyper, van der Werf, Buunk, & van der Zee, 2008; Dumas, Huguet, Monteil, Rastoul, & Nezlek, 2005; Festinger, 1954). Upward comparisons - when the targets of comparison are peers who perform better on a task - tend to lead children to doubt their own competence (Dickhäuser & Galfe, 2004; Dijkstra et al., 2008). Importantly, attribution theory suggests that children should be more likely to doubt their ability if they attribute their peers' better performance to internal (e.g., being talented, working hard), rather than external causes (e.g., they received parental help, they got lucky; Brun, Pansu, & Dompnier, 2021; Gerber, Wheeler, & Suls, 2018; Weiner, 1985; Weiner, 2000). Specifically, attributing peer success to internal factors that are relatively stable and uncontrollable (e.g., trait intelligence) may lead children to conclude that they, themselves are less skilled or talented than their peers. Conversely, forming external attributions has been shown to protect self-worth as the focus is shifted away from internal, stable characteristics (Peretz-Lange, Gonzalez, & Hess, 2024); Ruble, Parsons, & Ross, 1976): If children discover that their peer's project was completed with significant parental intervention, they may be less likely to compare this project (and by proxy, their peer's ability) to their own and, as a result, may not form negative beliefs about their competence.

Here, we propose that overparenting negatively impacts peers' beliefs about their abilities. Specifically, we hypothesize that children spontaneously attribute high peer performance to internal, rather than external, causes (due to the correspondence bias; Experiment 1) and that this internal attribution, in turn, leads children to feel worse about their own abilities (consistent with attribution theory; Experiment 2). We test these hypotheses across two preregistered studies with 6to 8-year-old children. We focus on this age range as prior work has shown that children become increasingly sensitive to peer comparisons as they enter the formal schooling environment (Dijkstra et al., 2008; Dumas et al., 2005; Ruble, Boggiano, Feldman, & Loebl, 1980). All experiments were preregistered (preregistrations can be found here Experiment 1, Experiment 2). Together, this work is a first step towards testing whether the negative consequences of overparenting extend beyond the home to harm the self-concepts of peers in their community.

# **Experiment 1**

In Experiment 1, we examined whether 6- to 8-year-old children spontaneously attribute above-age-appropriate performance to internal or external factors. Based on prior work from the attribution literature (e.g., Frieze & Snyder, 1980), we hypothesized that children would be more likely to spontaneously attribute high-quality drawings to internal factors such as competence or effort, rather than external factors such as parental intervention.

# Method

**Participants.** Thirty-two 6- to 8-year-old children ( $M_{age}$  = 7.39 years; 19 girls) were recruited and tested in person at a local partner museum in Connecticut. This sample size was derived from a power analysis showing that we would need n = 32 to detect expected large effects (d = .8) in planned binomial analyses with a power of .9. This sample size additionally provides power of over .9 for detecting large effects (d = .8) in planned chi-square analyses. The racial and ethnic makeup of the final sample was as follows: 81% White, 3% Black or African American, 10% multiracial, 6% Hispanic or Latino, 84% non-Hispanic or Latino, 3% other, and 6% preferred not to answer. Caregivers reported their highest level of education as a high school degree (3%), associate's degree (3%), bachelor's degree (22%), master's degree (53%), professional degree (16%) or preferred not to answer (3%). Based on preregistered exclusion criteria, an additional three participants were excluded due to neuropsychiatric diagnoses (n = 2) and experimenter error (n = 1).

Stimuli. Stimuli were three colored-pencil drawings of trees (see Figure 1a), presented via PowerPoint on a computer screen. We used drawings as our main stimuli because drawing is a familiar task for young children, allowing them to easily assess differences in quality (e.g., Asaba & Gweon, 2019). We first conducted a pilot study (n = 28) to test various tree drawings and ensure that children reliably categorize them as low-quality (made by a younger child), ageappropriate (made by a 6- to 8-year-old), and high-quality or above-age-appropriate (made by an older child or adult), respectively. The quality of the drawings was manipulated by varying the complexity, color, and detail of the images. The drawings were labeled with different colored boxes (red, yellow, or blue) so that children could respond either by pointing or saying the color of the box. The order of the drawings presented on the screen was randomized.

**Procedure.** To begin, the experimenter explained that they had many tree drawings on their computer made by kids of different ages. Some drawings were made by older children, some drawings were made by younger children, and some drawings were made by children the same age as the participating child. The experimenter then displayed three such drawings on their computer. First, all participants were asked to verbally select or point to the drawing they believed was created by a peer who was the same age as themselves (all children correctly chose the age-appropriate drawing). Then, all children were asked to compare the age-appropriate and high-quality drawing and select which one they believed was a better drawing of a tree (n = 30/32 chose the high-quality one as the better drawing).

The experimenter then revealed to the participant that the drawing they had selected as "better" - whether it was the high-quality or age-appropriate drawing - was given to them by an age-matched peer ("This drawing was given to me by my friend Sam, who is the same age as you!"). To probe children's spontaneous attributions, the experimenter asked children an open-ended question: "How do you think this drawing got to be so good?". Next, the experimenter asked two exploratory questions. The first used a forced-choice format to assess children's attributions: "Do you think that the drawing is good because Sam is good at drawing or because Sam's parent helped them with the drawing?". The second question explored children's perceptions of overparenting among their peers: "Have you ever noticed that sometimes parents step in and do things for your friends? They might do their homework for them or complete a craft for them."; participants responded with a "yes" or "no".

Coding. To measure children's spontaneous attributions of peers' performance, we relied on definitions of internal and external attributions from prior work (Weiner, 1985; Weiner, 2000). Internal attributions included mentions of the peer's ability (e.g., "Sam is really good at drawing"), effort (e.g., "Sam practiced a lot"), or other self-directed actions (e.g., "Sam picked really pretty colors"). External attributions include mentions of factors outside of their peer's control such as parental help or luck-based reasoning (e.g., "Sam got help"). Responses that did not fall into either of these categories (e.g., "I don't know") were coded as Other, and responses that contained elements of both internal and external factors (e.g., "Sam is good at drawing and got help from their parent") were coded as Both. All categories were thus mutually exclusive. Data were transcribed and coded by the experimenter and double-coded by a research assistant with 97% agreement on response categories. Discrepancies were resolved by a third coder.

# Results

First, a binomial test against chance (33% given three response options) confirmed that all participants correctly identified the age-appropriate drawing (p < .001). Second, as predicted, a chi-square goodness of fit test revealed that the dis-



**Figure 1. Experiment 1 procedure and results. (a)** First, participants were introduced to three drawings of trees and asked to identify which drawing they believed was drawn by someone their age. Next, participants were asked to select which one (of two) drawings they believed to be a better drawing of a tree. All participants were then told that the "better" drawing had been given to the experimenter by a same-aged peer and asked to explain how the drawing became good, to probe their causal attributions. Finally, participants answered several exploratory questions (as described in the Procedure). (b) Count of children's attributions, coded into one of four mutually exclusive categories.

tribution of participants' spontaneous attributions for peers' exceptional performance differed from chance (25% given the four possible coding categories;  $\chi^2(3) = 54$ , p < .001; Figure 1b). Specifically, pairwise comparisons indicated that participants made significantly more Internal attributions than attributions that fell into the External, Other, or Both categories (p < .001 for all comparisons; p-values Bonferroni corrected). No significant differences were found between External, Other, and Both categories (p = 1 for all comparisons). For participants whose responses fell into the Internal category (n = 26/32), 35% of the children specifically attributed the high-quality drawing to their peer's ability ("Sam is good at drawing") and 65% attributed the high-quality drawing to their peer's effort ("Sam practiced"). Next, a binomial test against chance (50%) revealed that participants were equally likely to select the external and internal attribution for high peer performance in the forced-choice question (p = .38). Finally, in our exploratory question probing whether participants notice overparenting for their friends or classmates, we found that 66% of our sample reported that they believe their peers receive excessive parental help on academic or household tasks.

#### **Interim Discussion**

As predicted, Experiment 1 showed that 6- to 8-year-old children attribute high peer performance primarily to internal causes (ability, hard work). Even when explicitly presented with a possible external and internal cause, children are at chance choosing between them, suggesting that children may not spontaneously attribute peer success to external causes but can select them when offered. Finally, a majority of children believed that their peers receive parental help, suggesting that in the early elementary school years, children are already cognizant that overparenting is a pervasive phenomenon. Together, our results show that children are aware of overparenting, but do not intuitively think that above-average peer work is driven by excessive parental help. In Experiment 2, we directly tested whether causal attributions about peers' high performance influence children's selfperceived ability.

# **Experiment 2**

In Experiment 2, we tested whether children feel worse about their abilities when they learn that their peers outperformed them due to internal causes (their parent only watched as the child completed the task themselves; Internal condition) versus external causes (their parent took over and did part of the task for them; External condition). Based on prior work from the attribution literature (Weiner, 1985; Weiner, 2000), we hypothesized that children would report lower ability ratings when they are provided with an internal versus external explanation for high peer performance. Different from Experiment 1, we used a novel, abstract reasoning task instead of a drawing task in order to control for individual differences in children's prior beliefs about their task ability.

# Method

**Participants.** We preregistered a sequential Bayes Factor (BF) analysis (e.g., Mani et al., 2021) using the BayesFactor package in R (Morey & Rouder, 2018). Following the preregistered plan, after collecting an initial sample of n = 50 (25) per condition), the BF would be evaluated after every five additional participants, with a plan to stop data collection when one of the following conditions were met: a  $BF_{10} > 5$  indicating moderate evidence in favor of the alternative hypothesis, a  $BF_{10} < 3$  in favor of the null hypothesis (no differences in ability rating across conditions), or reaching a pre-registered maximum of n = 80 participants (40 per condition). This approach led to a final sample of fifty 6- to 8-year-old children (25 per condition;  $M_{age} = 7.47$  years; 24 girls) all of which were recruited online and tested over Zoom. The racial and ethnic makeup of the final sample was as follows: 58% White, 24% Asian, 12% multiracial, 4% Black or African American, 18% Hispanic or Latino, 80% non-Hispanic or Latino, and 2% other. Caregivers reported their highest level of education as high school degree (4%), associate's degree



**Figure 2. Experiment 2 procedure.** All participants completed trials of a matching puzzle game where performance was surreptitiously manipulated such that the experimenter told participants that they only solved 3/10 puzzles correctly. Participants were then told that same-aged peers had played the same puzzle game and greatly outperformed them. In the External condition, the experimenter attributed the high peer performance to an external cause (parental help). In the Internal condition, the experimenter attributed high peer performance to an internal cause (ability). Finally, participants were asked to rate their own ability on a 6-point scale as well as answer exploratory questions (as described in the Procedure).

(2%), bachelor's degree (42%), master's degree (36%), or professional degree (16%). Based on preregistered exclusion criteria, an additional eleven participants were excluded due to failing comprehension check questions (n = 5), experimenter error (n = 4), or parental/sibling interference (n = 2).

*Stimuli.* All stimuli were presented via PowerPoint. Four novel abstract reasoning puzzles were created, inspired by age-appropriate matrix reasoning puzzles in the WISC (Wechsler, 2014). For each puzzle, participants were asked to select which one of five options (labeled 1-5) completes the array of four pictures at the top of the screen (Figure 2).

**Procedure.** Children were tested in a Zoom appointment by an experimenter. The experiment began with a series of warm-up and comprehension check questions to familiarize participants with a 6-point rating scale that was later used to measure self-perceived ability. Next, children completed one practice trial of the puzzle game and received corrective feedback from the experimenter to ensure that they understood the rules of the game. Then, children were told that there are ten puzzles in total and that their goal was to complete as many as possible within a limited amount of time (the exact amount of time was unspecified). In reality, performance was surreptitiously controlled: The experimenter ended the task after the child completed three puzzles, regardless of timing.

Afterward, the experimenter told the child they had solved 3 out of 10 puzzles correctly, then prompted them to draw upward social comparisons by presenting the (fictional) scores of three, same-aged peers who had performed substantially better — completing 8, 7, and 9 puzzles, respectively. In the External condition, the experimenter revealed that the same-aged peers did not do the puzzles independently because their parents actually stepped in and helped to complete many puzzles for their children (external explanation for high peer performance). In the Internal condition, the experimenter revealed that the same-aged peers completed the puzzles independently and their parents only watched them play the game (internal explanation for high peer performance). Thus,

the presence of a parental figure was matched across conditions — the key variable that changed was whether the parent actively intervened in the child's work. As a manipulation check, we asked all participants whether the same-aged peers completed puzzles independently (Internal condition) or received help from parents (External condition). The order of response options in this forced-choice manipulation check were counterbalanced and participants were excluded from analyses if they failed to respond correctly after the experimenter provided two corrections.

To assess children's self-perceived ability, we asked all participants: "How good do you think you are at solving these matching puzzles when compared to other kids your age?", to which children responded on a 6-point scale from 1 (not so good) to 6 (really good). All children were then asked four exploratory questions to investigate how they think about their own, as well as their peers', abilities. First, we examined whether children are sensitive to factors influencing their own performance and therefore, prefer to highlight the fact that they completed the puzzles independently more in the External (vs. Internal) condition in order to maintain their self-image. Thus, the experimenter revealed that they will show the participant's score to their higher-performing peers and then asked children what they would want to tell their peers when their own score is shared (Q1). Second, as a measure of children's challenge-seeking behavior, the experimenter told all participants that they will have a chance to play one more round of the puzzle game and that they could choose to play an easier or harder level for the next game (Q2). Third, to probe whether children associated independence or parental help with higher interest in challengeseeking, children were asked which level of the game (easier or harder) they thought that their peer (one of the age-matched peers previously shown in the peer comparison slide) chose to play next (Q3). Finally, to explore whether children associated independence or parental help with more learning, we asked children to rate how much they think their peers learned from doing the matching puzzles activity on a 6-point scale from 1 (*they did not learn very much*) to 6 (*they learned a lot*; Q4).

**Coding.** To assess how participants communicated their score to peers (exploratory Q1), we coded responses into one of four mutually exclusive categories. The No Help category included responses where children mentioned completing the puzzle game by themselves without adult intervention. The Performance category included responses where participants mentioned either their own or their peer's performance on the puzzle game. The Nothing category contained responses where children did not know what they would communicate or said that they would not want to say anything to their peers. Responses that did not fall into the aforementioned three categories were coded as Other. All data were double-coded by a research assistant with 96% agreement on response categories and any discrepancies were resolved by a third coder.

# Results

Our first goal was to investigate whether attributing peers' exceptional performance to an internal (vs. external) cause would decrease children's self-perceived ability. As predicted, children in the Internal condition reported significantly lower ability ratings than those in the External condition (W = 496, p < .001,  $Mdn_{Internal} = 3$ ,  $Mdn_{External} = 4$ ; Figure 3). Our preregistered BayesFactor analysis revealed a  $BF_{10}$  of 143.38, indicating strong support for the alternative hypothesis.



Figure 3. Experiment 2 results. Children's self-perceived ability ratings by condition. The top and bottom of the boxes correspond to the 25th and the 75th percentiles. The horizontal line in the middle of the boxes denotes medians. The large circles represent the mean, colored by condition. \*\*\* represents p < .001.

Next, we explored whether children might be more inclined to communicate that they completed the puzzles independently to their (fictional) peers who did receive parental help. As an exploratory analysis, we conducted Fisher's Exact Tests to examine the effect of condition on response content. This analysis revealed that the distribution of responses significantly differed by condition (p < .001). Specifically, pairwise comparisons between conditions (with Bonferroni *p*-value corrections) showed that significantly more participants provided responses that fell into the No Help category in the External (52%) versus Internal (0%) condition (p < .001). The remaining comparisons did not yield significant differences (p = 1 for all other comparisons).

Finally, in other exploratory questions, we examined participants' own challenge-seeking behavior as well as their inferences about their peer's challenge-seeking preferences and learning. Chi-square tests of independence revealed that participants' game choice for themselves did not vary by condition ( $\chi^2(1) = 0.08$ , p = .78; 52% of participants chose hard in Internal; 60% chose hard in External condition). There was a significant effect of condition on task choice when participants were selecting for their peer ( $\chi^2(1) = 10.08$ , p = .001). Specifically, more children reported that their peer would choose the harder (vs. easier) level in the Internal condition (84% chose hard) than the External condition (36% chose hard). However, children did not think that their peers learned more in the Internal compared to the External condition (W = 252, p = .23;  $Mdn_{Internal} = 5$ ,  $Mdn_{External} = 4$ ).

# **Interim Discussion**

Results from Experiment 2 revealed that children believe they are less competent when provided with an internal (vs. external) explanation for their peers' high performance. Exploratory findings are addressed in the General Discussion.

# **General Discussion**

Overparenting is an increasingly pervasive phenomenon, especially in societies with economic inequality and high stakes for educational attainment (e.g., United States; Doepke & Zilibotti, 2019). A plethora of research has shown that overparenting predicts poorer academic, motivational, and cognitive outcomes for children starting in early childhood (Joussemet et al., 2005; Leonard, Martinez, et al., 2021). However, prior work has only examined the proximal effects of overparenting on the children directly involved. Here, we show for the first time that there are hidden distal costs: Taking over to boost children's performance can foster harmful internal attributions among those children's peers, undermining their self-perceived competence and potentially their future academic outcomes.

Across two preregistered studies, we demonstrate the negative impacts of overparenting on peers and the cognitive mechanism that drives this effect: causal attribution. Specifically, Experiment 1 revealed that 6- to 8-year-old children spontaneously attribute high peer performance to their peers' abilities or hard work (internal cause) rather than parental intervention (external cause). Experiment 2 showed that this internal attribution leads children to develop negative beliefs about their own competence.

Our findings advance theoretical and empirical work on causal attributions, social comparison, and overparenting.

First, we corroborate prior research on the correspondence bias in children by showing that, indeed, 6- to 8-yearolds spontaneously attribute high peer performance to internal causes (ability, hard work), rather than external causes (Rholes & Ruble, 1984; Stipek & Daniels, 1990). Second, our work reinforces developmental predictions from social comparison theory (Butler, 1998), revealing that, like adults, young children also use social comparisons to form judgments about their competence (Keil, McClintock, Kramer, & Platow, 1990; Dickhäuser & Galfe, 2004). Third, given that children do not spontaneously intuit overparenting as a cause for high peer performance, our work adds to broader research on the negative effects of overparenting (Leonard, Duckworth, Schulz, & Mackey, 2021; Love et al., 2020; Schiffrin & Liss, 2017) by suggesting that these impacts may extend beyond the parent-child dyad. Fourth, our work shows that 6- to 8-year-old children are aware of and sensitive to overparenting: They think their peers receive excessive parental help and are motivated to disclose their independence to overparented peers who outperformed them. Finally, we extend research on reducing the detrimental impacts of overparenting (Leonard, Martinez, et al., 2021; Shachnai, Asaba, Hu, & Leonard, 2024) by highlighting one way to intervene — disclosing that a parent helped to achieve high peer performance can remediate children's negative self-perceived ability.

Several exploratory findings from Experiment 2 require more careful consideration and interpretation. First, despite reporting lower ability ratings when children learned that their peers completed the game independently, participants did not show an explicit preference to tackle an easier (vs. harder) level of the game. This finding aligns with work showing heterogeneity in how children behaviorally respond to low self-evaluations: While some children respond by increasing effort to compensate for perceived shortcomings (Magid & Schulz, 2015; Wehrens, Kuyper, Dijkstra, Buunk, & van der Werf, 2010), others may fall into a pattern of learned helplessness, where negative self-beliefs undermine both motivation and task performance (Dweck & Goetz, 1976; Wigfield & Karpathian, 1991). Future work is necessary to further unpack the relationship between upward social comparisons, self-beliefs, and challenge selection. Second, although children believed that their peers who completed the game independently would choose a harder level in the next game, they did not report that their peers learned more in the matching puzzle activity. This may imply that children interpret parental help as a sign of their peer's lower competence and/ or lack of interest in challenges, but potentially unrelated to their overall learning. One possible explanation suggests that some children may have interpreted the learning question as we originally intended, evaluating how much their peers learned from the activity based on their level of independence, while others may have taken a more literal approach, answering based on how much they believed their peers learned from viewing geometric shapes and colors. Future studies could test children's inferences about the learning process with more explicit questions about the knowledge or skills that peers may have gained from playing the game alone versus with parental intervention.

There are a number of limitations with the present work that inspire avenues for future investigation. First, in Experiment 2, it is unclear whether internal attributions of peer success reduced children's beliefs about their competence, or alternatively, whether external attributions increased these beliefs. To disambiguate the directionality of our effects, we are conducting an ongoing study with a no-social comparison baseline condition to test our hypothesis that internal attributions of high peer performance will lower ability ratings compared to baseline, based on prior work showing that, in the absence of social comparison, children have inflated performance estimates (Leonard & Sommerville, 2024). Second, we show that children are more likely to communicate that they solved the puzzles independently to overparented peers, suggesting that children are sensitive to factors that influence their own performance and may try to protect their self-image (in line with Asaba & Gweon, 2022; Silver & Shaw, 2018). An intriguing question is whether children would similarly disclose that they received adult help to achieve a high score or instead, hide this information to protect their reputation. If children are inclined to omit information about external causes for their performance, this would strengthen the ecological validity of our current findings and highlight the efficacy of disclosing excessive parental help as a potential intervention strategy. Ongoing work is manipulating whether participants receive adult help (or not) to succeed on a task to explore whether children disclose the help they received to a group of fictional peers.

Another limitation in the current paradigm is that we used abstract reasoning puzzles in a scenario with fictional peers to reduce preconceived notions about competence. As such, it is unclear whether our findings generalize to other tasks, especially ones where children may hold strong prior beliefs about one's competence (e.g., STEM tasks; Master, Meltzoff, & Cheryan, 2021). Further, our sample was limited to affluent children from the United States, raising questions about whether children reason similarly about overparenting in populations and cultures where parenting values differ (Doepke & Zilibotti, 2019). Finally, the explicit social comparisons in our online paradigm may not fully capture the nuanced, more implicit peer comparisons that occur in real classrooms. Future research should thus explore how overparenting impacts self-perceived ability in naturalistic environments.

Overparenting has become a key concern in modern discussions on promoting children's resilience and autonomy. Here, we present initial evidence that overparenting negatively affects the peers of overparented children, suggesting its consequences may be more far-reaching than previously thought. In doing so, our work highlights the need to help caregivers step back in order to create environments that empower not only their own children but also those around them.

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# References

- Asaba, M., & Gweon, H. (2019). Young children rationally revise and maintain what others think of them. *PsyArXiv*, *10*.
- Asaba, M., & Gweon, H. (2022). Young children infer and manage what others think about them. *Proceedings of the National Academy of Sciences*, 119(32), e2105642119.
- Boissicat, N., Pansu, P., & Bouffard, T. (2020). Does classroom social comparison bias students' evaluation of their own competence? *Social Psychology of Education*, 23(5), 1303–1326.
- Brun, L., Pansu, P., & Dompnier, B. (2021). The role of causal attributions in determining behavioral consequences: A meta-analysis from an intrapersonal attributional perspective in achievement contexts. *Psychological Bulletin*, 147(7), 701–718.
- Butler, R. (1998). Age trends in the use of social and temporal comparison for self-evaluation: Examination of a novel developmental hypothesis. *Child Development*, 69(4), 1054– 1073.
- Dickhäuser, O., & Galfe, E. (2004). Better ..., worse ... Achievement related comparison processes in elementary school. Zeitschrift Fur Entwicklungspcyhologie Und Padagogishe Psychologie, 36(1), 1–9.
- Dijkstra, P., Kuyper, H., van der Werf, G., Buunk, A. P., & van der Zee, Y. G. (2008). Social comparison in the classroom: A review. *Review of Educational Research*, 78(4), 828– 879.
- Doepke, M., & Zilibotti, F. (2019). *Love, money, and parenting: How economics explains the way we raise our kids.* Princeton University Press.
- Dumas, F., Huguet, P., Monteil, J.-M., Rastoul, C., & Nezlek, J. B. (2005). Social comparison in the classroom: Is there a tendency to compare upward in elementary school. *Current Research in Social Psychology*, *10*(12), 166–187.
- Dweck, C. S., & Goetz, T. E. (1976). Attributions and learned helplessness. In *New Directions in Attribution Research*. Psychology Press.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117–140.
- Frieze, I. H., & Snyder, H. N. (1980). Children's beliefs about the causes of success and failure in school settings. *Journal* of Educational Psychology, 72(2), 186.

- Gerber, J. P., Wheeler, L., & Suls, J. (2018). A social comparison theory meta-analysis 60+ years on. *Psychological Bulletin*, 144(2), 177–197.
- Joussemet, M., Koestner, R., Lekes, N., & Landry, R. (2005). A longitudinal study of the relationship of maternal autonomy support to children's adjustment and achievement in school. *Journal of Personality*, 73(5), 1215–1236.
- Keil, L. J., McClintock, C. G., Kramer, R., & Platow, M. J. (1990). Children's use of social comparison standards in judging performance and their effects on self-evaluation. *Contemporary Educational Psychology*, 15(1), 75–91.
- Leonard, J. A., Duckworth, A. L., Schulz, L. E., & Mackey, A. P. (2021). Leveraging cognitive science to foster children's persistence. *Trends in Cognitive Sciences*, 25(8), 642–644.
- Leonard, J. A., Martinez, D. N., Dashineau, S. C., Park, A. T., & Mackey, A. P. (2021). Children persist less when adults take over. *Child Development*, 92(4), 1325–1336.
- Leonard, J. A., & Sommerville, J. A. (2024). A unified account of why optimism declines in childhood. *Nature Reviews Psychology*, 1–14.
- Love, H., May, R. W., Cui, M., & Fincham, F. D. (2020). Helicopter parenting, self-control, and school burnout among emerging adults. *Journal of Child and Family Studies*, 29(2), 327–337.
- Magid, R., & Schulz, L. (2015). Quit while you're ahead: Preschoolers' persistence and willingness to accept challenges are affected by social comparison. In *Cogsci*.
- Mani, N., Schreiner, M. S., Brase, J., Köhler, K., Strassen, K., Postin, D., & Schultze, T. (2021). Sequential bayes factor designs in developmental research: Studies on early word learning. *Developmental science*, 24(4), e13097.
- Master, A., Meltzoff, A. N., & Cheryan, S. (2021). Gender stereotypes about interests start early and cause gender disparities in computer science and engineering. *PNAS Proceedings of the National Academy of Sciences of the United States of America*, 118(48).
- Miller, J. G. (1984). Culture and the development of everyday social explanation. *Journal of Personality and Social Psychology*, 46(5), 961–978.
- Morey, R. D., & Rouder, J. N. (2018). Baysefactor: Computation of bayes factors for common designs.
- Peretz-Lange, R., Gonzalez, G. D. S., & Hess, Y. D. (2024). My circumstances, their circumstances: An actor-observer distinction in the consequences of external attributions. *Social and Personality Psychology Compass*, 18(8), e12993.
- Rholes, W. S., & Ruble, D. N. (1984). Children's understanding of dispositional characteristics of others. *Child Development*, 55(2), 550–560.
- Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. In *Advances in experimental social psychology* (Vol. 10, pp. 173–220). Elsevier.
- Ruble, D. N., Boggiano, A. K., Feldman, N. S., & Loebl, J. H. (1980). Developmental analysis of the role of social

comparison in self-evaluation. *Developmental Psychology*, *16*(2), 105.

- Ruble, D. N., Parsons, J. E., & Ross, J. (1976). Selfevaluative responses of children in an achievement setting. *Child Development*, 990–997.
- Schiffrin, H. H., & Liss, M. (2017). The effects of helicopter parenting on academic motivation. *Journal of Child and Family Studies*, 26(5), 1472–1480.
- Shachnai, R., Asaba, M., Hu, L., & Leonard, J. A. (2024). Pointing out learning opportunities reduces overparenting. *Child Development*.
- Silver, I. M., & Shaw, A. (2018). Pint-sized public relations: The development of reputation management. *Trends* in cognitive sciences, 22(4), 277–279.
- Stipek, D. J., & Daniels, D. H. (1990). Children's use of dispositional attributions in predicting the performance and behavior of classmates. *Journal of Applied Developmental Psychology*, 11(1), 13–28.
- Wechsler, D. (2014). Wechsler intelligence scale for childrenfifth edition. Pearson. (Technical and Interpretive Manual)
- Wehrens, M. J. P. W., Kuyper, H., Dijkstra, P., Buunk, A. P., & van der Werf, M. P. C. (2010). The long-term effect of social comparison on academic pperformance. *European Journal of Social Psychology*, 40(7), 1158–1171.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92(4), 548.
- Weiner, B. (2000). Intrapersonal and interpersonal theories of motivation from an attributional perspective. *Educational Psychology Review*, 12, 1–14.
- Wigfield, A., & Karpathian, M. (1991). Who am I and what can I do? Children's self-concepts and motivation in achievement situations. *Educational Psychologist*, 26(3-4), 233–261.