

Evaluating the Impact of Parental Praise on Children's Problem-Solving Persistence

Rachel S. Francis, Department of Psychology
AnnaMaria Boullion, M.A., Department of Psychology
Tuppett M. Yates, Ph.D., Department of Psychology

ABSTRACT

Child-directed praise is commonly seen as a form of positive parenting that promotes child development. However, the impact of praise on child development can differ based on the specific type of praise used. This study examined 250 parent-child dyads to investigate the impact of three forms of parental praise (i.e., process, person, and ambiguous) received at age 4 on children's later problem-solving persistence at age 8. We hypothesized that process praise, which highlights child effort, would foster persistence, whereas person praise, which emphasizes child characteristics, would undermine child persistence. Independent coders rated child-directed praise across a series of challenging parent-child tasks during a laboratory assessment at age 4. Children's problem-solving persistence was assessed by separate sets of coders during these same tasks at age 4 and a set of similar parent-child interaction tasks at age 8. A linear regression analysis, which controlled for child sex, ethnicity, poverty, child IQ, total parental utterances, and prior persistence, revealed significant positive contributions of process praise and ambiguous praise to children's problem-solving persistence. In contrast, person praise predicted decreased persistence at age 8. These results reveal the nuanced effects of different types of parental praise on children's ability to persist during challenging tasks. Future studies will test mediation models to examine how parental praise might influence long-term adaptation through child persistence. The current findings can inform parenting practices and early childhood interventions by emphasizing the importance of effort-based praise in fostering problem-solving persistence in children.

KEYWORDS: Praise, parenting, persistence, problem-solving

FACULTY MENTOR - Dr. Tuppett M. Yates, Department of Psychology



Tuppett M. Yates is a professor and chair of the Department of Psychology at UCR. She is a clinical and developmental psychologist whose research examines the impact of childhood adversity on pathways toward psychopathology and competence. She is also the founder and Executive Director of the UCR Guardian Scholars Program, which supports emancipated foster youth in higher education.



RACHEL SIMONE FRANCIS

Rachel Francis earned a B.A. in psychology from the University of California, Riverside in Fall 2024. She served as a research assistant in Dr. Tuppett Yates' Adversity and Adaptation Lab under the mentorship of Ph.D. candidate AnnaMaria Boullion. She brings professional experience as a youth counselor, and held community service roles as a Food Insecurity Fellow at UCR College Corps and treasurer of the Black Psych Society. She plans to pursue a career as a clinical neuropsychologist.

Evaluating the Impact of Parental Praise on Children's Problem-Solving Persistence

INTRODUCTION

Child-directed praise encompasses verbal acknowledgments that recognize and value a child's actions, achievements, or attributes (Amemiya & Wang, 2018). Parents often use praise to reinforce desirable behaviors, shaping children's self-esteem and self-efficacy in ways that support their capacity to cope with future challenges (Mueller & Dweck, 1998; Gunderson et al., 2013). In this way, praise can play a significant role in fostering children's problem-solving persistence and motivation by promoting effort and encouraging children to push through difficulties (Lucca et al., 2019). As a common parenting practice, praise is often presumed to have positive developmental effects. However, the effects of praise may vary depending on its target of emphasis (e.g., vague praise versus praise about a child's efforts or attributes). Thus, this study investigated three types of praise—*process* focused on effort, *person* focused on inherent traits, and *ambiguous* focused on general outcomes—as related to changes in children's problem-solving persistence during challenging tasks observed at ages 4 and again at age 8.

Parental Praise and Children's Problem-Solving Persistence

Parental praise can take on different meanings (see Gunderson, 2013 for discussion), and may influence a child's ability to persist in problem-solving tasks in distinct ways. Process praise acknowledges the child's active involvement in a task by emphasizing their effort, strategy, and/or ideas (e.g., "That was a clever way to put those blocks together!"). Person praise focuses on the child's characteristics or attributes, such as affirming their intelligence (e.g., "You are so smart!") or ability (e.g., "You are the best artist around!"). In contrast, ambiguous praise lacks a clear target (e.g., "You did it!") and often addresses the quality of the outcome without specifying its cause (e.g., "That was impressive!").

Research suggests that parental praise effects on child development differ based on the specific type of praise administered (e.g., Gunderson et al., 2013). By highlighting the connection between the child's effort and success, process praise may enhance a child's motivation to continue working hard (Zentall & Morris, 2010), promote a growth mindset (Gunderson et al., 2013), improve academic

performance (Gunderson et al., 2018), boost self-esteem (Robichaud et al., 2022), and promote self-efficacy during skill acquisition (Mueller & Dweck, 1998). Conversely, by focusing on the child's characteristics and traits, person praise may lead to a fixed mindset wherein the child feels they have little capacity to change their situation (Gunderson et al., 2013), prompting task disengagement (Mueller & Dweck, 1998), and may lead to lower self-esteem (Brummelman et al., 2014). Compared to research on process and person praise, ambiguous praise has shown mixed effects on child development. However, one study found that a combination of descriptive process praise (e.g., "Look at how you organized the beads by color!") with non-specific outcome praise (e.g., "That is amazing!") was associated with higher child self-esteem than either process or outcome praise in isolation (Robichaud et al., 2022).

Children's Problem-Solving Persistence

According to White's Competence Motivation Theory (1959), children are intrinsically motivated to accomplish goals, which strengthens their mastery motivation to persist through challenges and overcome difficulties. However, positive reinforcement, such as parental use of child-directed praise, can further strengthen these motivational processes and foster independence (Harter, 1978).

Persistence is defined as the ability to solve a task while ignoring distractions and enduring uncertainty about achieving a goal (McCall, 1995). Identifying factors that promote problem-solving persistence can inform interventions to support children's capacities to cope with setbacks and approach obstacles as opportunities for growth (i.e., resilience). As children successfully navigate challenging situations, they develop improved problem-solving skills and self-confidence, which enhance self-esteem and competence (Robichaud et al., 2022).

Study Overview

This longitudinal investigation evaluated the unique pathways from different types of child-directed parental praise (i.e., process, person, and ambiguous) during the preschool period at age 4 to changes in children's observed problem-solving persistence from ages 4 to 8. Focusing on this transition period into formal schooling is important because children develop problem-solving skills, cognitive flexibility, and

Evaluating the Impact of Parental Praise on Children's Problem-Solving Persistence

mindsets that shape their academic and social success (Gunderson et al., 2013).

This study examined two directional hypotheses and one exploratory hypothesis. First, we hypothesized that children who received more process praise would be more likely to keep trying and persist through challenging tasks because process praise may help children attribute their success to their effort, which encourages them to continue working hard and not give up easily in the face of future challenges. Second, we hypothesized that person praise would reduce later persistence because it focuses on a child's attributes (e.g., appearance, talent) in ways that might lead children to believe their abilities are fixed and unchangeable. Third, we explored the effects of ambiguous praise on later problem-solving persistence. Ambiguous feedback might reduce motivation to persist because it does not indicate what the child did well or how their efforts contributed to success. Alternatively, it could enhance persistence by offering positive reinforcement, as the parent's recognition still acknowledges and celebrates the child's achievements.

METHODS

Participants

The current sample was drawn from a longitudinal study of children's early learning and development. At age 4 ($M = 49.1$ months; $SD = 2.4$), 250 caregiver-child dyads completed a laboratory assessment that included direct observations of parent-child interactions across a series of challenging tasks. Children were diverse with regard to sex assigned at birth (50% female), economic status (37.6% in poverty), and ethnicity and race (46.0% Latine; 24.8% multiracial; 18.0% Black; 11.2% White). Primary caregivers were mostly biological mothers (91.2%) or other females serving in a parental role (e.g., grandmothers, aunts).

Four years later ($M = 97.1$ months; $SD = 2.8$), 206 families (82.4%) completed a second lab assessment that included age-adapted parent-child tasks. All procedures were approved by the University's Institutional Review Board. Informed consent was obtained from the child's legal guardian at both data waves and child assent was collected at age 8. Additionally, all data were de-identified using alphanumeric

ID codes to ensure participant confidentiality. Caregivers were compensated with \$25 per hour of assessment and children received a small gift.

Measures

Parental Praise. Parental praise was coded from video recordings of parent-child interactions during four challenging teaching tasks lasting 20 minutes (e.g., sorting beads by color and shape and naming items with wheels; Egeland, 1982). First, the videos were manually transcribed, and parent utterances were counted using the Utterance Boundary Protocol from the Language Development Project Protocol (Goldin-Meadow et al., 2015). Second, independent coders used Gunderson's (2013) Naturalistic Coding Scheme to classify process praise, person praise, and ambiguous praise as present or absent during each task. Third, coder differences were resolved through discussion, and consensus scores were averaged across tasks, yielding excellent intraclass correlation coefficients (ICC) for process (0.98), person (0.98), and ambiguous (0.96) praise.

Child Problem-Solving Persistence. At age 4, a separate group of coders evaluated children's persistence during the same parent-child interaction tasks. At age 8, another set of coders assessed children's problem-solving persistence across 20 minutes of similar parent-child interaction tasks (e.g., puzzle building, naming wooden objects). Child persistence was rated on a 7-point scale (Egeland et al., 1982), with a low score of 1 assigned to a child who actively avoided the tasks and did not engage at all, and a high score of 7 assigned to a child who showed little to no diversion and pure concentration on the task despite difficulties. Discrepancies among raters were resolved through discussion, and consensus scores were averaged across tasks ($ICC_{age 4} = 0.85$, $ICC_{age 8} = 0.81$).

Covariates. *Child IQ* - At age 4, children's cognitive abilities were measured using the Vocabulary and Block design subtests from the Wechsler Preschool and Primary Scale of Intelligence-III (WPPSI-III; Wechsler, 2002). Verbal ability was assessed using age-appropriate measures of receptive and expressive vocabulary. Performance ability was measured using the block design subtest, where children recreated patterns using red and white blocks. A pro-rated full-scale IQ score was calculated by averaging the verbal

Evaluating the Impact of Parental Praise on Children's Problem-Solving Persistence

and performance IQ scores (Sattler, 2008). *Poverty* - Poverty status was determined by calculating the caregiver's reported total income (e.g., wages, child support) and dividing it by the appropriate poverty threshold. This income-to-poverty ratio accounted for household size and the number of children under 18 residing in the home (U.S. Census Bureau Housing and Household Economics Division, 2007).

Data Preparation and Analysis

Descriptive and bivariate analyses were conducted using IBM SPSS (Version 29). A multivariate analysis of variance (MANOVA) was performed to examine differences in process, person, and ambiguous praise, as well as poverty level, child IQ, and persistence at age 4, based on child sex assigned at birth, Latine ethnicity, and their interaction. Following this, a simultaneous linear regression using the Lavaan package (Rosseel, 2012) in version 4.4.1 of RStudio (RStudio Team, 2021) assessed the effects of process, person, and ambiguous praise while controlling for key covariates (i.e., child sex, Latine ethnicity, child IQ, total parental utterances, and prior problem-solving persistence). Since there were no significant differences between families who completed both waves and those who completed only the first wave across all study variables, missing data were handled using full information maximum likelihood estimation (FIML).

RESULTS

Descriptive and Bivariate Analyses

Descriptive findings and bivariate correlations are presented in Table 1. A multivariate analysis of variance (MANOVA) indicated no significant effects of child sex, Latine ethnicity, or their interaction on the study variables. At the bivariate level, poverty was positively correlated with child IQ, parental utterances, and ambiguous praise at age 4, as well as with child persistence at age 8. Additionally, child IQ was positively correlated with child persistence at age 4, as well as with parents' process and ambiguous praise at age 4, and child persistence at age 8. Children's problem-solving persistence showed significant stability from ages 4 to 8. Parents' total utterances were positively correlated with all forms of praise, and all praise types were positively correlated with one another. Person praise was negatively

correlated with persistence at age 8, whereas neither process praise nor ambiguous praise demonstrated significant correlations with persistence at age 8.

Regression Analysis

Table 2 depicts a regression of children's problem-solving persistence at age 8 on process praise, person praise, and ambiguous praise, as well as relevant covariates. Child IQ and persistence at age 4 were positively related to increases in children's problem-solving persistence from ages 4 to 8. However, the quantity of parental utterances at age 4 was not significantly associated with children's persistence. Process and ambiguous praise also contributed uniquely to increased persistence ($\beta = 0.206, p = 0.001$; $\beta = 0.170, p = 0.006$), whereas person praise predicted decreased persistence. Together, these variables explained 21.9% of the variance in children's problem-solving persistence.

Evaluating the Impact of Parental Praise on Children's Problem-Solving Persistence

Means, standard deviations, and correlations among study variables.

Variable	1	2	3	4	5	6	7	8
1. Income to Poverty Ratio	-							
2. Child IQ (Age 4)	.22**	-						
3. Persistence (Age 4)	.08	.20**	-					
4. Total Utterances (Age 4)	.16*	-.10	-.04	-				
5. Process Praise (Age 4)	.08	.13*	.01	.32**	-			
6. Person Praise (Age 4)	-.04	-.08	.03	.14*	.11	-		
7. Ambiguous Praise (Age 4)	.14*	.15*	.09	.33**	.27**	.17**	-	
8. Persistence (Age 8)	.19**	.28**	.35**	.02	.11	-.14*	.09	-
<i>Mean</i>	1.7	95.17	5.42	74.15	1.17	0.29	2.33	5.25
<i>Standard Deviation</i>	1.1	13.5	0.9	18.5	1.4	0.7	1.9	0.7

*Note: * $p < .05$. ** $p < .01$.*

Table 1

Table 2

Standardized and unstandardized estimates predicting children's problem-solving persistence at age 8

Variables	B	SE	β	p	95% Bias-Corrected CI	
					LLCI	UCLI
Covariates						
Child Sex	0.014	0.097	0.020	0.836	-0.166	0.221
Latine Ethnicity	0.120	0.098	0.174	0.076	-0.021	0.372
Income to Poverty Ratio (age 4)	0.106	0.037	0.069	0.061	-0.005	0.140
Child IQ (age 4)	0.173	0.004	0.009	0.023	0.001	0.017
Persistence (age 4)	0.314	0.068	0.259	< .001	0.131	0.398
Total Utterances (age 4)	0.006	0.003	0.001	0.931	-0.005	0.005
Predictors						
Process Praise (age 4)	0.405	0.065	0.206	0.001	-0.079	0.327
Person Praise (age 4)	-0.654	0.054	-0.163	0.002	-0.259	-0.050
Ambiguous Praise (age 4)	0.450	0.062	0.170	0.006	-0.039	0.286

$R^2_{persistence} = 0.22$

Cohen's $f^2_{persistence} = 0.28$

Note: Bold denotes significant parameter estimates

Table 2

Evaluating the Impact of Parental Praise on Children's Problem-Solving Persistence

DISCUSSION

The investigation evaluated the long-term effects of parental praise at age 4 on children's problem-solving persistence at age 8. This age is a key period when children are settling into formal schooling, making problem-solving persistence especially important for their current and future academic success. Interestingly, even though praise statements accounted for only 5% of caregivers' total child-directed utterances, they still had a significant impact on changes in children's problem-solving persistence over time. However, the nature of these effects differed among praise types.

As predicted, parental praise was associated with changes in children's problem-solving persistence, even beyond the significant contributions of child IQ and prior persistence at age 4. First, process praise was positively related to increased persistence from ages 4 to 8. Process praise may encourage persistence because it teaches children that their success is due to hard work and problem-solving strategies. This finding is consistent with prior literature suggesting that process praise increases growth mindsets and mastery motivation, leading to a belief that one can improve one's situation through effort, new learning, and continuing to persist through challenges (Gunderson, 2013; Xu et al., 2024).

Second, in contrast to process praise, person praise showed a consistent negative association with persistence at age 8. Person praise emphasizes children's inherent qualities, such as being "smart" or "good," which can create a fragile sense of self-worth by tying their value to these fixed traits. This type of praise may suggest that success results from who the child is, not what they do, leading children to believe their abilities are fixed and unchangeable. Research suggests that when children who frequently receive person praise encounter failure, they may interpret it as evidence that they do not truly possess the qualities they were praised for, such as intelligence or positive character (Mueller & Dweck, 1998). This can result in feelings of incompetence and low motivation to commit to challenges, as children interpret setbacks as signs of fundamental inadequacies.

Third, ambiguous praise, characterized by vague positive feedback, such as "There you go!" was associated with

increased problem-solving persistence at age 8. Notably, ambiguous praise was also the most common type of child-directed praise, which is consistent with previous research indicating that many parents naturally express ambiguous praise in their interactions with children (Brummelman et al., 2014; Robichaud et al., 2022). Although ambiguous praise lacks clear feedback about what the child did well or how their effort contributed to success, it may still recognize and celebrate the child's achievements. This can help the child feel acknowledged and encouraged, fostering motivation to persist. Additionally, because ambiguous praise does not focus on effort or traits, it may reduce pressure on the child to meet exact standards, which can, in turn, make them feel more competent (Morris & Zentall, 2014).

Strengths & Limitations

This longitudinal study featured several important strengths, including observational assessments and the inclusion of several covariates to evaluate the unique effects of parental praise types on children's problem-solving persistence over time. Specifically, persistence at age 4 was controlled to capture baseline levels of persistence. Child IQ at age 4 was included to address cognitive differences that may affect both problem-solving skills and persistence. The variable for Latine ethnicity was included to control for potential cultural factors influencing persistence, while the income-to-poverty ratio addressed socioeconomic disparities. Finally, child sex was held constant to account for gender-related differences in persistence. However, future work would benefit from considering the potential effects of ethnicity-race and/or child sex using multi-group analyses.

Notwithstanding these strengths, several limitations should be considered when interpreting the current findings. First, additional individual difference factors, such as temperament (Smith et al., 2008) and family dynamics (e.g., caregiving structure; Ren et al., 2022), may influence a child's motivation and persistence. Second, cultural context may influence children's perceptions of parental praise. Although our sample was larger and more diverse than those in previous studies, the representation of racial groups was uneven, which precluded our ability to examine these effects within specific ethnic and racial groups. Third, this study was conducted in a laboratory environment, which may not accurately represent real-world interactions between parents

Evaluating the Impact of Parental Praise on Children's Problem-Solving Persistence

and their children. Additionally, this context may have differential influences on families depending on their cultural or socioeconomic status.

Implications and Conclusions

This study illuminated several directions for future research and intervention. For example, some studies indicate that praise effects may be curvilinear, with excessive or insincere praise potentially leading to an overvaluation of children, fostering narcissism, or creating dependence on external validation, which in turn can lower self-worth and reduce intrinsic motivation (Brummelman & Grapsas, 2020). Inconsistent praise patterns—alternating between over-praising and under-praising—have also been linked to depression and poor academic performance (Lee et al., 2016). Additionally, inflated praise (e.g., exaggerating accomplishments by saying “You are doing an extraordinary job!” instead of “You are doing a good job!”) has been shown to lower self-esteem over time in children, while also increasing narcissism in those who already have high self-esteem (Brummelman et al., 2017).

Even within and between praise types, there may be nuanced effects that were not examined here. For example, in their study of ambiguous praise, Zentall and Morris (2010) found that specific outcome praise (e.g., “That was a good drawing!”) encouraged mastery behaviors, while generic outcome praise (e.g., “That’s cool!”) promoted helplessness. Furthermore, Xu et al. (2024) suggest that a balance between process and person praise may enhance self-efficacy and mastery motivation. When process praise slightly outweighed person praise, children demonstrated greater persistence during tasks, highlighting the benefits of a balanced praise approach. Understanding the fine balance between praise types and their developmental impacts can help refine strategies that promote healthy psychological and cognitive growth in children.

Regarding efforts to promote positive child development, these findings could inform parent education programs, equipping parents with praise strategies that foster persistence and resilience in their children. Finally, creating environments that promote children's mastery motivation may reinforce the benefits of praise and support children's ongoing development. The insights from this research

can contribute to developing effective parenting strategies, emphasizing the importance of understanding different types of praise in encouraging children's persistence and resilience in the face of challenging experiences.

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Evaluating the Impact of Parental Praise on Children's Problem-Solving Persistence

REFERENCES

- Amemiya, J., & Wang, M. (2018). Why effort praise can backfire in adolescence. *Child Development Perspectives*, 12(3), 199–203. <https://doi.org/10.1111/cdep.12284>
- Brummelman, E., & Grapsas, S. (2020). Can praise contribute to narcissism in children? In Routledge eBooks (pp. 84–92). <https://doi.org/10.4324/9780429327667-13>
- Brummelman, E., Nelemans, S. A., Thomaes, S., & De Castro, B. O. (2017). When parents' praise inflates, children's Self Esteem deflates. *Child Development*, 88(6), 1799–1809. <https://doi.org/10.1111/cdev.12936>
- Brummelman, E., Thomaes, S., Overbeek, G., De Castro, B. O., Van Den Hout, M. A., & Bushman, B. J. (2013). On feeding those hungry for praise: Person praise backfires in children with low self-esteem. *Journal of Experimental Psychology General*, 143(1), 9–14. <https://doi.org/10.1037/a0031917>
- Egeland, B. (1982). *42-month teaching task code manual* (Unpublished manuscript)
- Goldin-Meadow, S., Hedges, L., Huttenlocher, J., Levine, S., Raudenbush, S., & Small, S. (2015). *Utterance boundaries. Language Development Project*. https://ldp-uchicago.github.io/docs/guides/transcription/sect_4.html?highlight=utterance
- Gunderson, E. A., Gripshover, S. J., Romero, C., Dweck, C. S., Goldin-Meadow, S., & Levine, S. C. (2013). Parent praise to 1-to 3-Year-Olds predicts children's motivational frameworks 5 years later. *Child Development*, 84(5), 1526–1541. <https://doi.org/10.1111/cdev.12064>
- Gunderson, E. A., Sorhagen, N. S., Gripshover, S. J., Dweck, C. S., Goldin-Meadow, S., & Levine, S. C. (2017). Parent praise to toddlers predicts fourth grade academic achievement via children's incremental mindsets. *Developmental Psychology*, 54(3), 397–409. <https://doi.org/10.1037/dev0000444>
- Harter, S. (1978). Effectance motivation reconsidered toward a developmental model. *Human Development*, 21(1), 34–64. <https://doi.org/10.1159/000271574>
- Lee, H. I., Kim, Y., Kesebir, P., & Han, D. E. (2016). Understanding when parental praise leads to optimal child outcomes. *Social Psychological and Personality Science*, 8(6), 679–688. <https://doi.org/10.1177/1948550616683020>
- Lucca, K., Horton, R., & Sommerville, J. A. (2019). Keep trying!: Parental language predicts infants' persistence. *Cognition*, 193, 104025. <https://doi.org/10.1016/j.cognition.2019.104025>
- Morris, B. J., & Zentall, S. R. (2014). High fives motivate: the effects of gestural and ambiguous verbal praise on motivation. *Frontiers in Psychology*, 5. <https://doi.org/10.3389/fpsyg.2014.00928>
- McCall, R. B. (1995). On definitions and measures of mastery motivation. In G. A. Morgan & R. H. MacTurk (Eds.), *Mastery motivation: Origins, conceptualizations, and applications* (pp. 273–292). Ablex.
- Mueller, C. M., & Dweck, C. S. (1998). Praise for intelligence can undermine children's motivation and performance. *Journal of Personality and Social Psychology*, 75(1), 33–52. <https://doi.org/10.1037/0022-3514.75.1.33>
- Robichaud, J., Grenier, F., Joussemet, M., & Mageau, G. A. (2022). The role of Descriptive and Non-Specific Outcome-Oriented praise in Child Self-Esteem: a multiphase, multimethod investigation. *Journal of Child and Family Studies*, 33(4), 1336–1348. <https://doi.org/10.1007/s10826-022-02449-0>
- Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, 48(2), 1–31. <https://doi.org/10.18637/jss.v048.i02>
- Sattler, J. M. (2008). *Assessment of children: Cognitive Foundations*. Jerome M. Sattler Publisher
- U.S. Census Bureau. (2007). *Current population survey: Annual social and economic supplement*. <https://www.census.gov/data/datasets/2007/demo/cps/cps-asec-2007.html>
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, 66(5), 297–333. <https://doi.org/10.1037/h0040934>

Evaluating the Impact of Parental Praise on Children's Problem-Solving Persistence

Xu, X., Mo, L., Pan, L., & Li, Y. (2023). The 'praise balance': Uncovering the optimal recipe for mastery motivation in preschoolers. *Journal of Applied Developmental Psychology*, 90, 101607. <https://doi.org/10.1016/j.appdev.2023.101607>

Zentall, S. R., & Morris, B. J. (2010). "Good job, you're so smart": The effects of inconsistency of praise type on young children's motivation. *Journal of Experimental Child Psychology*, 107(2), 155–163. <https://doi.org/10.1016/j.jecp.2010.04.015>