

# Achievement-Related Shame and Guilt in Elementary Students: A Pilot Study

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*Abstract: Children can experience shame or guilt in response to academic failure. However, most of the research on achievement-related shame and guilt has been conducted with adult learners. The implications these emotions may have for children's learning necessitates further research to understand achievement-related shame and guilt in young students. In this pilot study, I investigated whether (a) children feel increased shame and guilt after an academic failure, (b) these emotions were related to ability and effort, and (c) the relationships were mediated by perceptions of the cause's locus and controllability. While students did feel increased shame and guilt after a failure, the relationships between these emotions and students' cognitions about the causes of their failure differed from those found in research with adults. These findings suggest further research and theorizing is needed to understand students' feelings of achievement-related shame and guilt so educators and caregivers can promote young students' long-term success.*

*Keywords: academic achievement emotions, shame, guilt, elementary students*

## Introduction

Students feel a wide variety of emotions related to their education (Lichtenfeld & Stupnisky, 2013; Pekrun, 2005; Pekrun et al., 2002; Raccanello et al., 2013). Researchers and theorists have labelled emotions related to academic achievement outcomes or activities as academic achievement emotions (AAEs; Pekrun, 2006; Pekrun et al., 2002; Weiner, 1985). AAEs are linked to many factors important to student learning including students' motivation, academic effort, learning strategies, and academic achievement (Lichtenfeld et al., 2012; Lichtenfeld & Stupnisky, 2013; Pekrun et al., 2002). However, research on AAEs tends to focus on older learners, with research on elementary students' AAEs only emerging in the last decade (Lichtenfeld et al., 2012; Lichtenfeld & Stupnisky, 2013) even though early AAEs can affect future achievement (Forsblom et al., 2022).

## Attribution Theory

According to Weiner's attribution theory (1985), AAEs are elicited following a series of cognitions. Immediately after an achievement outcome occurs, the individual decides if it is a success or failure in terms of their personal goals. The individual then feels outcome-dependent emotions, which are general positive or negative emotional responses (e.g., happiness or sadness) to the outcome. Next, if the individual thinks that the outcome is surprising, important, or a failure, they will make a subjective decision about what they think caused the success or failure. This causal attribution elicits attribution-dependent emotions, which are more specific emotional responses to the outcome based on what the person thinks caused it. The attribution-dependent emotion that is felt depends on the individual's understanding of the cause's locus, stability, and controllability (Weiner, 1985). Locus refers to how internal or external the cause is to the individual. Stability refers to the extent to which the cause is stable or unstable over time. Controllability refers to the extent to which the individual can control the cause. Altogether, the person's perceptions of the cause's locus, stability, and controllability determine the emotion experienced.

## Shame and Guilt

Shame and guilt are two AAEs that may have important implications for students' motivation and behaviour. Although these emotion terms are sometimes used interchangeably, shame and guilt are distinct emotional experiences (Lindsay-Hartz, 1984; Tangney & Dearing, 2002; Tangney et al., 1996). Children experience shame and guilt as early as two to three years old and demonstrate a deeper understanding of these emotions around ages seven to nine (Kochanska et al., 2002; Lagattuta & Thompson, 2007). The two emotions become increasingly differentiated through middle childhood and adolescence (Tangney, 1998). Shame involves feeling small, having a negative view of one's whole self, being concerned with others' perceptions of oneself, and wanting to escape or avoid the situation or others (Lewis, 1971; Lewis, 2000; Tangney & Dearing, 2002). Guilt involves feeling regret, having a negative view of one's actions, being concerned with one's impact on others, and wanting to repair the situation (Lewis, 1971; Lewis, 2000; Tangney & Dearing, 2002). Generally, shame is associated with avoidance behaviours whereas guilt is associated with approach behaviours (Ferguson et al., 1991; Lewis, 2000; Tangney & Dearing, 2002). Thus, as AAEs, shame and guilt may impact whether students engage with educational material involved in their academic failures. This engagement may in turn impact later academic performance or learning,

making shame and guilt important AAEs for educators and caregivers to understand and support early in children's education. Indeed, post-secondary students' feelings of guilt after an academic failure predicted improved academic performance, whereas their feelings related to shame predicted worse academic performance (Covington & Omelich, 1984).

According to attribution theory, as AAEs, shame and guilt are attribution-dependent emotional responses to achievement failures (Weiner, 1985). Weiner states that shame is elicited when the individual thinks they failed because of an internal and uncontrollable cause, such as ability, whereas guilt is elicited when the individual thinks they failed because of an internal and controllable cause, such as effort. Weiner does not mention the cause's stability in his discussion of achievement-related shame and guilt. Instead, Weiner emphasizes that shame and guilt are mainly related to, and distinguishable by, the cause's controllability (Graham & Taylor, 2014; Graham & Weiner, 1986; Weiner, 1985, 2018). In line with Weiner's suppositions, researchers have found that adults' perceptions of the controllability of internal causes more strongly differentiates between shame and guilt than the stability of internal causes does (Tracy & Robins, 2006). Weiner (2018) also highlights that ability and effort are two common attributions for academic achievement outcomes, so students likely experience shame and guilt. Research with adult learners has supported that attributing academic failures to ability is associated with feelings of shame whereas attributing academic failures to effort is associated with feelings of guilt (Brown & Weiner, 1984; Covington & Omelich, 1984; Tracy & Robins, 2006; Weiner, 2018; Weiner et al., 1982).

### Children's Shame and Guilt

Although this research with adults supports attribution theory, the findings may not generalize to children due to developmental differences between children and adults. Children start to demonstrate adult-like understandings of shame and guilt around ages seven to nine (Lagattuta & Thompson, 2007). However, children's understandings of the locus and controllability of different causes, and the emotions they feel after evaluating a cause on these dimensions, change as they develop (Graham et al., 1984; Normandeau & Gobeil, 1998; Stipek & DeCotis, 1988). Furthermore, researchers have found that conceptions of ability and effort evolve with age, with children beginning to differentiate between ability and effort as distinct causes of outcomes around Grade 5 (Folmer et al., 2008; Nicholls, 1978; Nicholls & Miller, 1984). Thus, children may not feel shame and guilt when they attribute failures to ability and effort, potentially rendering attribution theory ineffective at explaining children's feelings of shame and guilt.

Some researchers have studied shame and guilt in elementary students. Using self-determination theory (Deci & Ryan, 2000), Heirweg and colleagues (2019) found that some children are motivated to do their schoolwork through introjected regulation, or avoidance of negative feelings like shame and guilt. Other work suggests feelings of shame can emerge for young students when they are grouped by ability and end up in a low-ability group (McGillicuddy & Devine, 2020). Yet, in terms of understanding children's experiences of shame and guilt as AAEs, the literature is limited. Researchers have found that, with children, shame and guilt tend to both be related to ability and effort attributions (Stipek & DeCotis, 1988; Stipek & Gralinski, 1991). However, the older the children are, the more likely they are to feel shame after attributing a failure to uncontrollable causes and feel guilt after attributing a failure to controllable causes (Graham et al., 1984; Stipek & DeCotis, 1988). Together, this research reinforces that children's understandings of shame, guilt, ability, and effort are still developing such that relationships among these variables may only become more distinct with age.

The research on children's feelings of achievement-related shame and guilt has several limitations. First, Graham and colleagues (1984) had children recall personal experiences of guilt rather than assessing in-the-moment, natural experiences of guilt, limiting external validity. Second, Stipek and DeCotis (1988) assessed students' inferences of emotions in another student rather than their own emotional reactions to achievement failures, limiting generalizability. Third, the researchers did not test whether the children's ratings of the locus and controllability of ability and effort explain the link between ability and effort attributions and feelings of shame and guilt, as would be expected under attribution theory (Stipek & DeCotis, 1988; Stipek & Gralinski, 1991). Finally, more contemporary studies have not yet been conducted. As emotion socialization and education has changed over time, children's ability and effort attributions may be more clearly linked to feelings of shame and guilt, respectively.

In sum, the studies on elementary students' AAEs of shame and guilt suggest that attribution theory may not be useful for understanding their feelings of shame and guilt in achievement contexts due to their level of development. However, to evaluate attribution theory's usefulness with elementary students, contemporary studies must assess students' in-the-moment feelings of shame and guilt, their causal attributions, and their perceptions of the cause's locus and controllability. Such research can indicate whether these AAEs in young students are worth further investigation or whether research with adult learners is sufficient.

## Research Questions

The current pilot study aims to investigate whether elementary students' academic failures are related to their feelings of shame and guilt, as well as whether students' thoughts about the failure explain their feelings of shame and guilt as expected according to attribution theory. Specifically, the following five research questions guided the current study:

1. Do students in middle childhood feel increased shame and guilt following an academic failure, and which emotion do they feel more of?
2. Is the extent to which students think they failed due to their ability related to the extent to which they report feeling shame?
3. Is the relationship between ability attributions and feelings of shame mediated by the extent to which students think their ability is internal and uncontrollable?
4. Is the extent to which students think they failed due to their effort related to the extent to which they report feeling guilt?
5. Is the relationship between effort attributions and feelings of guilt mediated by the extent to which students think their ability is internal and controllable?

## Methods

### *Participants*

In this pilot study, Grade 5 students were recruited from a large metropolitan area in Alberta. To best inform early strategies and interventions for supporting students' feelings of shame and guilt, it was determined that the youngest possible group of students should be recruited for this study. Grade 5 students were chosen based on the research reviewed above which suggests that at this age, children will likely have deeper understandings of shame and guilt and begin differentiating between ability and effort. These children were also expected to be able to follow along and respond to written measures. Overall, although conceptualizations of shame, guilt, ability, and effort are not fully developed by this age, Grade 5 students were deemed to be the best fit.

Participants were recruited using a two-pronged, non-random procedure. The first recruitment phase occurred at summer daycares and day camps. Information and caregiver consent forms were sent home with any children entering Grade 5 in the upcoming school year. After contacting 10 daycares and day camps, five forms were distributed and one participant was recruited. The second recruitment phase occurred in the winter at an elementary school. Forms were sent home with 53 students in Grade 5, and 26 students were recruited. All participants provided verbal assent to participate in the study, and their caregivers provided informed consent. Participants were only included if they could demonstrate an understanding of shame and guilt, which was assessed with a procedure used by Stipek and DeCotis (1988). Specifically, participants were asked if they knew what shame, guilt, and happiness meant. They were then asked to give an example of a time they felt that emotion. Happiness was included to prevent participants from guessing that the study was focused on shame and guilt and reduce potential for biased responding. If the recruited students did not know what shame or guilt meant, or if their example for either emotion involved a positively-valenced situation, they were not included in the study. One student did not demonstrate an understanding of shame and guilt, one student was withdrawn from the study at caregiver request, and one was unable to participate due to scheduling. Thus, the final sample included 24 students.

Participants self-reported their age and gender, and their caregivers reported participants' ethnicity and annual household income on a two-item questionnaire sent home with the consent forms. Participants had a mean age of

10.13 years. The majority reported being girls, being Caucasian, and having an annual household income over \$100,000. The complete demographics of the current sample are outlined in Table 1.

**Table 1**

*Demographics of Sample*

Variable	Frequency	
	%	<i>n</i>
Age		
10 years	87.5	21
11 years	12.5	3
Gender		
Girl	58.3	14
Boy	41.7	10
Ethnicity		
Caucasian	79.2	19
Multiethnic	12.5	3
First Nations, Métis, or Inuit	4.2	1
No response	4.2	1
Annual Household Income		
\$80,001 - \$90,000	4.2	1
\$90,001 - \$100,000	12.5	3
Over \$100,000	75.0	18
Prefer not to answer	8.3	2

*Note.* Age and gender were reported by the participant. Ethnicity and annual household income were reported by the consenting caregiver. *n* = number of participants.

***Procedure and Measures***

Data collection took place at the participants' daycare or school. Before beginning, participants were told about the study's general purpose and procedures. I implemented a pre-post design. I assessed the study's variables using single-item measures that were constructed based off past research (Stipek & DeCotis, 1988; Stipek & Gralinski, 1991). Items were piloted with another Grade 5 student not in this sample. First, participants were given a three-question pre-test asking them to rate their in-the-moment feelings of shame, guilt, and happiness on a scale from 1 (no shame/guilt/happiness) to 5 (a lot of shame/guilt/happiness). Following the pre-test, they were given a ten-item, researcher-constructed spelling test. After the participants completed the spelling test, the researcher took the test from the participants and pretended to mark it. All participants were then told they got four of the words correct to induce an experience of failure. The test was designed to be easy to minimize the extent to which participants would attribute their failure to the test's difficulty.

Participants were then given a 12-question post-test. The first question asked participants if they thought they had passed or failed the spelling test. All participants thought they had failed the spelling test, indicating the induction of a failure experience was successful. Next was a description of a child named Alex playing tag which demonstrated the concepts of causal attribution, locus, and controllability in age-appropriate language. To assess their causal attributions, the participants answered two questions indicating whether they thought spelling ability and effort on the spelling test were important reasons for their failure on a scale from 1 (not a reason) to 5 (a very important reason). To assess their perceptions on the locus of ability and effort, the participants indicated how much they thought their spelling ability and effort on the test were a part of them versus a part of other people or other things on a scale from 1 (totally part of other people or other things) to 5 (totally part of me). To assess their perceptions on the controllability of ability and effort, the participants indicated how much they thought their spelling ability and effort on the test was something they could change on a scale from 1 (I cannot change it at all) to 5 (I can change it completely). Participants then rated how much shame, guilt, and happiness they were feeling in the moment because of their mark on the spelling test. Finally, the participants were asked their age and gender.

After completing the post-test, participants were debriefed by being told the full aim of the study. They were also informed that the mark on the test was not accurate and the reason why deception was used. All participants re-assented to their participation in the study after debriefing.

### *Statistical Analyses*

Data was analyzed using IBM SPSS Statistics (Version 26). Research question 1 was answered using a paired t-test analysis. To answer research questions 2 and 4, Spearman's rank-order correlational analyses were conducted between the variables of (a) causal attribution to ability, (b) causal attribution to effort, (c) locus of ability, (d) locus of effort, (e) controllability of ability, (f) controllability of effort, (g) post-test feelings of shame, and (h) post-test feelings of guilt. Based on the correlational analyses, planned mediation analyses were not conducted to answer research questions 3 and 5. Analyses were run with 1000 bootstrap samples.

## **Results**

### *Feelings of Shame and Guilt*

On average, participants reported feeling more shame after experiencing the failure ( $M = 2.92$ ,  $SD = 0.97$ ) than before experiencing the failure ( $M = 1.33$ ,  $SD = 0.64$ ). The difference between these two means,  $-1.58$ , BCa 95% CI  $[-2.08, -1.09]$ , was significant,  $t(23) = -6.59$ ,  $p < .001$ , and represented a large effect size of  $d = -1.35$ . Similarly, participants reported feeling more guilt after experiencing the failure ( $M = 1.88$ ,  $SD = 0.95$ ) than before experiencing the failure ( $M = 1.25$ ,  $SD = 0.44$ ). The difference between these two means,  $-0.63$ , BCa 95% CI  $[-1.02, -0.24]$ , was significant,  $t(23) = -3.32$ ,  $p = .003$ , and represented a medium effect size of  $d = -0.68$ . Between these two feelings, participants reported feeling more shame than guilt after experiencing the failure. The difference between these two means,  $1.04$ , BCa 95% CI  $[0.64, 1.45]$ , was significant,  $t(23) = 5.35$ ,  $p = .001$ , and represented a large effect size of  $d = 1.09$ . To better understand the post-failure difference, pre-failure feelings of shame and guilt and post-failure attributions to ability and effort were also compared. Participants reported feeling more shame than guilt before experiencing the failure but the difference between these two means,  $0.08$ , BCa 95% CI  $[-0.13, 0.29]$ , was not significant,  $t(23) = 0.70$ ,  $p = .490$ . Lastly, participants reported attributing the failure more to their ability ( $M = 2.92$ ,  $SD = 1.06$ ) than to their effort ( $M = 2.79$ ,  $SD = 1.29$ ), but the difference between these two means  $0.13$ , BCa 95% CI  $[-0.33, 0.54]$ , was not significant,  $t(23) = .45$ ,  $p = .647$ .

### *Attribution Theory Relationships*

Results from the correlation analyses can be found in Table 2. Participants' post-test feelings of shame were positively and moderately correlated with both their attributions to effort and their post-test feelings of guilt. No other significant relationships emerged. As a result, mediation analyses were not conducted to answer questions 3 and 5.

**Table 2**  
*Spearman's Correlation Analyses*

Variable	1	2	3	4	5	6	7	8	9
1. Causal attribution to ability	-	[-0.25, 0.66]	[-0.57, 0.34]	[-0.44, 0.39]	[-0.38, 0.41]	[-0.06, 0.56]	[-0.24, 0.69]	[-0.54, 0.28]	[-.24, .70]
2. Causal attribution to effort	.27	-	[-0.26, 0.55]	[-0.47, 0.28]	[-0.31, 0.45]	[-0.24, 0.38]	[0.01, 0.82]	[-0.28, 0.60]	[-.63, .37]
3. Locus of ability	-.12	.16	-	[-0.29, 0.54]	[-0.18, 0.74]	[-0.10, 0.55]	[-0.38, 0.45]	[-0.70, 0.11]	[-.53, .33]
4. Locus of effort	-.04	-.09	.12	-	[-0.32, 0.60]	[-0.19, 0.73]	[-0.64, 0.17]	[-0.00, 0.19]	[-.50, .39]
5. Controllability of ability	.04	.09	.33	.16	-	[-0.26, 0.64]	[-0.17, 0.58]	[-0.54, 0.28]	[-.50, .18]
6. Controllability of effort	.24	.10	.23	.30	.16	-	[-0.35, 0.49]	[-.43, .35]	[-.69, .11]
7. Post-test feelings of shame	.29	.45*	.05	-.28	.23	.07	-	[.07, .82]	[-.65, .16]
8. Post-test feelings of guilt	-.15	.15	-.33	-.33	-.13	-.02	.49*	-	[-.53, .29]
9. Child-reported gender	.27	-.19	-.15	-.05	-.17	-.33	-.27	-.13	-

*Note.* Results based on 1000 bootstrap samples. Below the line: Spearman's correlation coefficient. Above the line: bias-corrected and accelerated 95% confidence interval.

\* $p < .05$ . \*\* $p < .01$ .

## Discussion

Compared to their pre-failure reports, participants reported feeling significantly more shame and guilt following their experience of the spelling test failure. Students reported large and moderate increases in these feelings, respectively. Students also reported feeling significantly more shame than guilt after the failure, but not before the test. Per attribution theory (Weiner, 1985), these differences should be accompanied by stronger attributions to ability than effort. However, these attributions did not significantly differ. Furthermore, the degree to which participants attributed their failure to ability was not significantly related to their post-failure feelings of shame. The degree to which participants attributed their failure to effort was also not significantly related to their post-failure feelings of guilt. Interestingly, the degree to which participants attributed their failure to effort was significantly related to their post-failure feelings of shame. Due to the lack of relationship between ability attributions and shame and between effort attributions and guilt, there was no relationship to be mediated by perceptions of locus and controllability.

These findings are unexpected based on attribution theory and research with adults, wherein ability attributions are related to shame and effort attributions are related to guilt (Brown & Weiner, 1984; Covington & Omelich, 1984; Tracy & Robins, 2006; Weiner, 1985; Weiner et al., 1982). However, the findings are somewhat consistent with research with children. Stipek and DeCotis (1988) found that, around 9 and 10 years old, children start to relate feelings of guilt more strongly to effort attributions than ability attributions but that, even around 12 to 13 years old, children still do not relate shame more strongly to ability attributions than effort attributions. Stipek and Gralinski (1991) similarly found that, even by junior high, children's reported feelings of shame are not related to their ability attributions for failure. Thus, the non-significant relationship between students' ability attributions and their post-test feelings of shame is not surprising. However, in contrast to previous research, effort attributions were related to feelings of shame but not feelings of guilt.

It is possible that attributions to ability and effort were not related to feelings of shame and guilt in ways consistent with attribution theory and research with adults because participants' conceptions of shame, guilt, ability, and effort are still developing around 10 and 11 years old (Folmer et al., 2008; Lagattuta & Thompson, 2007; Nicholls, 1978; Nicholls & Miller, 1984; Stipek & DeCotis, 1988). At this age, children are only starting to differentiate between ability and effort and inconsistently attribute outcomes to ability and effort (Folmer et al., 2008; Nicholls & Miller, 1984; Stipek & DeCotis, 1988). As well, they have just started to demonstrate adult-like understandings of shame and guilt within the last two to four years (Lagattuta & Thompson, 2007). It is also possible that participants could have mislabeled their feelings of guilt as shame, thus inflating the amount of reported shame and resulting in both a significant difference between post-failure feelings of shame and guilt and a significant relationship between shame and effort attributions.

## Implications

Although this study needs to be replicated and extended, two potential implications emerge from its results. First, Grade 5 students appear to experience increased feelings of shame and guilt after a failure in spelling. Educational practitioners and caregivers should be prepared to respond to these feelings in these young students. In particular, Grade 5 students may feel more shame than guilt following a spelling test failure. This finding is particularly important as shame is related to avoidance behaviours whereas guilt is related to approach behaviours (Ferguson et al., 1991; Lewis, 2000; Tangney & Dearing, 2002). It may be that, following a spelling failure, students' increased feelings of shame will leave them more likely to avoid the spelling material in the future. Educational practitioners and caregivers should be ready to recognize such behaviours. They can provide encouraging feedback emphasizing the importance of the students' effort rather than their ability so that students are not discouraged and are more likely to feel guilt over shame following failure. Even though there may not be a relationship between effort attributions and feelings of guilt in this sample of Grade 5 students, research with adults suggests this link will emerge as the students develop. Thus, such feedback in elementary school could influence students' emotions following failures as they mature by influencing the attributions they are likely to make. In turn, students may be more likely to approach the failed material rather than avoid it.

Second, attribution theory may not be well-suited for describing elementary students' academic achievement emotions of shame and guilt due to students' developing conceptions of shame, guilt, ability, and effort. As a result,

there is a need for theorizing and research on how we can understand and describe elementary students' emotional experiences following academic failures. Given that emotions are related to students' learning and academic achievement (Covington & Omelich, 1984; Lichtenfeld et al., 2012; Lichtenfeld & Stupnisky, 2013; Pekrun 2005, 2006; Pekrun et al., 2002), this research will be important for helping educational practitioners and caregivers respond to and support students' emotional experiences in a way that promotes student success.

### **Limitations and Future Directions**

This pilot study has provided several lessons. First, further research with larger sample sizes is needed to replicate results and generalize the findings. Knowing that culture can impact development and emotions (Yang & Wang, 2019), these future studies should include students from more diverse ethnic and socioeconomic backgrounds to examine whether these findings generalize to more diverse groups. Second, the current study used a pre-post design with no comparison group, and thus we cannot make causal conclusions from the results. Future researchers could conduct an experiment where one group of students fail the test while another group passes.

Third, all measures in this study were self-report and single-item measures. Using self-report measures has the potential to capture different biases and limitations (e.g., social desirability bias, participants' lack of self-insight) which can introduce measurement error (Paulhus & Vazire, 2007). Although self-report measures are important for assessing children's subjective experience of emotions, additional observational measures could be used to supplement self-report in future research. Furthermore, single-item measures may not adequately capture all aspects of a construct or may be too general. For example, asking participants how much shame they feel may be more general than asking participants how much they feel small and feel negatively about their wholistic selves. Unfortunately, there is a lack of measures assessing children's feelings of shame and guilt, causal attributions, and their conceptions of ability and effort. Future researchers could develop valid and reliable multi-item measures of these constructs.

Finally, as the current study was a pilot study, the findings leave space for future research to answer further questions. Additional inquiry could examine whether these results are consistent across different school subjects (e.g., math and science); how shame and guilt following failure is related to students' academic behaviours (e.g., studying); at what age attribution theory can be used to explain students' feelings following a failure; and whether other existing (or newly created) theories can be used to understand elementary students' AAEs.

### **Conclusion**

Congruent with attribution theory, the current pilot study found that Grade 5 students report experiencing increased feelings of shame and guilt following a spelling test failure and report feeling more shame than guilt. The rest of the study findings did not align with attribution theory, highlighting that research with adult learners is not sufficient for understanding young students' experiences of shame and guilt as AAEs. Taken together with previous literature, the current findings could be explained by the fact that Grade 5 students' conceptions of shame, guilt, ability, and effort are still developing and becoming differentiated. Educational practitioners and caregivers should be prepared to respond to feelings of shame and guilt in Grade 5 students after they have experienced an academic failure in spelling, and to anticipate avoidance behaviours. Additional research is needed to replicate these findings and may lead to the exploration and development of additional theories to help explain young students' feelings of shame and guilt following an academic failure.

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## REFERENCES

- Brown, J., & Weiner, B. (1984). Affective consequences of ability versus effort ascriptions: Controversies, resolutions, and quandaries. *Journal of Educational Psychology, 76*(1), 146–158. <https://doi.org/10.1037/0022-0663.76.1.146>
- Covington, M. V., & Omelich, C. L. (1984). An empirical examination of Weiner's critique of attribution research. *Journal of Educational Psychology, 76*(6), 1214–1225. <https://doi.org/10.1037/0022-0663.76.6.1214>
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268. [https://doi.org/10.1207/S15327965PLI1104\\_01](https://doi.org/10.1207/S15327965PLI1104_01)
- Ferguson, T. J., Stegge, H., & Damhuis, I. (1991). Children's understanding of guilt and shame. *Child Development, 62*(4), 827–839. <https://doi.org/10.2307/1131180>
- Folmer, A. S., Cole, D. A., Sigal, A. B., Benbow, L. D., Satterwhite, L. F., Swygert, K. E., & Ciesla, J. A. (2008). Age-related changes in children's understanding of effort and ability: Implications for attribution theory and motivation. *Journal of Experimental Child Psychology, 99*(2), 114–134. <https://doi.org/10.1016/j.jecp.2007.09.003>
- Forsblom, L., Pekrun, R., Loderer, K., & Peixoto, F. (2022). Cognitive appraisals, achievement emotions, and students' math achievement: A longitudinal analysis. *Journal of Educational Psychology, 114*(2), 346–367. <https://doi.org/10.1037/edu0000671>
- Graham, S., Doubleday, C., & Guarino, P. A. (1984). The development of relations between perceived controllability and the emotions of pity, anger, and guilt. *Child Development, 55*(2), 561–565. <https://doi.org/10.1111/j.1467-8624.1984.tb00316.x>
- Graham, S., & Taylor, A. Z. (2014). An attributional approach to emotional life in the classroom. In R. Pekrun & L. Linnenbrink-Garcia (Eds.), *International Handbook of Emotions in Education* (pp. 96–119). Routledge.
- Graham, S., & Weiner, B. (1986). From an attributional theory of emotion to developmental psychology: A round-trip ticket? *Social Cognition, 4*(2), 152–179. <https://doi.org/10.1521/soco.1986.4.2.152>
- Heirweg, S., De Smul, M., Devos, G., & Van Keer, H. (2019). Profiling upper primary school students' self-regulated learning through self-report questionnaires and think-aloud protocol analysis. *Learning and Individual Differences, 70*, 155–168. <https://doi.org/10.1016/j.lindif.2019.02.001>
- Kochanska, G., Gross, J. N., Lin, M., & Nichols, K. E. (2002). Guilt in young children: Development, determinants, and relations with a broader system of standards. *Child Development, 73*(2), 461–482. <https://doi.org/10.1111/1467-8624.00418>
- Lagattuta, K. H., & Thompson, R. A. (2007). The development of self-conscious emotions: Cognitive processes and social influences. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp. 91–113). The Guilford Press.
- Lewis, H. B. (1971). Shame and guilt in neurosis. *Psychoanalytic Review, 58*(3), 419–438.
- Lewis, M. (2000). Self-conscious emotions: Embarrassment, pride, shame, and guilt. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (2nd ed., pp. 623–636). The Guilford Press.
- Lichtenfeld, S., Pekrun, R., Stupnisky, R. H., Reiss, K., & Murayama, K. (2012). Measuring students' emotions in the early years: The achievement emotions questionnaire-elementary school (AEQ-ES). *Learning and Individual Differences, 22*(2), 190–201. <https://doi.org/10.1016/j.lindif.2011.04.009>
- Lichtenfeld, S., & Stupnisky, R. H. (2013). Elementary school students' achievement emotions: Influences of gender and relations to motivation and achievement. In L. Zhang & J. Chen (Eds.), *Academic achievement: Predictors, learning strategies, and influences of gender* (pp. 33–62). Nova Science.
- Lindsay-Hartz, J. (1984). Contrasting experiences of shame and guilt. *The American Behavioral Scientist, 27*(6), 689–704. <https://doi.org/10.1177/000276484027006003>
- McGillicuddy, D., & Devine, D. (2020). ‘You feel ashamed that you are not in the higher group’: Children's psychosocial response to ability grouping in primary school. *British Educational Research Journal, 46*(3), 553–573. <https://doi.org/10.1002/berj.3595>
- Nicholls, J. G. (1978). The development of the concepts of effort and ability, perception of academic attainment, and the understanding that difficult tasks require more ability. *Child Development, 49*(3), 800–814. <https://doi.org/10.1111/j.1467-8624.1978.tb02383.x>
- Nicholls, J. G., & Miller, A. T. (1984). Reasoning about the ability of self and others: A developmental study. *Child Development, 55*(6), 1990–1999. <https://doi.org/10.2307/1129774>

- Normandeau, S., & Gobeil, A. (1998). A developmental perspective on children's understanding of causal attributions in achievement-related situations. *International Journal of Behavioral Development, 22*(3), 611–632. <https://doi.org/10.1080/016502598384298>
- Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 224–239). The Guilford Press.
- Pekrun, R. (2005). Progress and open problems in educational emotion research. *Learning and Instruction, 15*(5), 497–506. <https://doi.org/10.1016/j.learninstruc.2005.07.014>
- Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practices. *Educational Psychology Review, 18*(4), 315–341. <https://doi.org/10.1007/s10648-006-9029-9>
- Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist, 37*(2), 91–105. [https://doi.org/10.1207/S15326985EP3702\\_4](https://doi.org/10.1207/S15326985EP3702_4)
- Raccanello, D., Brondino, M., & De Bernardi, B. (2013). Achievement emotions in elementary, middle, and high school: How do students feel about specific contexts in terms of settings and subject-domains? *Scandinavian Journal of Psychology, 54*(6), 477–484. <https://doi.org/10.1111/jop.12079>
- Stipek, D. J., & DeCotis, K. M. (1988). Children's understanding of the implications of causal attributions for emotional experiences. *Child Development, 59*(6), 1601–1616. <https://doi.org/10.2307/1130674>
- Stipek, D. J., & Gralinski, J. H. (1991). Gender differences in children's achievement-related beliefs and emotional responses to success and failure in mathematics. *Journal of Educational Psychology, 83*(3), 361–371. <https://doi.org/10.1037/022-0663.83.3.361>
- Tangney, J. P. (1998). How does guilt differ from shame? In J. Bybee (Ed.), *Guilt and children* (pp. 1–17). Academic Press.
- Tangney, J. P., & Dearing, R. L. (2002). *Shame and guilt*. The Guilford Press.
- Tangney, J. P., Miller, R. S., Flicker, L., & Barlow, D. H. (1996). Are shame, guilt, and embarrassment distinct emotions? *Journal of Personality and Social Psychology, 70*(6), 1256–1269. <https://doi.org/10.1037/0022-3514.70.6.1256>
- Tracy, J. L., & Robins, R. W. (2006). Appraisal antecedents of shame and guilt: Support for a theoretical model. *Personality and Social Psychology Bulletin, 32*(10), 1339–1351. <https://doi.org/10.1177/0146167206290212>
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92*(4), 548–573. <https://doi.org/10.1037/033-295X.92.4.548>
- Weiner (2018). The contributions of an attribution approach to emotion and motivation. *Polish Psychological Bulletin, 49*(1), 3–10. <https://doi.org/10.24425/119466>
- Weiner, B., Graham, S., & Chandler, C. (1982). Pity, anger, and guilt: An attributional analysis. *Personality and Social Psychology Bulletin, 8*(2), 226–232. <https://doi.org/10.1177/0146167282082007>
- Yang, Y., & Wang, Q. (2019). Culture in emotional development. In V. LoBue, K. Pérez-Edgar, & K. A. Buss (Eds.), *Handbook of emotional development* (pp. 569–593). Springer Nature Switzerland.

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