Received: 7 August 2023 | Accepted: 5 April 2024

DOI: 10.1111/bjep.12685

the british psychological society
promoting excellence in psychology

ARTICLE

How mothers talk to their children about failure, mistakes and setbacks is related to their children's fear of failure

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Abstract

Background: Many people fear failure and making mistakes. This fear can be transmitted from parents to children, suggesting that parental communication regarding failures and setbacks may play a critical role in shaping a child's perception of mistakes.

Aims: In this study, we investigated how everyday parent-child conversations about setbacks influence children's fear of making mistakes.

Sample: Drawing on the large pre-birth Growing Up in New Zealand cohort, we focused on a sub-sample of 231 mother-child dyads who engaged in a recorded conversations about a "recent disappointment or setback" when the children were 8 years old.

Method: Conversations between mothers and children about the recent disappointments were coded to identify whether parents recognised or acknowledge their child's emotional response, if action plans were discussed, and the types of resources that the child could draw on. The children also completed a questionnaire about their global self-worth and their fear of making mistakes.

Results and Conclusions: The discussion of clear action plans, in the absence of a discussion about collaborative resources, was found to be associated with an increased fear of making mistakes among children. Conversely, when mothers clearly acknowledged their child's emotions and discussed ways to work collaboratively with their child on

future problems, there was a notable decrease in the child's fear of mistakes. However, it is noteworthy that many mothers in our study either minimally acknowledged or dismissed their child's emotions(40%), rarely discussed action plans (55%), or collaborative resources (79%)when discussing the recent setback.

KEYWORDS

errors, goals, growing up in New Zealand, parents, parent–child conversations, resilience, self-worth

INTRODUCTION

Fear of failure and of making mistakes

Research has shown that a fear of failure and an aversion to making mistakes, commonly found in people with perfectionism (Frost et al., 1990), can prompt the adoption of avoidance-oriented achievement motives which affect the tasks people choose, their effort and persistence, intrinsic motivation and overall well-being (e.g. Elliot & Thrash, 2004). In children, this fear is often described as relational, rooted in a strong desire to evade feelings of shame and a desire to feel loved (McGregor & Elliot, 2005). Notably, this fear is believed to be socialized and is associated with parents having high expectations of their children and giving their children negative feedback on failures and neutral responses to their successes (Teevan, 1983). Fear of failure also often spans multiple generations (Elliot & Thrash, 2004), highlighting the importance of understanding how parents communicate about failure and mistakes to their children, and how they can offer constructive guidance and support in handling such situations in the future.

Pedagogical benefits of failure moments and some challenges for our self-worth

Experimental and classroom-based research is increasingly highlighting the potential benefits of making and responding to failure moments (mistakes, errors and failures) for promoting knowledge retention, deeper understanding, problem-solving skills and self-regulation (Mera et al., 2022; Metcalfe, 2017; Wong & Lim, 2019; Zhang & Fiorella, 2023). As a result, there is a growing recognition of the need to support the identification of these failure moments, promote learning environments that intentionally engage with them and encourage quality reflection and the deep exploration of viable solutions (Kapur, 2015; Pan et al., 2020; Tawfik et al., 2015). However, while conversations about how to create such error friendly learning environments are increasingly being explored in educational and organizational contexts (e.g. Gartmeier et al., 2008; Soncini et al., 2021), less attention has been given to how parents can support their children's failure moments within their day-to-day conversations with their child.

Getting individuals to attend to and respond effectively to failure moments is challenging (Ecker et al., 2022; Pan et al., 2020). The process of gaining insights from mistakes and failures is typically more complicated and less direct than learning from successes (Eskreis-Winkler & Fishbach, 2022). Furthermore, a significant challenge in addressing failures is the negative impact that dwelling on these moments can have on our self-esteem. This phenomenon is captured by Covington's self-worth theory (Covington & Berry, 1976) which has at its core, people's natural inclination to protect their self-worth. This instinct also forms the basis of Covington's Needs Achievement Model (Covington, 2009; Covington & Dray, 2002). This model suggests people are driven by the dual motivations of avoiding

failure and seeking success. For example, individuals who are success-oriented and failure-avoidant (referred to in the model as over-strivers) are primarily motivated to succeed in order to avoid failure. While these individuals tend to be successful in what they do, they often show higher levels of anxiety, have low perceptions of control and have unstable self-esteem (see Martin & Marsh, 2003 for a review). Given the features of this learning profile, it is perhaps not surprising that studies have found that when the threat to the ego or self-esteem is reduced, learning from errors has been found to improve (e.g. Eskreis-Winkler & Fishbach, 2019).

Considering the numerous challenges associated with responding to failure moments and the potential negative impact on self-worth, it is important for parents and educators to create supportive environments where children can discuss errors and mistakes and learn strategies to manage them that do not lower their self-worth. By fostering such environments, parents can encourage children to view failures as opportunities to try something different next time, rather than see them as threats to their self-worth. This can help develop 'optimistic learners' who are defined as highly success-oriented and low in failure avoidance (Martin et al., 2001).

Parent–child reminiscing about past failure moments

Research on the structure and content of parent–child conversations about past events, known as reminiscing, has been consistently linked to children's cognitive and socio-emotional development. Parents talk with their children about the past from the early toddler years and do so frequently (dozens of times each day) about a range of topics (Harris et al., 2017). Discussions of past experiences have been found to direct or guide children's future decision making, problem solving and learning, as well as help children to scaffold the regulation of emotions and behaviours (Goodvin & Rolfson, 2014; Goodvin & Romdall, 2013; Hernandez et al., 2018) and shape their developing sense of self (Fivush, 2007).

While previous research has been conducted on parent and child reminiscing on negative emotional events (most often with pre-schoolers), these negative events have typically been related to specific emotions (angry, sad and scared; Oppenheim et al., 2007) or topics such as injury or pain (Pavlova et al., 2020), health issues (Sales & Fivush, 2005), parent separations, conflict (Brumariu & Kerns, 2015) or stressful events (Abel et al., 2020). To our knowledge, this is the first study to investigate parent–child reminiscing about setbacks in relation to children's approach to an important aspect of learning: their fear of making mistakes.

Managing emotions and promoting self-worth

Reminiscing research has highlighted how discussion of negative events in particular can provide children with opportunities to explore a wide range of emotions, their causes and consequences, as well as different coping mechanisms (Fivush et al., 2003). The strategies parents use vary, ranging from helping children to identify their emotions and reframe perceptions, emphasizing positive aspects, or employing techniques such as suppression, dismissal or disengagement (Bird & Reese, 2006). The use of these different strategies to manage emotions has implications for children's developing sense of self-worth and well-being. For example, Reese et al. (2007) found that mothers who acknowledged and explained their 5- to 6-year-old child's past negative emotions (a time the child felt sad, scared and angry) and explained and confirmed their child's past positive emotions (a time the child felt happy), had children with higher self-worth as measured by the Harter's (1982) global self-worth scale.

Research has also found that mothers often have different emotional conversations with their child depending on their child's characteristics. For example, Brumariu and Kerns (2015) found that mothers of more anxious children were more likely to try and control their child's emotional state by invalidating it or constraining their child's emotional expression.

Therefore, the nature of parent–child conversations about past events, particularly those involving negative experiences, plays a potentially pivotal role in guiding children's cognitive and emotional processes. Through these interactions, parents have the opportunity to assist their children in identifying and managing emotions, as well as helping them to construct positive self-perceptions and views of themselves as learners. This, in turn, can have a profound impact on a child's self-esteem and sense of self-worth. Such dialogues likely also contribute to children's emotional responses to mistakes. As Fivush et al. (2003, p. 179) aptly stated, 'it is through our subjective perspective on our past that we define ourselves in the present'. This emphasizes the potentially powerful influence that reminiscing can have on a child's developing self-concept and their emotional resilience.

Making action plans and identifying resources can give a sense of control

In this study, we also draw on Ajzen's Theory of Planned Behaviour (Ajzen, 1991) which offers insights into some of the factors that drive human behaviour, making it a useful framework to consider when thinking about strategies that might support children in managing and responding to setbacks. In particular, the model highlights the importance of perceived control and intentions for driving behaviours.

Parent–child conversations about past setbacks and discussions about what could be done differently next time can be challenging. Drawing on Ajzen's theory, Gollwitzer's (1993) research reminds us that merely setting a new goal after a setback and holding a strong intention to achieve it (often referred to as 'a state of willing') may prove inadequate without including 'a state of planning'. Researchers contend that, alongside establishing the goal, it is essential to create an implementation intention—a detailed action plan that specifies when, where and how the goal will be pursued in advance (Gollwitzer & Sheeran, 2006).

In addition, Ajzen's (1991) theory emphasizes the importance of identifying resources that support the achievement of a person's goals, as these resources contribute to a person's perception of control over the outcome. These perceived control beliefs are shaped by our own experiences of whether something is easy or hard, and also by societal norms and what we have heard or learned from others, such as our parents.

Given that children often rely on parental explanations to make sense of negative and challenging events in their lives (Miller & Johnston, 2019), it seems that conversations about past setbacks which discuss concrete action plans and the resources that children could call on next time are likely to increase children's sense of control over their future outcomes, reducing their anxiety (Ajzen, 1991) and concerns about potential failures or mistakes.

Further, parents are well placed to hold conversations about the range of resources available to children, and can likely do so in culturally meaningful ways. As Ungar et al. (2013) notes, when developing children's resilience to setbacks, we need to do more than help them identify and navigate towards resources, the resources also need to be provided in culturally meaningful ways. This concept also aligns with Ajzen's theory of planned behaviour which highlights the importance of considering the impact of societal and cultural norms on our intentions and actions.

The current study

Considering that adaptively responding to failures and mistakes is a life skill that can foster learning and well-being, and that parents can play a critical role in shaping children's beliefs and attitudes towards mistakes and failure, it seems important to gain a deeper understanding of how everyday parent–child conversations about failures and setbacks influence children's perspectives and attitudes to mistakes and failures. In this study, we analyse 231 audio recordings of conversations mothers have with their 8-year-old children about a recent disappointment or setback and explore whether some of the features of these conversations are associationed with children's fear of making

mistakes. In addition, the level of the child's global self-worth was included in our analysis, as it likely affects the extent to which a child fears making mistakes in the first place, and potentially how much support and scaffolding mothers feel they need to provide during these conversations to promote a positive approach to setbacks.

Our study design and approach to analysis draws on two main fields of research. First, the reminiscing literature (e.g. Fivush, 2007; Fivush et al., 2003) which explores whether parental conversation styles while reminiscing about past negative experiences are associated with children's developing sense of themselves as a learner, and in this study, if it is associated with being a failure-avoidant learner who fears making mistakes. In line with the reminiscing literature, we also explore whether mothers' acknowledgement of children's emotional state within these conversations is important.

The second field of research we draw on is Ajzen's (1991) principles of the theory of planned behaviour, particularly the concepts of perceived behaviour control and implementation intention (Orbell et al., 1997). These concepts emphasize the importance of the identification of resources and concrete action plans in order to drive future behaviour change (Gollwitzer, 1993).

Overall, we hypothesized that when mothers (i) clearly acknowledge their children's emotions during their discussion, (ii) help create a clear action plan and (iii) identify resources children can draw on, these actions will be associated with their children reporting a reduced fear of making mistakes. We also posit that these conversational elements between mothers and children are not only interdependent, but collectively essential in reducing children's fear of errors, paralleling the notion that goals without specific plans may not sufficiently drive behaviour.

Finally, we also explore the relationship between global self-worth and children's fear of making mistakes. As noted above, researchers have found that a low fear of failure and reduced apprehension about making mistakes is associated with higher levels of global self-worth or self-esteem. Therefore, we also hypothesize that (iv) children with higher global self-worth would exhibit less fear of making mistakes and that children with different levels of global self-worth may require different parental supports.

In this study, to explore the effect of global self-worth, we employed Harter's (Harter, 2012) Global Self-Worth scale, a widely used tool in developmental studies. This scale captures children's general feelings about themselves and is based on the premise that a child's self-worth is influenced by a multitude of domains in their life. It also recognizes that self-worth is a dynamic construct shaped by a diverse array of experiences and perceptions and is therefore ideal for our study looking at mother–child conversations. The scale is argued to be appropriate for children in middle childhood, as by this age they have developed the cognitive ability to grasp abstract concepts about themselves, such as their overall traits and self-ideals, enabling them to articulate their overall sense of self-worth.

METHOD

Participants

This research drew on a sub-sample of data collected from the pre-birth growing up in New Zealand cohort (Morton et al., 2013). A random sample of 1404 8-year-old children (*M age* = 8.3 years) that took part in a recorded conversation with their mother, were selected for transcription and analysis (see Garnett et al., 2023; Swearingen et al., 2023). Of these, 231 mother–child dyads chose to have a conversation about a 'recent disappointment or setback such as a test or a sports game', which was the focus of this research. At birth, the mother identified 51% of the children as female, with the remaining identified as male. The age of the mothers ranged from 17 to 42 years at the child's birth and most of the families lived in areas with medium level deprivation (42%), with 27% coming from areas of high deprivation and 31% from low deprivation areas.

Demographics

Area deprivation was assessed using the New Zealand 2006 Index of Deprivation, an area-based measure that classifies the level of deprivation in distinct geographic regions throughout New Zealand-based on reported primary residence (Salmond et al., 2007). Scores on this index range from 1, indicating the least deprived areas, to 10, indicating the most deprived areas.

Measures

Fear of making mistakes

To assess fear of making mistakes, children indicated their agreement with the question, 'In the past seven days, I was afraid of making mistakes'. Response options were coded as 0 = *Never*, 1 = *Almost never*, 2 = *Sometimes*, 3 = *Often* and 4 = *Almost always*.

Global self-worth

Global self-worth was measured using a six-item subscale from the Harter (2012) Self Perception Profile for Young Children which, as noted above, is appropriate for children in middle childhood. Children are presented with a pair of statements, for example, 'Some kids are often unhappy with themselves' BUT 'Other kids are pretty pleased with themselves' and are asked to decide which statement is more like you. Once they have made that decision, they are asked to show if the statement they chose is 'sort of true for me' or 'really true for me'. This is then converted into a four-point response and a mean self-worth score is created. As the responses to this variable are known to be positively skewed (Harter, 2012), the variable was dichotomized so that those with a mean score of ≥3 represented those with high global self-worth and those <3 were categorized as having lower global self-worth (see Figure 4).

Mother–child conversation

Additional consent was given for audio recording of the mother–child conversations. In this sample, the conversation was between the mother and the child. These conversations were then transcribed verbatim with any identifying information removed.

Mothers and their children were asked, 'For the next activity, we would like you to talk with your child using these pictures as a prompt. You can just choose one of them to talk about. Just talk about it in the way you usually would, for as long as you usually would. There is no right or wrong way to talk'. The participants were then presented with three topics they could choose from, but only responses to the topic 'a recent time (child) didn't do as well as they wanted to (e.g. in a test or a sports game)' were analysed for this paper.

Coding

We used a deductive approach to our qualitative analysis. Guided by key concepts in the literature, we developed a coding scheme to assess mothers' recognition of their child's emotional response, whether an action plan or strategy for the future was discussed, and the types of resources that were discussed (e.g. child's, parent's or teacher's strength and skills that could be drawn on) to help manage the issue in the future. The coding scheme was then tested in a sub-sample to help refine or elaborate on our initial coding scheme and provide examples to guide the coding. A summary of our final coding categories is given in Table 1.

Two coders then coded 10% of the transcripts. The inter-rater reliability was assessed using an inter-class correlation (ICC) based on an absolute agreement, mixed model, and single-measure approach and yielded a value of .88, (see Syed & Nelson, 2015). For the coding of the remaining conversations, each

coder independently coded approximately half. To ensure continued reliability, the coders discussed any conversations they were uncertain about and collaboratively determined a final score for each. To prevent any deviation in coding standards over time (coding drift), the coders revisited and reviewed the initial subset of transcripts they had coded.

TABLE 1 Parental conversational features and their coding.

Construct	Categories	Modifications for quantitative analysis
Emotion response recognition-parent	1 = Dismissal. Parent recognizes the emotion, but it is dismissed, e.g. '*It was silly to feel that way*' or '*You're lazy*'. 2 = No recognition/acknowledgement. Parent and/or child do not mention emotion regarding the event, or discuss or acknowledge how the child was feeling after the event 3 = Slow or vague acknowledgement of emotion, and no validation. Vague conversation on how the child may have been feeling. Parent might ask how they were feeling, but do not sufficiently validate or take time to show they understand the child's emotional response. They may, for example, quickly change the topic. Examples: '*How were you feeling when that happened?*' followed by a general statement '*That's not good*' or '*Yeah*'. Or, '*You were feeling upset, yeah that's not good. Did you play with your friends?*' Parent assumes the child was feeling a certain way. For example, the parent may suggest an emotion to the child, but then move on, instead of asking the child about how they felt and validating the emotion. Example: '*You would have felt angry when that happened*' or '*Where you happy or sad?*' but with no further discussion. 4 = Clear/Immediate recognition of emotion: Key feature of this is the parent elaborating on the child's emotion. Parent may immediately acknowledge and validate the child's emotion(s) and indicate they understand. Or parent spends some time asking about the child's feelings, this may include following up questions e.g. '*What did being upset look like for you*' or '*How did it feel in your body when you got angry*' '*What do you normally do when you feel that way*'. If the child shares their emotion without the parent asking, the parent shows they are listening and then they validate the child's emotion and show they understand. Parent does not judge the child for the emotion, e.g. '*It's ok to feel upset*'. Parent may also ask if the child is still feeling the emotion.	Recoded into no or slow emotion Recognition (0) and clear emotion recognition (1) Codes 1–3 were recoded to 0 and code 4 was recoded as 1
Action plan	1 = No action plan. No statements/conversation on strategies or next steps 2 = Vague action plan. Vague suggestions offered on what could be done in the future Somewhat makes sense in context 3 = Clear action plan or moral of the story, e.g. '*What did you learn from the experience?*' Action plan strategy explicitly stated to achieve a different outcome in the future Goal should be one of the following: specific, measurable, actionable, realistic and or timely Example: Mother: '*Yeah, but if your team has got the ball and they're way up by the goals and you're on defence, so you're not even near the ball, but you're busy watching that other team, on the other field, how do you make sure you pay attention? What's something you could do?*' Child: '*Watch the ball and keep an eye on the ball*'.	Code 1 was recoded to 0 and kept as No Action plan. Codes 2 and 3 were combined and recoded as 1 representing an action plans (either vague or clear)

(Continues)

TABLE 1 (Continued)

Construct	Categories	Modifications for quantitative analysis
Resources	1 = None: No resources spoken about (internal, external or collaborative). 2 = Individual: Personal/individual qualities, strengths, and skills that are drawn on to help change the outcome of the event in the future Example Child: '*I can try harder*' '*I can keep pushing myself*' Example Parent: '*You can try harder*' '*You can run faster*'. 3 = External: Only resources outside of oneself such as a tutor, coach, family, teacher, peers that are drawn on to help change the outcome of the event in the future Example: 'what can I (parent) do for you' 'your teacher can help' 'what can dad and I do to make things easier' 4 = Collaborative: Internal and external resources are both mentioned to help change the outcome of the event in the future. Often will suggest an ongoing commitment to work together, rather than a one-off thing that could be done. For example, '*we can practice more at home*' '*we can get a tutor to help you with math problems*'. More statements which allow the child and parent to work together, where the parent can also be a support or help guide the child to use their internal and external resources	Due to low endorsement the external resources code was dropped from the analysis. The remaining resources were retained and coded as 1 (No resources), 2 (Internal resources) and 3 (Collaborative resources

Data preparation and analysis

Descriptive statistics of the conversational features and other predictor variables were run first. The categorical predictors were then inspected to ensure linearity with the outcome variable. Some of the conversational categories were aggregated to meet the statistical assumptions for regression analyses and maintain statistical power by avoiding small cell counts (see Table 1 for the modifications). While this reduction in the number of categories loses variance, it is important to ensure meaningful and robust analysis in small samples. A key advantage of aggregation is that it minimizes the number of categorical predictors in regression models, which allows for the exploration of more complex models within the constraints of the data. Further, if statistically significant results are found with less fine-grained categories, more detailed follow-up research can be conducted at a later point.

In the current study, only one category of responses was dropped from the analysis, namely the external resources category, because of a low response count. Conceptually, this category could not be merged with either the individual or collaborative resources variables in the analysis. The final set of aggregated/modified predictor variables (see Table 1) was also checked for multi-collinearity and no outliers were found, the normality of the residuals was also confirmed prior to running the regression analysis.

The linear regression predicting fear of making mistakes entered child gender as the first step as a control, and then added the conversational features and global self-worth as predictors. This was our base model. Due to the constraints imposed by the small sample size, the interactions between conversation features, as well as those between conversation features and global self-worth, were incorporated one at a time in an additional step beyond the base model. This stepwise approach was essential for managing the limited data available. Where significant interactions were found, these were further explored using moderation analysis with PROCESS macro in SPSS version 27 (Hayes, 2018). The PROCESS macro uses bias-corrected bootstrapping based on 5000 bootstrap samples with a 95% confidence interval (CI).

RESULTS

Use of different conversational features

The frequencies of the different mother–child conversation features, the distribution of global self-worth scores and the fear of making mistakes scores are given below in Figures 1–5. These findings suggest that, while dismissal of the child's emotion by mothers was rare (4.5%), the recognition of the children's emotion by mothers was often non-existent or slow (77%) (Figure 1). Action plans for the next time, the child encountered a setback were often not discussed (55%) or were vague (25%) (Figure 2), and resources were frequently not discussed (43%). If resources were discussed, they were mostly focused on what the individual child could do in the future if a problem arose again (37%) (Figure 3). As expected, global self-worth was heavily skewed, with 56% of the sample reporting a global self-worth score of three or more on a four-point scale (Figure 4). The majority of children (61%) never or almost never feared making mistakes in the last 7 days (Figure 5), but 14% reported having this fear always or often.

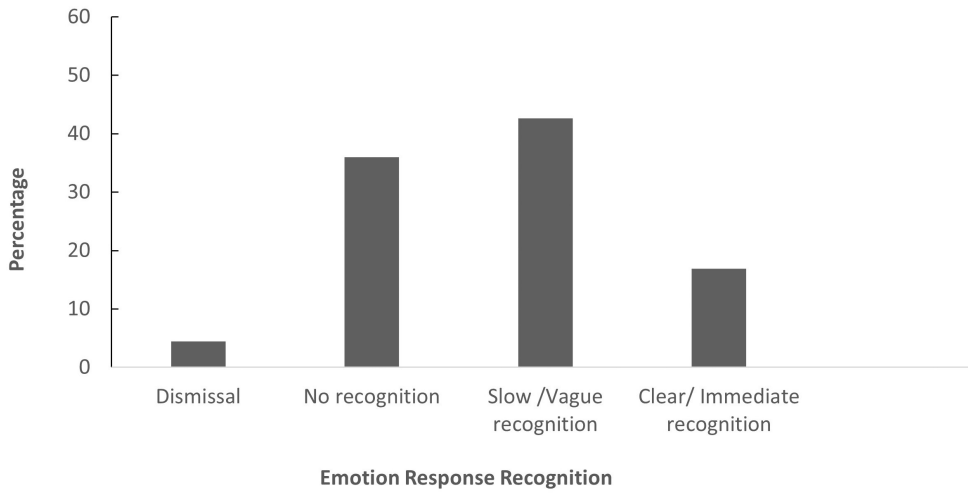

FIGURE 1 Conversations that included parental recognition of the child's emotional response.

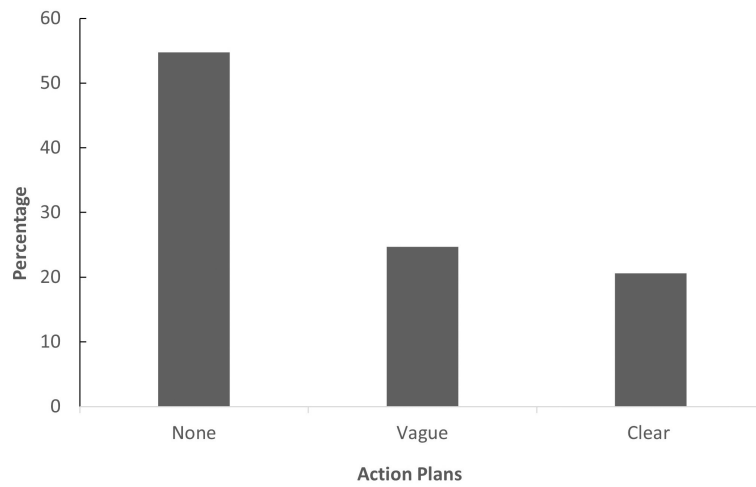

FIGURE 2 Conversations that included the different types of action plans.

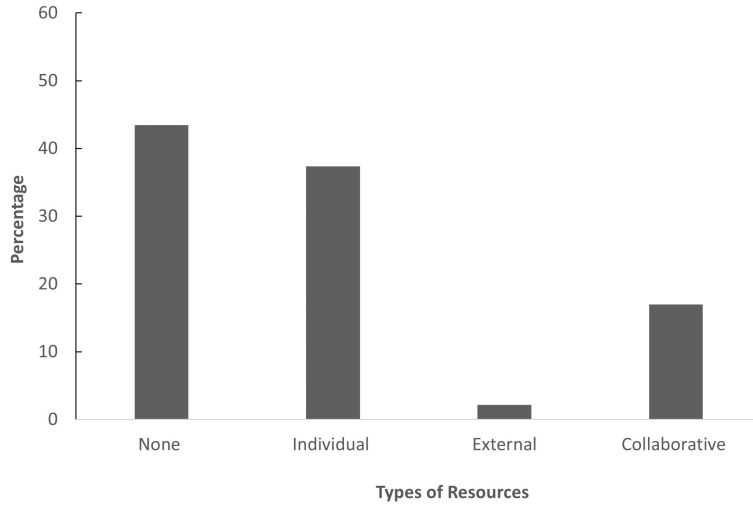

FIGURE 3 Conversations that included the discussion of different types of resources.

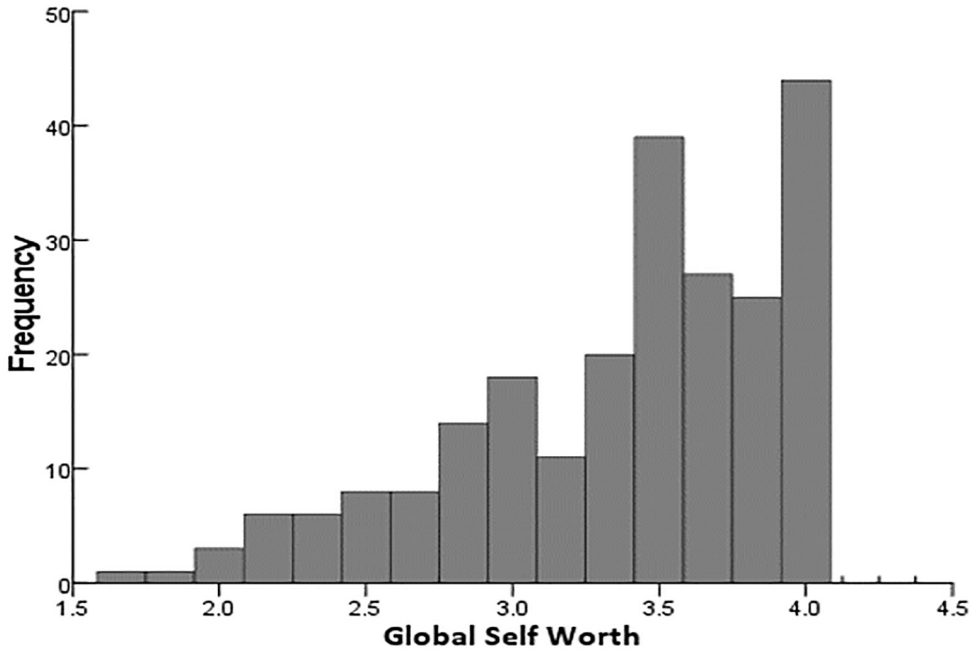

FIGURE 4 Distribution of global self-worth scores.

Global self-worth and conversational features associated with the fear of making mistakes

Linear regression was used to examine whether, when controlling for gender (Step 1), global self-worth and the different maternal conversational features (emotion recognition, action plans and types of resources) were associated with children's fear of fearing making mistakes (Step 2). The final model, shown in Table 2, accounted for 6.6% of the variance (Adjusted $R^2 = .040$, $F(6,218) = 2.55$, $p = .021$).

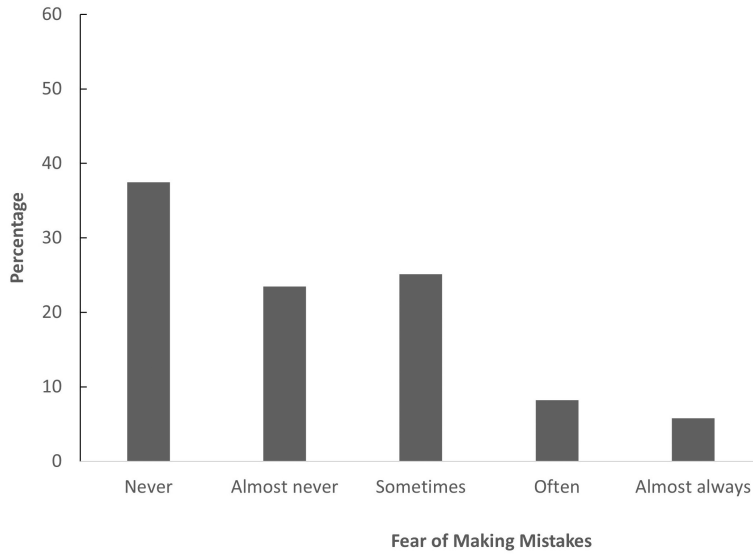

FIGURE 5 Percentage of children's reporting a fear of making mistakes in the last 7 days.

TABLE 2 Initial regression predicting the fear of making mistakes.

	B	SE	*β*	*t*	*p*	Lower CI	Upper CI	VIF
Child gender (girl)	0.12	0.16	0.05	0.76	0.45	−0.19	0.43	0.05
High global self-worth	−0.42	0.17	−0.16	−2.40	0.02	−0.76	−0.07	−0.16
Clear action plan	0.50	0.21	0.21	2.32	0.02	0.07	0.92	0.16
Clear emotion recognition	0.08	0.21	0.02	0.37	0.71	−0.33	0.49	0.03
Individual resources vs. none	−0.05	0.21	−0.02	−0.21	0.83	−0.47	0.38	−0.01
Collaborative resources vs. none	−0.28	0.28	−0.09	−0.97	0.33	−0.84	0.28	−0.07
Constant	1.28	0.19		6.78	<0.01	0.91	1.65	

As expected, global self-worth was significantly negatively associated with fear of making mistakes ($\beta = -.159$, $p = .017$) highlighting that high self-perception is associated with a lower fear of mistakes in children. Surprisingly, the presence of an action plan was significantly positively associated with an increased fear of mistakes ($\beta = .209$, $p = .021$), suggesting that taking a structured approach to tackling future setbacks may not ease children's fears of failure. Gender was not a statistically significant predictor of the fear of making mistakes in our model. Given the constraints of our small sample size, and that our study was also interested in exploring interaction effects between conversational features and global self-worth, we excluded gender from subsequent analyses. Excluding gender helped to minimize the risk of over fitting the more complex models and to manage the additional variance introduced by including interaction terms.

Next, we explored whether (i) a combination of conversational features and (ii) a combination of conversational features and global self-worth were related to children's fear of mistakes. Again, as the sample was small, we were unable to enter all the interaction terms at once into our model. Instead, eight separate regression analyses were run with the base model shown in Table 2 entered in Step 1 (without gender), and the different interaction terms added separately in Step 2. For the resources variable which had three levels (none, individual and collaborative resources) two dummy codes were created with 'no resources' as the reference category. Where appropriate, both interaction terms were then added to the models in Step 2. In keeping with the findings in Table 2, global

self-worth and action plans remained significant predictors in all the models with the interaction terms added.

In examining the interaction with conversational features, one statistically significant and one marginally significant interaction were found. The first was between clear emotion recognition and collaborative resources (vs. no resources) ($\beta = -.158$, $p = .012$) which led to a slight increase in the amount of variance explained (10.0%; Adjusted $R^2 = .071$). The second interaction was between action plans and collaborative resources (vs. no resources) ($\beta = -1.24$, $p = .098$) which also slightly increased the amount of explained variance to 7.6% (Adjusted $R^2 = .046$). No interactions were found between conversational features and global self-worth, suggesting that whether a child has high or low global self-worth, did not change whether the different conversational features relate to children's fear of mistakes. In addition, no interaction was found between emotion recognition and action plans, suggesting that whether the child's emotional state was recognized during the conversation did not change whether the discussion of an action plan affected the child's fear of making mistakes.

Exploring the moderating role of resources

To get a clearer understanding of the two interactions, we conducted moderation analyses using Hayes' PROCESS model, which enables the examination of conditional effects and simple slopes to explore the strength and direction of any effects found. Specifically, we explored whether the effect of (i) action plans and (ii) emotion recognition on a child's fear of mistakes changed depending on the different types (or levels) of resources discussed, while controlling for global self-worth.

Our first model, looking at whether resources moderated the effect of emotional recognition on the fear of mistakes, was statistically significant ($F(6,218) = 2.99$, $p = .008$) and explained 7.6% of the variance. Interestingly, apart from the global self-worth covariate, which continued to negatively predict a fear of failure ($\beta = -.512$, SE = .173, $p = .004$), no main effects were found for clear emotion recognition or individual and collaborative resources compared to discussing no resources. However, a statistically significant interaction was found between emotional recognition by mothers and collaborative resources (compared to no resources) and this was associated with a reduction in children's fear of making mistakes ($\beta = -1.66$, SE = .630, $p = .009$) suggesting a moderation effect at this level. A test of the highest order unconditional interactions indicated the model was significantly improved with the addition of the interaction terms (R^2-change = .038, $F(2,218) = 4.44$, $p = .013$).

Examining the conditional effects of emotion recognition for the three different types of resources revealed that only the slope of discussing collaborative resources had a significant negative effect on the fear of making mistakes ($\beta = -1.47$, $SE = .554$, $p = .008$). As shown in Figure 6, this indicates that clear maternal emotion recognition, when accompanied by a commitment to work collaboratively together to manage the setback, is associated with a decrease in children's fear of making mistakes.

Our second model, looking at whether resources moderated the effect of action plans on the fear of failure, was also found to be statistically significant ($F(6,218) = 2.984$, $p = .008$) and explained 7.6% of the variance. A main effect was found again for action plans ($\beta = 1.08$, $SE = .426$, $t = 2.52$, $p = .012$), again highlighting the direct correlation between action plans and a heightened apprehension about mistakes. Similarly, in keeping with previous analyses, we also found that global self-worth remained directly associated with a decreased fear of mistakes ($\beta = -.437$, $SE = .174$, $t = -2.52$, $p = .0125$), reinforcing its protective role.

The moderation analysis also revealed a marginally statistically significant interaction between action plans and collaborative resources in relation to the fear of making mistakes ($t = -1.68$, $p = .09$). Using Hayes' PROCESS Model allowed us to explore the conditional effects and simple slopes of the moderation effects across all the levels of the moderator, not just in binary terms. This helped us to speculate on how action plans might influence outcomes under different resource conditions, which might not be apparent through the examination of the interaction effect alone. Notably, we found a statistically significant conditional effect for the condition of no resources ($\beta = 1.076$, $SE = .426$, $t = 2.52$,

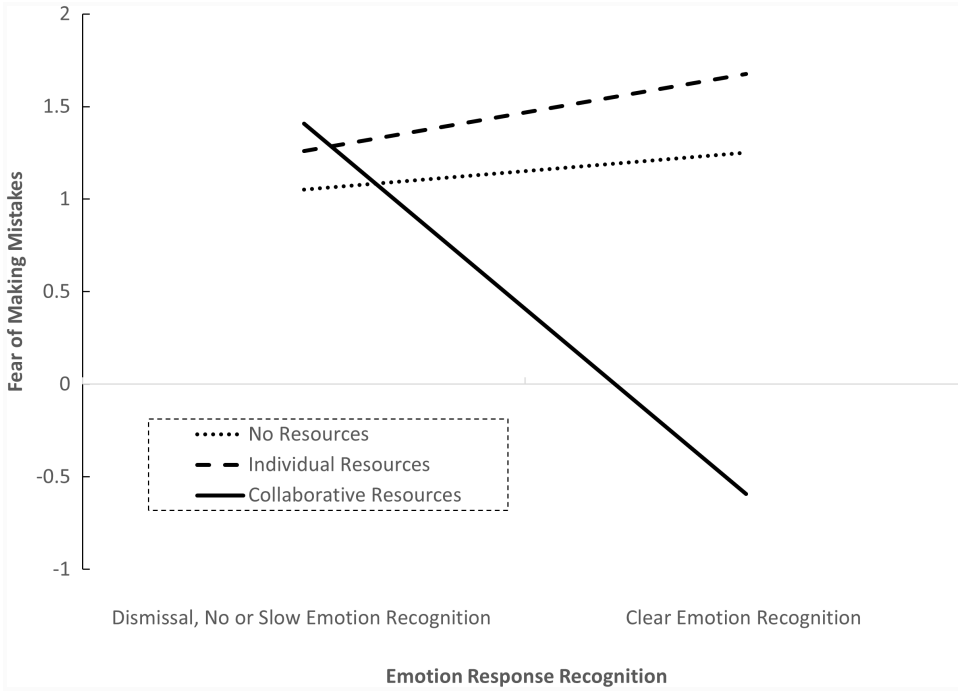

FIGURE 6 Conditional effects of emotion recognition on the fear of making mistakes for each type of resource.

$p = .012$). This suggests that the link between action plans and an increased fear of making mistakes is stronger in contexts where no resources are discussed. This finding is pivotal, revealing that, while the presence of action plans seems to correlate with a heightened fear of mistakes, this adverse effect predominantly manifests in environments lacking supportive resources. Figure 7 helps to visualize this finding, illustrating that action plans without resources, or with only individual child-focused resources, are associated with an increase in children's fear of mistakes. Conversely, integrating action plans with collaborative resources, where parents and children make plans to work together, appears to help mitigate the fear of mistakes. Although these insights are derived from a marginally significant moderation effect and should be interpreted with caution, they help us speculate on how the presence or absence of resources modulates the impact of action plans within parent–child conversations and suggest that a more complex process is at play than might first appear from only looking at the direct effects.

DISCUSSION

When parents talk with their children about setbacks or failure moments, they provide a scaffold from which their child can learn to manage future challenges and disappointments. Our findings suggest that conversations incorporating clear emotion recognition and action plans should be accompanied by a discussion of ideally collaborative resources, where parents talk to their child about what they can do *together* to solve or address the problem next time. If this approach is taken, children's fear of making mistakes will probably reduce.

However, our findings suggest that a considerable proportion of mothers in our research tend to either ignore or downplay their child's emotions (40%), infrequently engaged in discussing action plans (55%), or seldom mentioned collaborative resources (79%) during conversations about recent setbacks. These findings suggest that parent–child conversations about setbacks could be improved and that

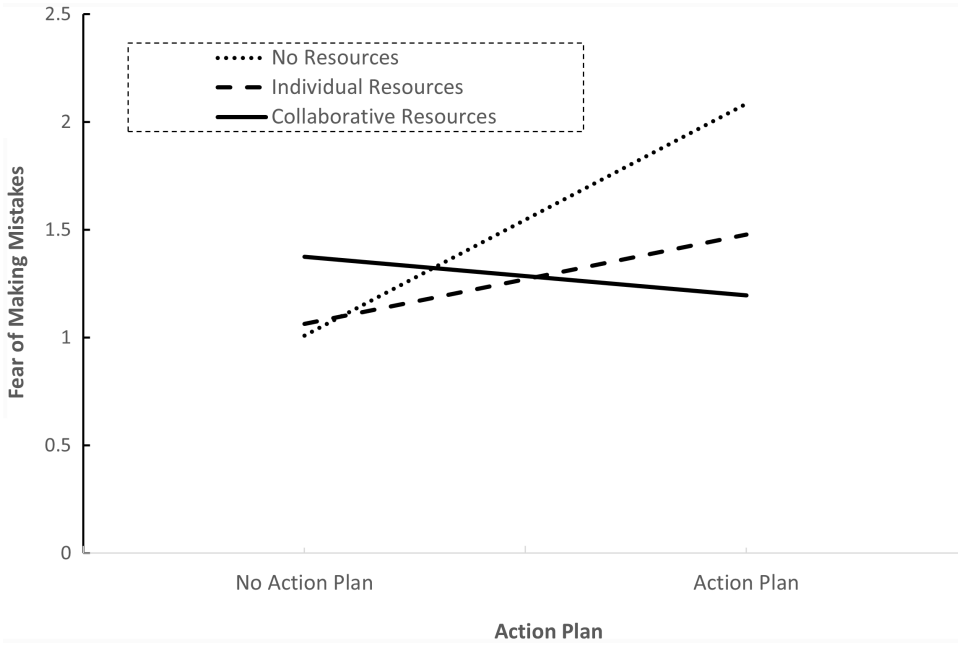

FIGURE 7 Conditional effects of action plans on the fear of making mistakes for each type of resource.

enhancing these interactions could promote more adaptive attitudes towards setbacks among children and help reduce their apprehension about making mistakes.

In our study, we hypothesized that mothers who clearly acknowledge and recognize their child's emotions would have children that report less fear of making mistakes. We found no evidence for this direct effect, and the significant interaction effect between clear emotion recognition and resources on children's fear of making mistakes suggests this effect is more nuanced. Specifically, our findings suggest that clear emotion recognition alone by mothers is not enough to reduce their children's fear of mistakes, Only when the resources discussed are collaborative, involving the mother and the child working together towards the outcome, did the clear recognition of the emotions result in a decrease in the child's fear of making mistakes. This finding highlights the importance of parents clearly showing empathy for their child's experience, as well as giving their child a sense that they are not alone in having to manage their situation if it happens again. These two factors in combination are most likely to help reduce children's fear of making mistakes. There are parallels to this finding within the reminiscing literature, where explanation and/or resolution of negative emotion are associated with child socioemotional outcomes, while simple attribution of emotion is not (Bird & Reese, 2006; Goodvin & Romdall, 2013).

Our second hypothesis that mothers who discuss action plans for managing future setbacks would have children who reported less fear of making mistakes was not directly supported. Indeed, initially, our findings seem to suggest that action plans were likely to increase children's fear of making mistakes. However, our subsequent moderation analysis suggested the unexpected main effect for action plans was predominantly being driven by a conditional effect of resources. Specifically, we found an increase in fear of mistakes only in scenarios where action plans were provided *without* the accompanying resources. This highlights the need for a comprehensive support framework when discussing setbacks with children, and emphasizes that if action plans are discussed, children also need to be made aware of the resources available to execute those plans if we want to mitigate children's fear of making mistakes. This finding is in keeping with Ungar's (2013) model of resilience that highlights the need to navigate (have a plan) to get to resources and for the resources to be available in meaningful and accessible ways. Our third hypothesis that discussion of resources would directly relate to a reduced fear of mistakes was not supported. However, as noted above, resources were a significant moderator of the other conversational features, suggesting that they play a key role in conversations about setbacks.

Our final hypothesis that global self-worth would be associated with a reduced fear of making mistakes was supported and is in keeping with Covington's self-worth theory. In this theory, individuals with high self-worth tend to believe in their abilities and this perception of competence is argued to provide a foundation for their self-assurance giving them the confidence to handle challenges and trust in their problem-solving skills, helping them to have fewer fears of making mistakes (Covington & Omelich, 1988). Our findings seem to be consistent with previous research which has found that individuals with a high global self-worth tend to adopt a mastery-oriented mindset, characterized by a focus on learning and improvement rather than on avoiding mistakes or failure (Dweck & Master, 2009). We also explored whether different conversation features might be more relevant depending on whether children had high or low global self-worth, but no interactions were found. This suggests that high global self-worth is associated with lower fear of making mistakes irrespective of the action plan, resources or clear emotion recognition given.

Another potentially interesting aspect of the study, especially given that the discussion of resources with children seems to be important, was that of those mothers who discussed resources (56%), most focussed this discussion on what the *child* could do next time, suggesting a bias towards encouraging self-reliance when dealing with setbacks. In contrast, only 2% of mothers exclusively mentioned external resources available to their child. Although the category of collaborative resources encompassed both child-related and external sources, it was less frequently mentioned with only 30% endorsing this category. A contributing factor to the low endorsement of external supports may be that mothers are less aware of alternative sources of support for their child, or they may avoid mentioning such supports due to the social stigma associated with seeking external support. However, these suggestions are only speculative and need to be further explored.

Summary

Our study aimed to understand whether everyday mother–child conversations about a recent failure or setbacks, along with children's base level of self-esteem, are associated with children's attitudes towards mistakes and failures. Recognizing the critical life skill of adaptively responding to failures, and the significant role parents play in shaping children's beliefs, our findings revealed effective discussions about setbacks go beyond simply recognizing and empathizing with a child's emotions. They also require the incorporation of action plans but in conjunction with a discussion of resources about how parents and children can work *together* on problems. When global self-worth is high, and these three conversational elements are effectively combined (action plans, collaborative resources and emotion recognition), our study's findings suggest children's fear of failing will probably reduce.

The fact that the combination of clear emotion recognition, action plans and the discussion of collaborative resources were associated with a lower fear of mistakes, but that many mothers did not use these conversation features, suggests that the conversations parents have with their kids about setbacks could be enhanced. It is, of course, not always feasible for parents to have in-depth conversations with their child about their setbacks. However, given our study found significant associations from analysing only one mother–child conversation, that in the most cases lasted no more than 5 min, this suggests that even occasional conversations that dedicate some time to meaningful discussions that reflect on past setbacks which offer children support and guidance could be beneficial in fostering resilience and positive attitudes towards setbacks and learning from mistakes.

Limitations

This study has several limitations that need to be kept in mind. It is important to note that the overall amount of variance in the fear of failure explained by these models was small (approximately 7%–10%), suggesting that other factors likely play a larger role in children's fear of making mistakes. In addition,

the interactions found were only marginally statistically significant, suggesting the need for these findings to be confirmed in a larger study. Nevertheless, a final sample of 226 dyads is considered large for reminiscing-based research study.

In addition, while our effects were small, it is likely that the impact of repeated discussions about setbacks and failures has a cumulative effect, shaping a child's self-concept and their identity as a learner. As these interactions accumulate, they will probably continue to influence how children perceive themselves, their abilities and their approach to learning and challenges. It will, however, be important to verify this and draw on future data collection waves from this longitudinal cohort as they become available to explore any long-term effects of these conversations on children's attitude to learning. Although not a pre-defined hypothesis of our original study, it is perhaps interesting to note that, while our final models only explained 7%–10% of the variance in children's fear of failure, when we regressed fear of failure on to *academic* self-concept in a post hoc analysis, we found fear of failure alone explained 21% of the variance in academic self-concept. Despite the exploratory nature of this additional finding, the insight is potentially valuable, as it suggests that interventions aimed at reducing fear of failure through constructive parent–child dialogue about past setbacks, could also be a meaningful avenue for improving students' academic self-concept.

Another limitation of this study was that our outcome variable was a single item. Single-item measures struggle to capture complex constructs. This can lead to a lack of depth and nuance in the data, potentially oversimplifying and/or overlooking subtleties. Furthermore, these measures are more susceptible to measurement error and may lack reliability, as the absence of multiple items to assess the same construct prevents the averaging out of random errors inherent in any measurement process. While large-scale longitudinal studies (such as this study) are often rich in their diversity of constructs measured, they frequently lack depth. However, these studies are useful for testing general ideas in large samples and for identifying trends that can be confirmed and explored in more focused studies.

The choice made by mothers and children in the study to focus on discussing recent setbacks, instead of the other subjects (recent minor injuries or social disagreement), may also pose a limitation in terms of the generalizability and representativeness of our findings. When discussing which conversation topic to discuss, it appeared that mothers and children chose recent scenarios that they could easily recall. However, their choice may also reflect a preference for discussing setbacks, potentially underrepresenting those who avoid such topics. Future research could consider random topic assignment to counteract possible sampling biases.

Another potential limitation is we could not control for the different types of setbacks discussed. The conversational task included a discussion of a range of setbacks from school tests to sporting losses, and further analysis to see if the results differ based on different contexts should be explored. Further, while there is evidence that the discussion of past negative events is especially important, as it is outside of the heat of the moment (Reese et al., 2007; Salmon & Reese, 2016), future research should also explore how parents support their children through a challenging setback as it unfolds. Future research should also consider how fathers' conversations about setbacks influence their children as they might display distinct reminiscing styles compared to mothers, as suggested by previous studies (e.g. Fivush & Zaman, 2015).

Despite this study's limitations, the identification of significant links between a single mother–child conversation about a recent setback and the child's fear of mistakes is noteworthy. This finding underscores the importance of how parents communicate with their children about setbacks, suggesting that these interactions matter.

AUTHOR CONTRIBUTIONS

Elizabeth R. Peterson: Conceptualization; methodology; investigation; writing – original draft; writing – review and editing; validation; visualization; software; formal analysis; project administration; supervision. **Tanvi Sharma:** Methodology; data curation. **Amy Bird:** Methodology; writing – review and editing. **Annette M. E. Henderson:** Methodology; writing – review and editing. **Varun Ramgopal:**

Data curation. **Elaine Reese:** Methodology; writing – review and editing. **Susan M. B. Morton:** Funding acquisition; methodology; writing – review and editing.

ACKNOWLEDGEMENTS

We are extremely grateful to all the families who participated in GUiNZ and created such a valuable database. We also thank the whole GUiNZ team. Growing up in New Zealand has been funded by the New Zealand Ministries of Social Development, Health, Education, Justice and Pacific Island Affairs; the former Ministry of Science Innovation and the former Department of Labour (now both part of the Ministry of Business, Innovation and Employment); the former Ministry of Women's Affairs (now the Ministry for Women); the Department of Corrections; the Families Commission (now known as the Social Policy Evaluation and Research Unit); Te Puni Kokiri; New Zealand Police; Sport New Zealand; the Housing New Zealand Corporation and the former Mental Health Commission, The University of Auckland and Auckland UniServices Limited. Other support for the study has been provided by the NZ Health Research Council, Statistics New Zealand, the Office of the Children's Commissioner and the Office of Ethnic Affairs. The study has been designed and conducted by the growing up in New Zealand study team, led by the University of Auckland. The authors acknowledge the contributions of the original study investigators: Susan M.B. Morton, Polly E. Atatoa Carr, Cameron C. Grant, Arier C. Lee, Dinusha K. Bandara, Jatender Mohal, Jennifer M. Kinloch, Johanna M. Schmidt, Mary R. Hedges, Vivienne C. Ivory, Te Kani R. Kingi, Renee Liang, Lana M. Perese, Elizabeth Peterson, Jan E. Pryor, Elaine Reese, Elizabeth M. Robinson, Karen E. Waldie and Clare R. Wall. The views reported in this paper are those of the authors and do not necessarily represent the views of the growing up in New Zealand Investigators. Open access publishing facilitated by The University of Auckland, as part of the Wiley - The University of Auckland agreement via the Council of Australian University Librarians.

CONFLICT OF INTEREST STATEMENT

The first author served as a guest editor for this special issue of the *British Journal of Educational Psychology* in which this paper appears. Although the first author held this editorial role, the review process for this particular paper was conducted entirely independently to ensure an unbiased evaluation. None of the authors have financial, consultative, institutional, or other relationships that might lead to a perceived conflict of interest regarding the content of this publication.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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How to cite this article: Peterson, E. R., Sharma, T., Bird, A., Henderson, A. M. E., Ramgopal, V., Reese, E., & Morton, S. M. B. (2024). How mothers talk to their children about failure, mistakes and setbacks is related to their children's fear of failure. *British Journal of Educational Psychology*, *00*, 1–19. https://doi.org/10.1111/bjep.12685