

**Does the Activation of One's Mindset Impact Self-Regulatory Processes After
Experiencing Failure?**

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Abstract

Many people encounter setbacks in their work life, though some withdraw and give up, while others persevere and succeed. We aim to see whether people's beliefs regarding the malleability of their work skills play a role in explaining this difference in reactions. This research examines the influence of one's professional skills and abilities mindset (either growth or fixed) after experiencing failure on self-regulatory processes, including goal-monitoring. In other words, the purpose of the study was to investigate whether one's type mindset has an effect on their reported level of self-efficacy following negative feedback. Additionally, we wanted to investigate whether self-compassion would moderate this effect. For this experiment, we firstly manipulated the mindset of the participants through vignettes into either a growth or fixed mindset, which was then followed by various "work-related" tasks. After each task, participants would receive (the same) negative feedback with the purpose of inducing the threat of failure. Finally, the participants filled in various questionnaires regarding success expectations and self-compassion. It was expected that participants with a growth mindset would report higher levels of self-efficacy in comparison to those with a fixed mindset. Besides, it was expected that participants who reported higher self-compassion would report increased levels of self-efficacy as well, in other words that they would be less affected by the negative feedback. The results indicated that participants with growth mindsets reported higher levels of success expectations. Furthermore, the effect of mindset did not depend on whether a participant was more self-compassionate.

Does the Activation of One's Mindset Impact Self-Regulatory Processes After Experiencing Failure?

Failure and setbacks are a part of everyone's work trajectory. In a changing environment it is important for employees to continuously adjust to new working procedures by acquiring skills, handling responsibility regarding advanced tasks, and actively evolving their careers (van der Horst & Klehe, 2019). However, not everyone has the same ability to calibrate and cope with present and future career changes (Rudolph et al., 2017). When experiencing failure or inadequacy at work, some people become frozen and are overwhelmed by feelings of helplessness, whereas others see it as an opportunity for development and still actively approach these challenges. Why does this happen and why do some people still remain confident when facing professional setbacks, whereas some people feel emotionally discouraged? One way of explaining is to look at people's beliefs regarding the world and their abilities. People have various beliefs regarding themselves and how they see the world; they can carry beliefs their skills and abilities are either malleable or resistant to improvement (Dweck, 1999; Schmitt & Scheibe, 2022). Especially in a situation where the self-image has the potential of being threatened, for instance when one receives negative feedback at work, these differences in mindsets could be evident. The experience of setbacks reveals to the individual what he or she has not accomplished. Also, when getting negative feedback, an individual receives information that a discrepancy exists between their desired end goal and their actual state of progress, which helps them to identify whether they need to adjust their strategies for completing the specific goal (Burnette et al., 2013). Besides, negative feedback signals a failure in the pursuit of fulfilling job tasks and gives an idea of failure in meeting the standards of the job responsibilities (Xing et al., 2020).

However, some employees seem to be less affected by setbacks at work, but why does this happen? We hope to find that people's beliefs matter in the way they handle setbacks, since

these beliefs are relevant for achievement and recovering from setbacks. In addition, it depends on the type of one's mindset how they interpret and integrate the information stating they are still far removed from their desired end goal (Burnette et al., 2013).

These mindset theories have been researched extensively in the past, predominantly in the academic context (Dweck, 1999). Research by Schmitt & Scheibe (2022) focuses more on mindset in the workplace, which offers new information in this area. We aim to explore the role of mindsets in the workplace on handling failure because there is still a lack of insight of the influence of employees' mindsets in learning and adapting to career changes. Additionally, setbacks can have unpleasant consequences for the individual and their career. By expanding our knowledge on this topic, we can help organizations to support their employees in managing their career and hope to reduce the negative consequences for employees. (Lent & Brown, 2013; Rudolph et al., 2017).

Mindset & PSaA mindset

People can carry different beliefs regarding the malleability of their skills and abilities (Dweck, 1999). The professional skills mindset is rooted in this, and states that people differ in the implicit beliefs they carry, which influences the way people understand and handle tasks they encounter in situations (Schmitt & Scheibe, 2022). To be more concrete, employees with a growth mindset believe their professional skills and abilities can be improved over time unlimited to age. They are more prone to seek out learning opportunities and actively try to develop their career. In contrast, those with fixed mindsets believe their professional skills and abilities are innate, constant, and difficult to develop during adulthood. Therefore, they are more likely to have a harder time adjusting to career changes (Schmitt & Scheibe, 2022; Dweck & Yeager, 2019). In the case of setbacks, people receive information a discrepancy exists between their desired end goal and their actual state of progress. Subsequently, people can interpret this information differently and utilize different following strategies. Those with growth

professional skills and abilities (PSaA) mindsets interpret the rate of progress as a sign they are developing mastery or as relevant information to help future development. In contrast, those with fixed PSaA mindsets are more likely to perceive their rate of progress as an indication of lack of ability to achieve the goal since they focus more on proving their ability rather than improving their ability (Burnette et al., 2013).

SOMA-model

Implicit theories (or mindset theories) have long been established in research on achievement & motivation (Dweck, 1999), but how do people with growth or fixed PSaA mindsets differ in how they approach the entire process of goal pursuit? Here, the SOMA serves as a framework, with the purpose of explaining differences in human self-regulatory processes according to people's implicit beliefs about the malleability of human skills and abilities (Burnette et al., 2013). Foregoing research has shown that mindset theories predict self-regulatory processes (Dweck, 2008). The SOMA-model integrates these implicit theories with the self-regulation processes we use when we want to achieve a goal. We are choosing to explore this S-R model in the work and career area because we want to investigate whether someone's mindset has an impact on handling negative feedback or experiencing failure in general.

Processes of self-regulation

The SOMA-model develops beyond the model of Carver & Scheier's (1982, 1998) self-control theory and follows the stages that build up towards goal achievement, namely goal setting, -operating and -monitoring. These processes of self-regulation are activated within a person in the pursuit of a certain goal. Goal setting is the first process which includes specific desired end states (Burnette et al., 2013). The SOMA-model suggests people with growth PSaA mindsets tend to set learning-oriented goals in the attempt of mastering a skill usually for

internal satisfaction (Maurer et al., 2002). Those with fixed PSaA mindsets tend to set performance-oriented goals in an attempt to show their capability to themselves or others (Leonardi & Gialamas, 2002). The second process of self-regulation is goal-operating, which includes strategies to reach goal achievement (Carver & Scheier, 1998). Because people with fixed PSaA mindsets seek to protect their self-esteem by avoiding information that might indicate lack of ability, they are especially likely to adopt avoidant or self-handicapping strategies that protect their self-esteem in the experience of setbacks, whereas those with growth PSaA mindsets tend to engage in problem solving and more active strategies (Shih, 2009).

The third process of self-regulation is goal-monitoring, which includes thinking of possible roadblocks and available tools in order to succeed and checking the state of progress of goal achievement (Carver & Scheier, 1982). We aim to investigate the impact of setbacks, specifically the impact of negative feedback, thus we are interested in learning how people react to a discrepancy between their actual performance and their desired performance. Therefore, we focus mostly on goal-monitoring because it is the process where one receives information on their rate of progress. When individuals have envisioned a particular goal for themselves and have taken specific actions to achieve it, they should monitor the extent to which each action has helped to achieve the intended goal. Ideally, the action should have brought the individual closer to their end goal and increased the likelihood of achieving the goal in the future (Pintrich, 2000; Sitzmann & Ely, 2011). When the discrepancy between current-desired state is too big, people may experience negative emotions like sadness and anxiety (Carver, 2004; Carver & Scheier, 1990). When one's current rate of change meets or exceeds one's desired rate of change, one experiences positive emotions like happiness and excitement. The monitoring of progress also affects people's future success expectations, which can be explained as the likelihood of achieving one's desired rate of progress in the future. Success expectations can be seen as self-efficacy because the definition of self-efficacy refers to the

judgement of how well one can execute courses of action required to deal with prospective situations (Bandura, 1982). From this moment forth we will be referring to success expectations as self-efficacy.

Professional Skills Mindsets - Growth & Fixed orientations

People vary in their PSaA mindset (either growth or fixed) and therefore differ dramatically in how they regard themselves and integrate new information at work (Murphy & Reeves, 2019; Burnette et al., 2013). People with growth PSaA mindsets are more inclined to and confident in taking responsibility for their career and show more adaptive readiness (Schmitt & Scheibe, 2022) because they believe their skills and abilities can be actively developed. As a result, they will set more career goals, are more willing to master new professional roles and engage in active strategies to achieve them. Additionally, their goal is to learn as much as possible and they want to do better than others to feel successful (Bråten & Strømsø, 2006; Chen & Pajares, 2010; Elliot & McGregor, 2001). Therefore, they tend to engage in problem solving and more active strategies to strengthen their self-esteem (Shih, 2009). In the case of setbacks, they are less fearful, and interpret it as useful information towards goal-completion (Burnette et al., 2013). Therefore, they remain optimistic regarding their future career success or self-efficacy. In contrast, people with fixed PSaA mindsets are less likely to show adaptive readiness in career changes, because they believe their skills and abilities are resistant to improvement. Subsequently, they find career changes, such as the assignment of new tasks less manageable and feel less confident and in control. Because they do not want to look unprepared or incapable in front of their colleagues, they try to avoid new challenges and decline to explore future career options (Chen & Pajares, 2010). Therefore, they are more likely to adopt avoidant or self-handicapping strategies (Mangels et al., 2006). Additionally, they fear setbacks and will feel vulnerable and inadequate because of the belief their abilities and skills

cannot be developed. Within these people emotions such as fear, shame and anxiety will especially rise up (Burnette et al., 2013).

Setbacks & success expectations

Also in the workplace, people can encounter situations where they experience failure. It is natural that setbacks can have unpleasant consequences, such as the evocation of negative emotions, loss of direction, and the decrease of one's future success expectations (Burnette et al., 2013). For example, when receiving negative feedback, people can experience an ego-threat where their self-esteem seems to be in danger. Here, the negative feedback at work makes the need for change salient and will evoke negative emotions within the individuals, such as helplessness and fear, and leave someone with feelings of vulnerability (Cury et al., 2008; Plaks & Stecher, 2007). Additionally, it can lower a person's expectations of success in the future, which indicates the chance of achieving the desired rate of progress and eventually the end goal itself. Furthermore, setbacks can also have negative consequences for one's career because the negative emotions can lead employees to overestimate the chance of negative outcomes and to underestimate the chance of positive outcomes for following tasks (Nygren et al., 1996). Setbacks can also decrease trust and commitment towards an organization and hinder the process of learning from the failure experience (Shepherd et al., 2009).

However, the mindset one carries will influence in how they deal with such setbacks (Burnette et al., 2013) because mindsets dictate the integration of information with what we have so far. Thus, the type of one's PSaA mindset (either growth or fixed) might use the given information during setbacks differently. When people with fixed PSaA mindsets are confronted with setbacks, they will be especially prone toward given up the pursuit of the relevant goal because they believe professional skills and abilities are innate, and are almost impossible to improve. They will be more likely to question their abilities since they see it as an indication of

their lack of ability and see the negative feedback as a threat for their self-esteem. Therefore, they will tend to focus on proving and conserving their ability in the future because they want to protect their self-esteem (Mangels et al., 2006). Thus, when people with fixed mindsets are conscious of their slow rate of progress, they will be emotionally affected by negative feedback and will experience more negative feelings, such as sadness or anxiety (Aronson et al., 2002) and lower levels of self-efficacy (Burnette et al., 2013). In contrast, people with a growth PSaA mindset who encounter setbacks may continue to persist, potentially because growth-oriented beliefs are associated with higher success expectations or self-efficacy and lower negative affect. They believe the struggle is part of the learning process and remain optimistic in succeeding in the future. In other words, they interpret the negative feedback as useful information for reaching the longer-term learning-goal. Therefore, any change in progress will be seen as an indication they are developing mastery, which leads to lower negative affect and higher self-efficacy levels. Considering the given information, we come to the following hypotheses:

H1a: There is a difference between the fixed and growth PSaA mindsets in reports of self-efficacy.

H1b: Participants in the growth PSaA mindsets condition will report higher levels of self-efficacy when compared to the fixed PSaA condition.

Self-compassion

Self-compassion is a healthy way of relating to oneself in times of suffering, and applies to situations of failure, perceived inadequacy, or general life difficulties. When someone has a self-compassionate mindset and experiences personal struggle, their self-responding will be more compassionate and less uncompassionate (Neff et al., 2020). It involves being caring towards oneself when one is confronted by the fact their skills and abilities are insufficient to

achieve a goal. Also, it reduces regulatory demands by enabling people to experience negative emotions in a mindful and non-judgmental manner (Jazaieri et al., 2013; Leary et al. 2007).

Self-compassion can explain how individuals differ in their ability to regulate negative events, such as receiving negative feedback. It is assumed that the greater one's self-compassion, the less interference a given level of negative emotions will have on learning from the failure experience (Shepherd & Cardon, 2009). Additionally, those with greater self-compassion will face fewer obstacles to try again. Research by Neff (2003) has shown that individuals with great self-compassion are less anxious about negative events and are able to maintain increased psychological well-being. As a result, self-compassionate people may find a difficult self-control task more manageable than less self-compassionate people.

Considering all the given information, we come to the following hypotheses:

H2a: Participants who report higher levels of self-compassion will report increased levels of self-efficacy.

H2b: The type of PSaA mindset (either growth or fixed) depends on the level of self-compassion within the participant.

Method

Participants

By utilizing convenience sampling, we gathered a sample of participants that were referred to by psychology students through word-of-mouth as part of their bachelor thesis project. The participants did not receive compensation for their participation in the study. The study received a total of 234 responses, of which around 140 were incomplete. The complete sample consisted of 88 employees from various different occupational backgrounds, with the only inclusion criteria being that their current working hours exceed at least 20 hours per week.

We also checked that our participants did not guess the purpose of our study. Data from 15 participants were removed because they did not give consent to use the data, did not fill in the complete survey, or exclusively stated that they guessed the true purpose of the study. Five Dutch-speaking participants reported that they have a zero-hour work contract, but we decided to keep these cases in the analysis as zero-hour contracts are common in the Netherlands. After all exclusions, the data of the remaining 73 participants were used for the statistical analysis. The specific demographic information of all participants can be found in Table 1.

Table 1

Gender, Language, and Age of Participants

| Baseline Characteristic | | N | % | Mean | Std. Deviation |
|-------------------------|---------|----|------|------|----------------|
| Gender | Male | 22 | 67.1 | | |
| | Female | 49 | 30.1 | | |
| | Other | 2 | 2.8 | | |
| Language | English | 27 | 37 | | |
| | Dutch | 29 | 39.7 | | |
| | German | 17 | 23.3 | | |
| Age | | 73 | | 40.8 | 14.7 |
| Total | | 73 | | | |

Assessment and Measures

State Self-Compassion Scale Short Form (SSCS-S)

The State Self-Compassion Scale Short Form is a self-report measure that assesses an individual's global level of self-compassion. The measure is composed of six items that can be scored on a 5-point Likert scale ranging from 1 = "not at all true for me" to 5 = "very true for me". The six items likewise resemble the six core components of self-compassion (self-kindness, common humanity, mindfulness, self-judgement, isolation and overidentification). Example items from the scale are "I'm giving myself the caring and tenderness I need" and "I feel tolerant and impatient toward myself". The measure offers good psychometric properties with a reliability of $\alpha = .86$ (Neff et al., 2020) and $\alpha = .76$ for this study.

Developmental Self-Efficacy Scale

In order to assess one's success expectations, we draw inspiration from previously published research where success expectations were related to - and measured with - self-efficacy (Maurer et al., 2002; Taberero & Wood, 1999). The Developmental Self-Efficacy Scale is a self-report measure that includes two types of self-efficacy for development: relative and absolute. We only report on absolute self-efficacy, and only looked into relative self-efficacy for exploratory purposes. The absolute self-efficacy was assessed by a four-item scale developed by Maurer et al. (2002), going from 1 = "disagree very strongly" to 7 = "agree very strongly", which measures participants' beliefs they can improve their skills without reference to others, and consists of four items such as "When facing difficult tasks, I am certain that I will accomplish them". Despite the fact that Cronbach's alpha was not indicated, the scales have been used before in previous research projects, which ensures reliability (Maurer et al., 2003). The reliability of the scale in this study was $\alpha = .96$.

Design and Procedure

In order to test our hypotheses, an experiment was conducted. Thereby, the two experimental conditions represent the two levels of our independent variable professional skills

and abilities mindset. Each participant was randomly assigned to either the growth mindset or the fixed mindset condition. The data was gathered using a single study, which took participants around 25 minutes to complete. Before the study was conducted it was approved by the Ethics committee of the University of Groningen.

Before the study began, all participants were informed that participation was completely voluntary and that they could quit the study at any time. Even after participation, there was an option for the participants to have all their data removed. Once the information about the study was given, participants filled in the informed consent form. In order to mask the true aim of the study, participants received a bogus explanation indicating our interest in examining individual differences and their accounting for differing work-related abilities throughout a recruitment task used in Human Resources departments across different companies. In reality however our aim was to investigate the relationship between professional skills and abilities mindset and reaction to work-related threat of failure, provided through negative feedback. A comprehensive debriefing of the true purpose of the study was offered to all participants after they were finished with all tasks and questions. Participants were also given a voluntary ‘mood restoration’ video to watch to make sure that the deception in the study would not leave them with any negative feelings.

The study consisted of four parts: mindset manipulation, an emotional-understanding task, a pattern-finding task, and a brief questionnaire. Each task was followed by standardized negative feedback, irrespective of the participant’s actual performance. In order to activate either the fixed or the growth professional skills and abilities mindset, participants were asked to read a vignette suggesting that work-related skills and abilities are either developable or relatively stable and unchangeable. The vignettes were introduced to the participants as a memory task, indicating that they will later be tested on their memory of the main message of the text. In reality however there was no testing of memory, as the vignettes only served the

purpose of activating either growth or fixed mindsets in our participants. Additionally, to further strengthen our mindset manipulation, participants were asked to fill out condition-specific items from the professional skills and abilities mindset scale. The professional skills and abilities mindset scale is a self-report measure that assesses the two core components of professional skills and abilities growth and fixed mindsets. The measure's set of 6 items was adapted and accordingly adjusted from Dweck's (1999) intelligence mindset scale.

Following the mindset manipulation, the Occupational-Propensity Task (OPT) was introduced. The OPT, as adapted from Shafir et al. (2017), is a computerized task that is composed of three successive tasks assessing wise reasoning, fluid intelligence, and emotional intelligence. The current study only utilized the two latter mentioned tasks. In particular, the first task assessing emotional intelligence required participants to watch a 2-minute video of a person recounting an emotional experience, thereby being instructed to pay close attention to the protagonist's facial expressions. In order to ensure complete focus of the participants on the ambiguous situation, there was no sound available and the participants were not allowed to continue until they finished watching the entire video. Subsequently, participants were asked to indicate the emotions they believe have been portrayed in the video clip. In order to indicate the intensity of each emotion, a questionnaire that lists 14 different emotions was provided; each emotion can be rated on a 5-point Likert scale ranging from 1 = "not at all" to 5 = "extremely". Their actual performance was not recorded, however, after finishing the task, and unrelated to their actual performance, participants were provided with automated negative feedback indicating a below-average performance simulating failure. This feedback solely served the purpose of evoking an affective response in our participants in order to investigate our hypothesis.

Afterward, participants completed the second part of the OPT, which assesses fluid intelligence through a pattern-finding task. Therefore, participants were presented with a picture

that was missing a piece, and accordingly had to indicate which of the presented six options completes the picture. This task was presented in a total of ten different trials; each trial had to be completed within a given time frame of 15 seconds. Again, their performance was not actually being recorded. After completion of the task, participants once again received standardized, bogus negative feedback indicating below-average performance. Subsequently, and under consideration of the negative feedback that has just been provided, participants were asked to indicate both their negative affect and their success expectation. Lastly, in order to assess our moderators, participants were asked to fill in both the Short Almost Perfect Scale and the State Self-Compassion Scale Short Form.

After providing demographics, such as age, gender, country of residence, level of educational attainment and number of workhours specified in their contract, participants were asked to indicate their thoughts about the true purpose of our study. This question served the function of assessing possible demand characteristics that might have been present within our study. To restore mood, participants were offered the possibility to watch a collection of scenes from Pixar's 2015 film "Inside Out". At this point, participants were furthermore provided with an extensive debriefing, which included both the real purpose of our study and an explanation for our deception that was delivered through a bogus explanation at first. It was likewise clarified that the negative feedback each participant received solely served the function of investigating our hypothesis regarding mindset and reaction to negative feedback.

General Statistical Procedure

A one-way ANOVA will be run in order to determine whether there is a statistically significant difference between growth and fixed PSaA mindset on self-efficacy (H1a). Thereby, the two experimental groups the participants were randomly assigned to represent our independent variable mindset, while group differences will be examined in our dependent

variable self-efficacy. In addition, it will investigate whether there is a difference between levels of self-compassion regarding self-efficacy (H2a).

Subsequently, an ANCOVA will be carried out to examine the direction of the possibly significant difference between the growth and fixed groups. Specifically, we want to investigate whether participants with a growth PSaA mindset will report higher levels of self-efficacy when compared to participants with a fixed PSaA mindset (H1b). In addition, we want to investigate if there exists an interaction effect between the independent variable mindset and the moderator self-compassion (H2b). Prior to our analysis, an assumption check will be carried out to determine whether the performance of an ANCOVA on our data is appropriate. Therefore, the following assumptions will be tested: normality, homogeneity of regression slopes, and equality of variances.

Results

Descriptive statistics

The relevant means, standard deviations and correlations can be found in Table 2 and 3.

Table 2

Descriptive Statistics: Self-efficacy as Dependent Variable

| Mindset | Mean | Std. Deviation | N |
|-----------------|------|----------------|----|
| Fixed | 4.50 | 1.38 | 33 |
| Growth | 5.15 | 1.30 | 40 |
| Total | 4.86 | 1.37 | 73 |
| Self-compassion | 4.25 | .810 | 73 |

Table 3*Correlations*

| | Self-efficacy | Self-compassion |
|-----------------|---------------|-----------------|
| Self-efficacy | 1 | .066 |
| Self-compassion | .066 | 1 |

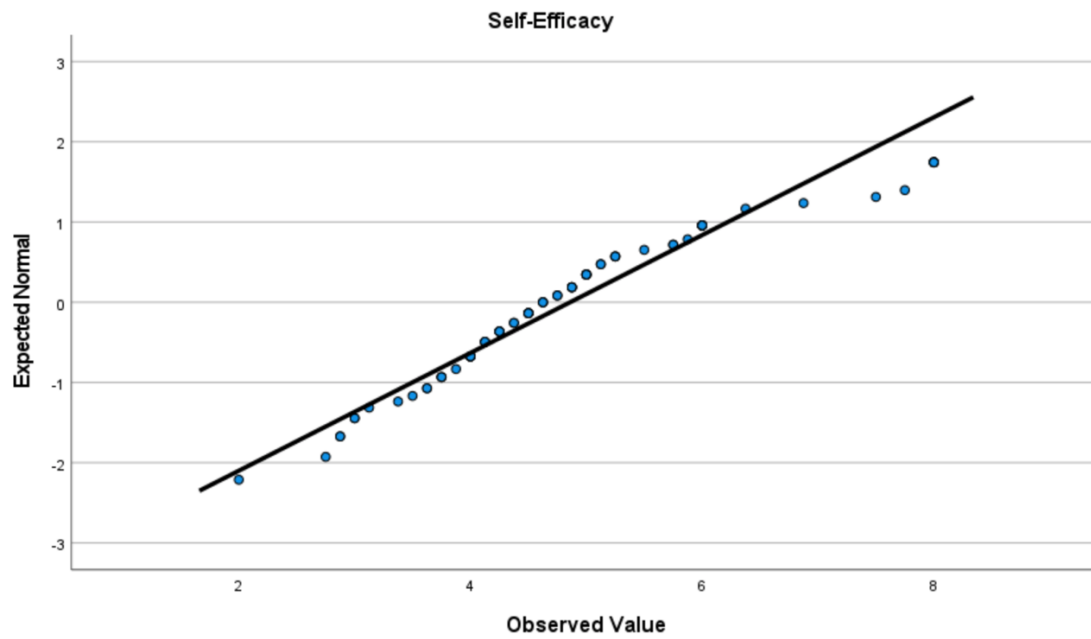
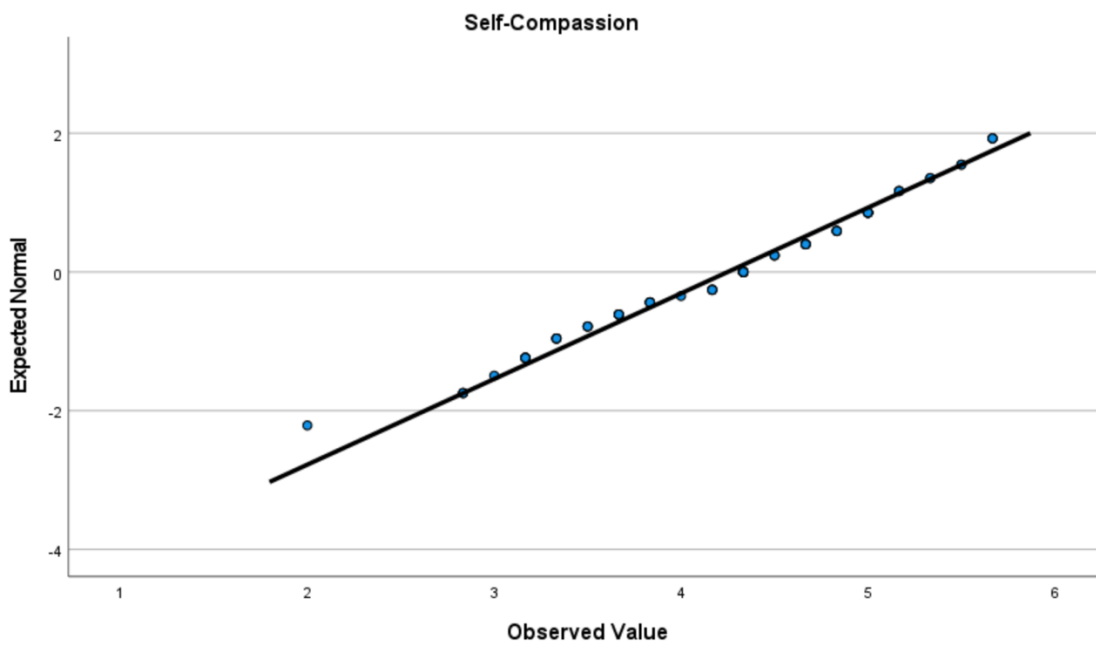
Assumption checks*Normality*

For the Kolmogorov-Smirnov statistic, Table 4 shows the values of significance are $p = .004$ for the self-efficacy variable and $p = .015$ for the moderator self-compassion. For the Shapiro-Wilk, it is $p = .001$ for the self-efficacy and $p = .111$ for the self-compassion. Since they are very small, the assumption of normality is not met. However, Figures 1 and 2 show that the normality assumptions can be tolerated since the distribution of the residuals is relatively acceptable, which allows us to proceed.

Table 4*Tests of Normality*

| | Kolmogorov-Smirnov | | Shapiro-Wilk | |
|-----------------|--------------------|------|--------------|------|
| | df | p | df | p |
| Self-efficacy | 73 | .004 | 73 | .001 |
| Self-compassion | 73 | .015 | 73 | .111 |

Figure 1

Q-Q plot of Self-efficacy**Figure 2***Q-Q plot of Self-compassion**Homogeneity of variances*

The significance is $p = .821$ in the Levene's test, which can be seen in Table 6. This means that the fixed and growth group variances are not significantly different from each other and therefore the homogeneity assumption of variance is met.

Table 6

Levene's Test of Equality of Error Variances

| | F | Hypothesis df | Error df | p |
|---------------|------|---------------|----------|------|
| Self-efficacy | .052 | 1 | 71 | .821 |

One-way ANOVA

To test the main effects for self-compassion and mindset regarding self-efficacy and thereby hypothesis H1a and H1b, we conduct a one-way ANOVA. Here, we want to investigate whether differences between groups exist. Table 7 shows that a significant effect for mindset, meaning that the two mindset groups differed in their reports of self-efficacy $F(1, 71) = 4.298$, $p = .042$). The results indicated that the predictor mindset explained 5.7% of the variance in self-efficacy ($R^2 = .057$), which means that mindset explains very little of the variation in self-efficacy.

Table 7

Tests of Between-Subjects Effects

| | df | F | p | R^2 |
|---------|-------|-------|------|-------|
| Mindset | 1, 71 | 4.298 | .042 | .057 |

ANCOVA

The method of analysis included a ANCOVA where mindset was used as the independent variable, self-compassion as a covariate and self-efficacy as the dependent variable. For this analysis, we wanted to investigate whether the type of one's mindset (either growth or fixed) can influence their level of self-efficacy, or in other words expectations of success and what the direction of this influence would be (H1b). The interaction between mindset and self-compassion was also incorporated, which let us investigate whether the type of mindset depended on whether a participants had little or higher levels of self-compassion (H2b).

As can be seen in Table 9, a significant main effect was found for mindset ($F(1, 71) = 4.298, p = .042, \eta^2_p = .057$), when the covariate self-compassion was excluded from the model. This means that there was a significant difference in reported self-efficacy between the growth and fixed PSaA groups. As can be seen in Table 2, the participants in the growth mindset condition reported a higher average of self-efficacy ($M = 5.15; SD = 1.30$) than the participants in the fixed mindset condition ($M = 4.50; SD = 1.38$). Figure 3 gives a visual display of the significant difference in self-efficacy between the fixed and growth mindset condition.

Furthermore, there was no significant effect found for self-compassion ($F(1, 69) = .490, p = 0.486$) which means that self-compassion did not have a significant influence on the reported levels of self-efficacy of the participants (Table 8). Additionally, there was no significant effect found for the interaction between mindset and self-compassion ($F(1, 69) = .805, p = .373, \eta^2_p = .012$). This means that the effect of mindset did not depend on whether a participant was more self-compassionate.

Table 8

Tests of Between-Subjects Effects: Covariate present

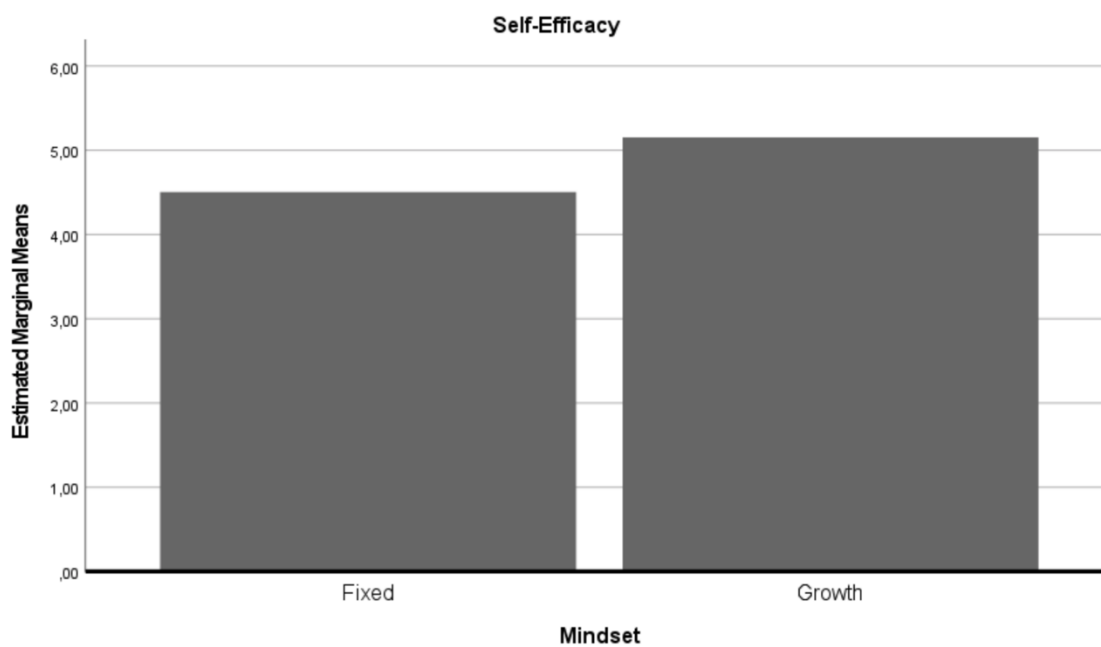
| | df | F | p | Partial Eta Squared |
|--|----|---|---|---------------------|
|--|----|---|---|---------------------|

| | | | | |
|-------------------------|----|-------|------|------|
| Mindset | 1 | 1.577 | .213 | .022 |
| Self-compassion | 1 | .490 | .486 | .007 |
| Mindset*Self-compassion | 1 | .805 | .373 | .012 |
| Error | 69 | | | |

Table 9

Tests of Between-Subjects Effects: Covariate absent

| | df | F | p | Partial Eta Squared |
|---------|----|-------|------|---------------------|
| Mindset | 1 | 4.298 | .042 | .057 |
| Error | 71 | | | |

Figure 3

Discussion

To expand the knowledge of the impact of mindsets on handling failure in the context of the workplace, we investigated whether people with a growth PSaA mindset would differ in report of self-efficacy in comparison with people with fixed PSaA mindsets (H1a). To specify, we hypothesized that participants with a growth PSaA mindset would report higher levels of self-efficacy than those with fixed PSaA mindsets (H1b). We found our results to be in line with those hypotheses. In addition, we hypothesized that participants who reported higher levels of self-compassion would report increased levels of self-efficacy as well (H2a). Also, the type of PSaA mindset (either growth or fixed) would depend on the level of one's self-compassion (H2b). Here, our hypotheses were inconsistent with the found results.

We hypothesized participants with a growth PSaA mindset would report having higher levels of self-efficacy than those with fixed mindsets and found our results to be supportive. This can be explained by the research by Burnette et al. (2013) which states that one's mindset influences the way people engage in self-regulation processes, including goal-monitoring. When people receive information of a discrepancy between the actual progress and desired end goal in the goal-monitoring process, it depends on one's mindset which strategies will be equipped next and how they will be affected emotionally, and in their self-efficacy. Our found results are sensible because people with growth PSaA mindsets believe their professional skills and abilities can be developed through motivation, hard work and effort. They will interpret the rate of progress as relevant information for learning and see it as a sign of developing their professional skills and abilities, while remaining optimistic about their future success. Therefore, they will be less fearful in case of setbacks and still expect to complete their goals in the future. However, people with fixed PSaA mindsets believe their professional skills and abilities are innate and cannot be improved over time and are likely to interpret the rate of progress as an indication of lacking ability. Because they believe to be unable to improve their

skills and abilities, they are especially prone to experience a decrease of self-efficacy when receiving negative feedback and are likely to throw in the towel. Thus, our results are in line with previous research by Schmitt & Scheibe (2022) and Burnette et al. (2013) and suggests that self-regulation in the workplace may benefit from adapting one's PSaA mindset to a growth-orientation since they are more ready to tackle career changes and remain confident and optimistic in succeeding their roles and tasks in the future. Our points are consistent with this because in our study people with growth PSaA mindsets reported higher levels of self-efficacy than those with fixed PSaA mindsets.

Additionally, we hypothesized that participants who reported higher levels of self-compassion would report increased levels of self-efficacy as well and that self-compassion would moderate the effect of self-efficacy. We based this on the research by Jazaieri et al. (2013) and Leary et al. (2007) which explain self-compassion as being caring towards oneself when one is confronted by the fact their skills and abilities are insufficient to achieve a goal. For this reason, we expected that people who reported higher levels of self-compassion would be more able to regulate the negative feedback and therefore report increased levels of self-efficacy (Neff, 2003; Burnette et al., 2013). However, our found results were unresponsive of these claims. It may be that self-compassion has better prediction purposes in the case of negative feelings, whereas we investigated the case of future success expectations or in other words self-efficacy. However, these effects must be further investigated.

Limitations

A limitation of this study was the small sample size that led to the assumption of normality not being met. However, this could be tolerated because the distribution of the residuals did appear to be normal once certain outliers had been taken out. The data still should be interpreted carefully because the certainty of the results can be questioned. Small samples

may lead to underrepresentation in (for example) age or gender groups. Also, small sample sizes lead the effects to be very vulnerable to extreme values, which is why we tried to analyze the data with and without the outliers.

In addition, the feedback we gave after the work-related tasks only consisted out of brief negative feedback. The research by Burnette et al. (2013) also takes in other types of feedback, such as constructive and positive feedback where the focus lies on positive behaviors or contributions. Constructive feedback, as opposed to negative feedback, focuses on behavioral changes which the employee has the capability to control and is specific and detailed so that the employee has practical and concrete information in how to adjust. More constructive feedback can enhance performance and professional growth and improve the relationships within a business (Harvey & Green, 2022). Constructive feedback may especially be valuable and well-fitting for growth-oriented people since they focus on learning and actively try to develop their careers (Schmitt & Scheibe, 2022). Since we only focused on negative feedback to induce the experience of a setback, we are unsure what happens when various types of feedback are given and how that would affect the responses in the goal-monitoring process in particular. It would be interesting to investigate which type of feedback would work best of the different types of mindsets in the future.

Furthermore, the concept of mindsets is difficult to capture and manipulate and therefore difficult to plan an intervention for. Especially since Dweck (1999) suggests that the concepts are not opposites but rather distinct, and one can differ in their mindset depending on the context and at the same time carry both, manipulations can be difficult to implement. Also, people can carry different beliefs at the same time. Besides the type of mindset, there can also be many other mechanisms affecting change in achievement processes (Sisk et al., 2018). For example, one's motivation and personal value in achieving a goal might affect the way people engage in

the self-regulation processes, interpret their future success and negative affect. These mechanisms could have been present here and need to be taken into account in future research.

Implications & future research

Our research could be useful for businesses to support their employees in their career and help them adapt to new responsibilities and their accompanying required skills. Also, it can help identify those employees who believe they cannot really develop and improve over time and try to change those mindsets in order to make them more flexible during alternations within the organization (Heslin et al., 2020; Murphy & Reeves, 2019). Now we know that growth PSaA mindsets lead to more self-efficacy, changing people's mindset into growth mindsets would be beneficial because it helps people to remain optimistic in case of setbacks, protect their self-esteem and increase productivity (Burnette et al., 2013). Besides, mindset interventions are cheap and easy to implement in especially businesses where people encounter failure a lot. For example, highlighting that setbacks are learning opportunities could maintain effort and motivation within employees (Heslin et al., 2020; Schmitt & Scheibe, 2022).

For future research, it would be interesting to study mindset in a more ecological way and therefore investigate the effect of one's mindset on their environment, such as relationships with colleagues or private (romantic) relationships. Therefore, we should let people hold a diary in how they feel regarding setbacks at work and describe the consequences of those setbacks in their personal and work-life. In this way, we can capture the role of mindset in setbacks people actually encounter in their life and investigate the accompanying consequences in their private life, such as their romantic relationship which can also be important for one's well-being. Also, the experienced setbacks would be more representable because they are happening in real-time. Additionally, we only focused on the process of goal-monitoring. However, it would be interesting to also test the difference between mindsets on the other levels of the SOMA-model,

namely goal-setting and -operating, which would form a more complete picture of the differences of mindsets in the workplace, tracking an individual's goal pursuit from start to finish (Burnette et al., 2013).

Conclusion

Thus, our research wanted to investigate whether the activation of one's mindset would influence the processes of self-regulation after the experience of failure. Theretofore, we manipulated mindset into either a growth or fixed-orientation and explored their effects on self-efficacy. For the first time, the effect of mindset on self-efficacy was investigated in the context of failure in the workplace.

The results showed that people with growth and fixed PSaA mindsets differ in their reports of self-efficacy, namely that people with growth PSaA mindsets report higher levels of self-efficacy. In addition, we found that people with higher levels of self-compassion did not report increased levels of self-efficacy and that the effect of mindset did not depend on whether a person was more self-compassionate.

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