<Project replication>

Experiment 4, which found a causal relationship between parents’ views of failure and their response to a hypothetical scenario in which their child came home with a failing grade.

Just like the original study, this replication study was also conducted online. Parents’ views of failure, as well as other information, was collected using an online Qualtrics survey. A biased, 5-item survey was included to manipulate participants’ views of failure, followed by an open-ended question that asked participants how they would react to the hypothetical scenario. Participants were parents with children of all ages, and they were recruited through an online recruitment platform called Prolific.

|  |  |  |
| --- | --- | --- |
|  | Original paper | First replication |
| Sample size | 131 | 113 |
| Sample characteristics |  |  |
| 1)Gender | Female (57%) | Female (49%),  Male (50%),  genderqueer, gender fluid, or non-binary (2%) |
| 2)Education | High school diploma or some college education (31%)  College degree (51%)  Postgraduate degree (18%) | No degrees (1%)  High school diploma (24%)  College degree (55%)  Post-graduate degree (19%)  Preferred not to answer (1%) |
| **3) Race/Ethnicity** | White (75%)  African American (12%)  Asian American (7%)  Hispanic (6%) | White (63%)  Black/African American (16%)  Asian (4%)  Hispanic, Latino or Spanish origin (17%)  Native Hawaiian or Other Pacific Islander (1%)  Filled in their own option (3%)  Preferred not to answer (1%) |
| **Crowdsourcing Platform** | Amazon’s Mechanical Turk Web | Prolific |
| Analysis | Unpaired, Two-Tailed T-Test | Unpaired, Two-Tailed T-Test |
| Exclusion | who were selected to participate in the current study if they reported in an initial survey that they were a parent. | Parents were only recruited.  The original paper did not mention whether participants were excluded, but in this replication study, I planned to exclude data from participants if the open-ended responses were not possible to code (e.g., unintelligible responses, responses such as “I don’t know.”). |
| Coder | Two people | One people |
| Result | Parents who were induced to hold a failure-is-debilitating mind-set were more likely to react with concerns about their child’s performance and lack of ability, t(131) = 3.246, p < .001, ηp2 = .075 … compared with those who were induced to hold a failure-is-enhancing mind-set. | The replication study showed similar trends to this original finding. The effect was not as large and there was no statistical difference in the number of performance-oriented responses between the two conditions, t(113) = -1.9291, p = 0.0562, ηp2 = .031. |
| **Exploratory Analysis Plan** |  | I also explored whether parents’ knowledge of mindset research was associated with their learning-oriented and performance-oriented responses.  The effects of child’s age were tested on key variables, namely parents’ scores on performance-oriented responses and learning-oriented responses. |

all survey items were on a Likert-type scale from 1 (strongly disagree) to 6

(strongly agree)

intelligence Mindsets (From Blackwell et al., 2007)

1). You have a certain amount of intelligence, and you really can’t do much to change it.

2). You can learn new things but you can’t really change how intelligent you are.

3). No matter how much intelligence you have, you can always change it quite a bit.

4). You can always greatly change how intelligent you are.

Failure Mindsets (Scale created by the authors.)

1). Experiencing failure enhances my performance and productivity.

2). Experiencing failure facilitates my learning and growth.

3). The effects of failure are positive and should be utilized.

4). Experiencing failure debilitates my performance and productivity.

5). Experiencing failure inhibits my learning and growth.

6). The effects of failure are negative and should be avoided.

Perceptions of Child’s Competence (From Frome & Eccles, 1998)

1). 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

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:**

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

2). The effects of failure can be negative.

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

4). Experiencing failure can slow down my productivity.

5). Failing should usually be avoided when possible.

**Failure-is-Enhancing biased questionnaire:**

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

2). The effects of failure can be positive.

3). Experiencing failure sometimes helps me learn and grow.

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

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

**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?

<1st replication study>

1. competence

A survey form with circles

Description automatically generated

intelligence Mindsets

A group of black circles with white text

Description automatically generated

[Please indicate how much **you** agree or disagree with the following statements]

**Failure-is-debilitating biased questionnaire:**

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

2). The effects of failure can be negative.

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

4). Experiencing failure can slow down my productivity.

5). Failing should usually be avoided when possible.

<or>

**Failure-is-Enhancing biased questionnaire:**

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

2). The effects of failure can be positive.

3). Experiencing failure sometimes helps me learn and grow.

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

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

**Manipulate the situation**

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.

A screenshot of a questionnaire

Description automatically generated

How there mind has changed.

Failure Mindsets (Scale created by the authors.)

Failure Mindset

1). Experiencing failure enhances my performance and productivity.

2). Experiencing failure facilitates my learning and growth.

3). The effects of failure are positive and should be utilized.

4). Experiencing failure debilitates my performance and productivity.

5). Experiencing failure inhibits my learning and growth.

6). The effects of failure are negative and should be avoided.

Please indicate your child's age in years:

**If you have more than one child**, please indicate your other child(ren)'s age(s) in years:

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

* No degrees
* A high school degree
* College degree
* Post-graduate degree
* Prefer not to answer

Please indicate your race/ethnicity (**Please check all that apply.**)

* Hispanic, Latino, or Spanish origin
* American Indian or Alaska Native
* Asian
* Black or African American
* Native Hawaiian or Other Pacific Islander
* White
* Fill-In Option:
* Prefer not to answer

Although these are broad categories, what is your gender identity? **(Please check all that apply.)**

* Woman or female
* Man or male
* Transgender
* Agender
* Genderqueer, gender fluid, or non-binary
* Questioning or Unsure
* Fill-In Option
* Prefer not to answer

What did you think this experiment was about?

Are you familiar with the term *failure mindset,*or *growth/fixed mindset*?

* Yes
* No
* Not sure
* Was not in the original paper

What is your Prolific ID? Please note that this response should auto-fill with the correct ID

This experiment was about parental views around failure. We are interested in examining whether views on failure influence how parents react to a situation in which their child comes home with a failing grade. Please do not share this information with other potential parents that may participate in this study.

Thank you for your participation!