

Materials and Measures

Haimovitz, K., & Dweck, C. S. (2016). What predicts children's fixed and growth mindsets? Not their parent's views of intelligence But their parents' views of failure. *Psychological Science*.

Contains materials for:

- Study 1
 - Parent Surveys
 - Child Surveys
- Study 2
 - Parent Scenario
 - Parent Surveys
- Study 3a
 - Child Surveys
- Study 3b
 - Parent Surveys
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- Study 4
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 - Parent Scenario and Coding Scheme

Across all studies, all survey items were on a Likert-type scale from 1 (strongly disagree) to 6 (strongly agree) unless otherwise noted.

Study 1 Parent Survey

Intelligence Mindsets

From Blackwell et al., 2007

- You have a certain amount of intelligence, and you really can't do much to change it.
- You can learn new things but you can't really change how intelligent you are.
- No matter how much intelligence you have, you can always change it quite a bit.
- You can always greatly change how intelligent you are.

Failure Mindsets

Scale created by the authors.

- Experiencing failure enhances my performance and productivity.
- Experiencing failure facilitates my learning and growth.
- The effects of failure are positive and should be utilized.
- Experiencing failure debilitates my performance and productivity.
- Experiencing failure inhibits my learning and growth.
- The effects of failure are negative and should be avoided.

Emotion Mindsets

From Tamir, John, Srivastava, & Gross, 2007

- No matter how hard they try, people can't really change the emotions that they have.
- Ptoemo1

The truth is, people have very little control over their emotions. Ptoemo2

Personality Mindsets

From Chiu, Hong, & Dweck, 1997

No matter what kind of person you are, you can always change substantially.
You can always do things differently, but the important parts of who you are can't really be changed.

Perceptions of Child's Competence

From Frome & Eccles, 1998

Rate how competent your child is in each of the following subjects using the scale below.
1 (not at all good) to 6 (very good)
Math, Science, Social Studies, English

Education

Please indicate the highest educational degree you have obtained using the options below:

No degrees, a high school degree, college degree, post-graduate degree

Study 1 Child Survey

Intelligence Mindsets

From Cain & Dweck, 1995

How smart you are is something about you that you can't change very much.
You can learn new things, but you can't change how smart you really are.
You can always change how smart you are.
You're a certain amount smart, and you can't really do much to change it.

Achievement goals

From Patterns of Adaptive Learning Survey (Midgely et al., 1998)

Performance goals:

It's important to me that other students in my class think I am good at my class work.
One of my goals is to show others that class work is easy for me.
It's important to me that I look smart compared to others in my class.

Learning goals:

It's important to me that I learn a lot of new things this year.
One of my goals in class is to learn as much as I can.
It's important to me that I really understand my class work.

Perceived parent learning versus performance orientation

From Friedel, Cortina, Turner, & Midgley (2007)

My parents ask me how my work in school compares with the work of other students in my class.
My parents would be pleased if I could show that school is easy for me.

My parents would like it if I could show that I'm smarter than other students in my class.
My parents don't like it when I make mistakes in school.
My parents want me to understand school concepts, not just do the work.
My parents think how hard I work in school is more important than the grades I get.
My parents would like me to do hard work, even if I make mistakes.
My parents want me to understand homework problems, not just memorize how to do them.

Perceived parent autonomy-support vs. control

From Grolnick, Ryan, & Deci (1991):

My parents are usually interested in my point of view.
My parents aren't very sensitive to many of my needs. (reverse coded)
My parents let me to choose what to do whenever possible.
My parents let me to decide things for myself.
My parents insist on doing things their way. (reverse coded)

From Barber (1996):

My parents want to control whatever I do.
My parents would like to be able to tell me what to do all the time.
My parents, if I have hurt their feelings, talk to me less until I please them again.

Study 2 Scenario

Participants were given the scenario below. The grade level of the child was specified for some of the participants for reasons not central to the current paper. No differences were found between scenarios specifying different ages so analyses were thus collapsed across these scenario variations.

Next we want you to read a scenario. While reading, imagine you are the parent of this [4th/11th grade] student and that this really happened to your child; try to picture how you would feel and what you would think and do if it happened.

Your child starts a new calculus class at the beginning of his/her [4th/11th grade] year. S/he likes math and the teacher and thinks s/he knows the subject pretty well, so s/he studies a medium amount for the first quiz. Afterward, your child says that s/he thinks it went okay, even though there were some questions that were confusing. Then the class gets their quizzes back and your child brings it home. S/he only got a 54 - that's an F.

Study 2 Response Survey

Performance Oriented Responses

(ability attributions, pity, contingent self-worth, rumination, entity comfort)

I might worry (at least for a moment) that my child isn't good at this subject.
I'd consider whether my child had enough ability in this subject.
I'd feel sorry for my child.
I might feel a bit bad about myself as a parent.

I'd probably find myself dwelling on his/her performance.
I'd try to comfort my child to tell her it's okay if she isn't the most talented in all subjects.

Learning Oriented Responses

(process attributions, learning, mastery, help-seeking)

I'd think my child just didn't study hard enough.
I'd think my child didn't go about studying in the right way.
I'd encourage my child to tell me what she learned from doing poorly on the quiz.
I'd discuss how s/he can use these kinds of mistakes to really master this subject.
I'd let my child know that this is a great opportunity to learn this material well.
I'd discuss with my child whether it would be useful to ask the teacher for help.

Before the scenario and responses, we additionally asked parents to report on their intelligence mindsets, perceptions of their child's competence, and educational background as measured in study 1. Failure mindsets were also measured using the same items as in Study 1, but omitting the word 'my' (e.g., "Experiencing failure facilitates learning and growth").

Study 3a Parent Survey

Failure mindsets ($\alpha=0.78$) were assessed with the same measures used in Study 1, omitting the word 'my' (e.g., "Experiencing failure facilitates learning and growth"), and intelligence mindsets ($\alpha=0.88$) were assessed with a 2-item measure shortened for this survey:

You have a certain amount of intelligence, and you really can't do much to change it.
You can learn new things but you can't really change how intelligent you are.

Study 3a Child Survey

Perceptions of parents' failure mindset

My parents think failure is bad and should be avoided.
My parents think failure hurts my learning.
My parents think failure can help me learn.
My parents think failure can help me grow.

Perceptions of parents' intelligence mindsets

My parents think you can learn new things but you can't change how smart you really are.
My parents think how smart you are is something you can't change very much.
My parents think you can always change how smart you really are.

Study 3b Child Survey

Perceptions of parents' failure mindset (shortened for length)

My parents think failure is bad and should be avoided.
My parents think failure can help me learn.

Perceived academic competence

From Anderman & Midgley (1997)

Some of the work we do in school is too hard for me. (reversed)

Even if the work in school is hard, I can learn it.

If I have enough time, I can do even the hardest work in school.

No matter how hard I try, there is some class work I'll never understand. (reversed)

Children's intelligence mindsets, learning and performance goals, perceptions of parents' learning and performance orientations, and perceptions of parents' autonomy support versus controlling orientations were assessed with the same measures as study 1.

Study 4 Parent Manipulation

After reporting their intelligence mindsets and perceptions of their child's competences using the measures in Study 1, participants were randomly assigned to complete one of two questionnaires meant to temporarily manipulate their failure mindset.

Failure-is-debilitating biased questionnaire:

Experiencing failure can lead to negative feelings, like shame or sadness, that interfere with learning.

The effects of failure can be negative.

Experiencing failure can sometimes make it harder to learn new material.

Experiencing failure can slow down my productivity.

Failing should usually be avoided when possible.

Failure-is-Enhancing biased questionnaire:

Sometimes you can gain quite useful lessons from failing to achieve goals.

The effects of failure can be positive.

Experiencing failure sometimes helps me learn and grow.

Experiencing failure can improve performance in the long run if you learn from it.

You can often use your past failures to improve in the future.

Study 4 Parent Scenario and Coding Scheme

Text of Scenario Activity:

Parents, teachers, and adults often react differently to children's performance. We would like to know how you would react. Below are a few experiences that children and students might encounter. Please read each one and respond truthfully and thoughtfully to each. Your feedback will greatly help us to understand more about these important situations.

While reading, imagine you are the parent of this student and that this really happened to your child; try to picture how you would feel and what you would think and do if it happened.

Your child starts a new math class at the beginning of the year and really likes the subject and the teacher. S/he thinks s/he knows the material pretty well, so s/he studies a reasonable amount for the first test. Afterward, your child says that s/he thinks it went okay, even though there were some questions that were confusing. Then the class gets their tests back and your child brings it home. S/he only got a 54 - that's an F.

What would you say to your child? What would you do?

(Please respond with your immediate 'gut' reaction as if you were talking to the child, and then add as much detail as possible)

What would you think?

How would you feel as a parent?

Coding scheme for parent free responses to child failure scenarios

Blind raters gave a score of 1 in each category each time a code is present.

Two statements that repeated the same sentiment were not coded as two instances (e.g., "She really needs to try harder", "She really needs to put in more effort" would be 1 code for effort). However, two statements that express different ideas but fall under the same code were marked as two instances (e.g., "I would question my child to make sure that she studied the correct material thoroughly. I would ask to make sure that she was paying attention in class" were marked as two codes for strategies, as these statements represent different strategies). Similarly, an attribution of past performance due to lack of effort and a suggestion for future increases in effort constituted 2 codes for effort. Offering to go to the teacher for help and offering to get a tutor was similarly coded as 2 help seeking codes.

If there was a more specific code, only the more specific classification was counted. That is, while *Effort* and *Help-seeking* could be different types of strategies, they were only counted as Effort and Help-seeking, not also as strategies.

Label	Description	Example	Notes
Performance Orientation			
Ability	Mention of child's ability/intelligence, characterization of ability as stable	"I would think maybe my child is just not that good at math"; "math doesn't run in our family"	
Entity Comfort	Offering comfort for lack of ability; Low standards that imply lack of ability attribution	"It's ok that you got an F. You tried your best." I'd help them find other strengths	This can be implied with and 'its okay', etc., but not just comfort/warmth, it must be in context
Pity	Pity towards child, feel bad or sad for them	"I would feel a little nervous for my child because I know how hard it can be"	Not same as disappointment, anger, empathy, concern [may remove this – barely happens]
Contingent self-worth	Parent's sense of worth contingent on child's performance	"I'd feel like a failure as a parent"; "I'd feel bad about myself"; "ashamed"	
Grades	Focus on grades as a goal	"I tell my children in order to make good grades the key is to study"	Not just a reference to the scenario mention of the F
Social Compare	Goal or communication of comparing child to other children	"I would also want to know how the other children in the class scored"	
Learning Orientation			
Effort	Attributions of lack of effort, plan to put in more effort/study harder/more, practice	"I would tell my son he needs to study harder"	Do not include 'they tried their best' language
Strategy	Attributions or suggestions for ways of studying/working, revising study habits, listing specific study strategies	"he didn't study the material in the right way"; "I would also say that double checking your work before	

		you hand it in is a good habit to get into"	
Help Seeking	Telling child to get it from the teacher, going to teacher themselves, offering tutor help, or offering child help themselves	"I would get her a math tutor"	
Mastery	Mention of learning/mastery (as more important than grades), focus on understanding concepts, developing skills	"the important thing we need to do is try to understand the concepts behind the problems he got wrong"	
Interest	Mention goals to foster the child's intrinsic motivation, interest, enjoyment, engagement		
Failure Good	Explicit statement about how failure is good for learning/growth	"Figuring out our mistakes is fun! Lets party"	No instances of failure as bad
Other			
Ask Child	Does the parent ask the child what they think went wrong? Do they ask how the child thinks they did?		