Exploring Mindsets and Negative Affect in the Workplace: The Role of Adaptive Perfectionism

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Abstract

This bachelor thesis explores the impact of implicit theories, specifically growth mindset and fixed mindset, on negative affect in the context of workplace setbacks. The study utilizes the Setting/Operating/Monitoring/Achievement (SOMA) model of self-regulation to examine the role of implicit theories in goal monitoring. The first hypothesis suggests that individuals with a growth mindset will experience lower levels of negative affect compared to those with a fixed mindset when facing failure in the workplace. The second hypothesis explores the moderating effect of adaptive perfectionism on the relationship between mindset and negative affect. It predicts that individuals with a growth mindset and high levels of adaptive perfectionism will experience fewer negative emotions related to work performance. The study discusses the implications of its findings and highlights its strengths, such as the innovative mindset manipulation and comprehensive analysis of adaptive perfectionism as a moderator. However, limitations are also acknowledged, including the small sample size and limited ecological validity. Suggestions for future research include replicating the study with larger and more diverse samples and incorporating more naturalistic settings. Overall, this thesis provides insights into the role of implicit theories and adaptive perfectionism in managing negative affect in the workplace.

Epictetus, one of the founders of the ancient philosophy of stoicism, said;" It is not what happens to you, but how you react to it what matters." In our lives, plans we make to reach set goals do not always yield the outcomes we are hoping for. Existing theories regarding people's beliefs state that there are two different ways in which people conceptualize their thoughts regarding the malleability of their skills; incremental theory (growth mindset), and entity theory (fixed mindset). To study the effects of a setback in the context of a workplace-environment and the differences in people's reactions, we shall be looking at the concept of negative affect generated by a setback. Furthermore, we shall look at the variable of adaptive perfectionism to explore the potential moderating effect of it on the level of negative affect in the context of a setback.

The Setting/Operating/Monitoring/Achievement Model (SOMA)

For a clear direction in this paper we investigate how people self-regulate after setbacks. We used a theoretical framework of self-regulation designed by Burnette and colleagues (2012) that is called the SOMA (Setting/Operating/Monitoring/Achievement) model. In our/this study, the SOMA-model is utilized to increase the clarity of directions in further research about implicit theories. To create a better understanding of the SOMA-model, we need to explore the theory on which it is based on, namely the self-control theory of Carver and Scheier (1998). The self-control theory states that there are three processes of self-regulation: goal setting, goal operating and goal monitoring. They interact with one another in a feedback loop where the goal setting process is about choosing and establishing goals, the goal operating process is about implementing plans to achieve those goals, and the goal monitoring process is about evaluating progress toward those goals. All three processes are important for self-control, as they help individuals to achieve their desired outcomes by directing their attention, effort, and behaviour toward those outcomes, maintaining motivation and effort, and making adjustments along the way. (Carver & Scheier, 1989).

The SOMA model incorporates the system of the feedback loop from the self-control theory to form the associations between the three self-regulatory processes and implicit theory (Burnette et al., 2012). Meaning that one's system of beliefs regarding skills malleability is thought to drive cognitive, affective and behavioural processes at each stage of goal pursuit. The implicit theories we use in our research are based on the work of Dweck's mindset theory (Dweck et al., 1995). This

theory states that there are two different kinds of mindsets, namely, incremental theory (growth mindset) and entity theory (fixed mindset). Individuals who are more prone to a fixed mindset believe that skills and attributes are more stable over time and cannot be easily changed. Individuals who are more prone to a growth mind-set are more likely to believe that skills and attributes can change over time (Sisk et al., 2018).

In the present review, we focus mainly on the effect implicit theories have on the goal monitoring process of self-regulation, since the overall aim is to investigate professional setbacks. Within the goal monitoring process, affect is an indicator of how goal-related progress is perceived (Carver & Scheier, 2012). When the progression is met with the expectations one has set or it exceeds it, positive emotions like excitement and happiness are experienced, but if the progression towards the goal is lower than the desired level, negative emotions are experienced like anxiety, helplessness and vulnerability (Burnette et al., 2012). Results from the meta-analysis of Burnette and colleagues (2012) suggest that entity theorists are likely to hang on to more negative emotions at goal monitoring as opposed to incremental theorists. When negative emotions are experienced regarding goal monitoring, it can be perceived as if the progression towards the goal is failing to meet the expected outcome (Carver & Scheier, 1990). This perceived failure/setback can strengthen patterns of self-defeat, lower expectations of prospective outcomes and henceforth threaten goal achievement (Cervone et al., 1994). On the contrary, regulating and reducing negative emotions such as anxiety and vulnerability can clear the way for achievement (Keith & Frese, 2005). It has been hypothesized that people with a growth-mindset retain a higher certainty in their ability and resources to achieve the set goals, and these expectations are expected to have a higher chance of goal achievement (Aspinwall & Taylor, 1997).

In this study, we explore the role of implicit theories in the work-life environment. According to Schmitt and Scheibe's (2022) research, employees' beliefs about the malleability of their professional skills and abilities can predict their level of career adaptability. They suggest that employees may have either a growth mindset or a fixed mindset towards their work-related skills, abilities, and career development. Those with a growth mindset tend to be more proactive in their career development, seeking out opportunities to enhance their skills and abilities. Conversely, those

with a fixed mindset are less likely to engage in learning and career development activities as they believe that skills and abilities are innate talents. Interestingly, Schmitt and Scheibe (2022) found that people can hold both mindsets simultaneously, with one mindset being more dominant in certain situations. Thus, professional skills and abilities mindset is a two-dimensional concept.

Setbacks and negative affect

When individuals work toward a goal or a challenge and a setback occurs, it is inevitable that negative emotions, like sadness and anxiety, can surface (Carver, 2012). In the meta-analysis of Burnette and colleagues (2012), negative emotions show a moderate to strong, negative correlation to goal achievement. Everyone experiences these initial negative emotions when finding that their performance is subpar, but the individual's reaction to these negative emotions is important in the understanding of how these emotions influence the goal monitoring process and therefore also, goal achievement. Thus, we further explain our rationale regarding the role of mindset in potentially driving some of these differences.

In the context of failure, incremental theorists experience fewer negative emotions than entity theorists, just like in the case of monitoring their goal (Burnette et al., 2012). In the research of Babij and colleagues (2020), it has been found that entity theorists, when encountering setbacks, appraise negative emotions as debilitating to their progress and in turn this increases the severity of these negative emotions. In contrast, incremental theorists appraise negative emotions as enhancing to their progress and are more likely to use the negative emotions from a setback as a source of motivation to renew their effort in pursuing their goal. This is because they view setbacks as being part of the process of goal pursuit, rather than as indicators of their fixed ability level. They believe that they can change their ability with effort, rather than accepting it as unchangeable. Therefore, we predicted that incremental theorists will report less negative emotion in our study compared to entity theorists. As such, the first hypothesis we tested states that "Incremental theorists experience a lower level of negative affect compared to entity theorists when confronted with failure in the workplace."

In the present study, we will consider adaptive perfectionism as a possible moderator of negative affect in the context of failure. Mofield et al. (2019) found that individuals with high levels

of adaptive perfectionism (i.e., those who strive for excellence but are not overly self-critical) showed greater benefits from a growth mindset intervention, including improved emotional outcomes such as reduced anxiety and depression. This suggests that the relationship between mindset and emotional outcomes may be affected by levels of adaptive perfectionism. According to Dweck and Yeager (2019), individuals who hold a growth mindset are more likely to experience positive emotions and greater resilience in the face of challenges than those who hold a fixed mindset. This might be because individuals with a growth mindset are more likely to view challenges as opportunities for growth and improvement. In contrast, individuals with a fixed mindset may be more vulnerable to negative emotions and fear of failure.

Adaptive perfectionism may moderate the relationship between mindset and emotional outcomes. Lo and Abbott (2019) have found that individuals who score high on adaptive perfectionism, are less emotionally affected by feedback (failure or success). This suggests that adaptive perfectionism influences the severity of the emotional response. Furthermore, according to Brummelman et al. (2016), children who were praised for their intelligence (a fixed trait) showed greater fear of failure and negative emotions in response to setbacks than those who were praised for their effort (a growth mindset). This suggests that holding a fixed mindset can make individuals more vulnerable to negative emotions related to their performance. The second hypothesis of this study states that "Employees who hold a growth mindset will experience fewer negative emotions related to their work performance than employees who hold a fixed mindset, and this relationship will be stronger among those with high levels of adaptive perfectionism."

Method

Materials

Short Almost Perfect Scale

The Short Almost Perfect Scale (SAPS) measures two dimensions of perfectionism. The scale consists of eight items, equally divided into 'Standards' representing adaptive perfectionism (e.g. 'I expect the best from myself') and 'Discrepancy' standing for maladaptive perfectionism (e.g. 'Doing

my best never seems enough'). Cronbach's alpha for Discrepancy is 0.87 (Rice, et al., 2014). This aligns with our own reliability of the scale ($\alpha = 0.879$)

Negative Affect Measure

A measure of current negative affect involves 3 items relating to specific negative emotions (angry, ashamed and disappointed), which were taken from broader emotion scales with reliability $\alpha > .75$ (Harley et al., 2019; Pekrun et al., 2011). This reliability aligns with the Cronbach's alpha we found ($\alpha = 0.787$). Following the example of Betella and Verschure (2016), the items were scored on a slider instead of a Likert scale to enhance the response range. Furthermore, three additional positive-emotion items (Harley et al., 2019; Pekrun et al., 2011).

Procedure

This research was conducted in the form of an experimental one-level study with two conditions. It took approximately 25 minutes to complete the questionnaire. Firstly, participants were asked to sign the informed consent, in which they were introduced to the research and granted permission to start. Participants were then presented with a manipulation by reading a vignette to prime one of the conditions, either a growth mindset or a fixed mindset. The vignettes were fabricated news articles appearing to be from 'Psychology Today'. To strengthen the manipulation, participants were asked to rate statements about the respective PSAM on a 4-point Likert scale ranging from Neutral to Strongly Agree, therefore disabling the option to disagree with the statements aligned with their condition. A manipulation check consisted of writing down the central message of their vignette. Following this, participants carried out two HR-inspired occupational propensity tasks that should appeal to a variety of individuals (Shafir et al., 2017). These included a video-based emotion-recognition task and a pattern-recognition task by selecting the missing tiles from six incomplete pictures. After fulfilling each task, they were falsely informed about their below-average performance to elicit feelings of failure. Participants then filled out measures about their current affect and self-efficacy. Afterwards, participants answered items regarding the moderators self-compassion and adaptive and maladaptive perfectionism. After answering demographic questions, participants were

shown a movie clip to restore their mood. Finally, participants were debriefed and the deception was made transparent, along with the true aim of this study.

Participants

In this one level experimental design with two groups, participants were primed with a fixed or growth mindset within a professional setting. After removing 271 people who did not meet the inclusion conditions, 98 persons remained. The inclusion criteria were giving informed consent before and after the experiment, being over the age of 18, and working part-time or full-time. Out of 369 online survey respondents, we excluded 63 for not consenting, 182 for not agreeing to deception/final check, and 12 for failing/withdrawing at final check. We also excluded 14 for working zero hours. Our final sample was 98 participants who passed all criteria and gave valid data. Table 1 specifies the participant demographics.

Table 1.

Participant demographics

-Age	*Mean = 32 (SD=11.7)*
-Level of Education	
(Technical) University	*34 (35%)*
High school	*48 (49%)*
-Place of residence	
Netherlands	*56 (57%)*
German	*16 (17%)*
Other	*25 (26%)*

Mindset

Fixed	*53 (54%)*
Growth	*45 (46%)*

The ratio between men and women in this experiment was 35 to 61 respectively. Two participants did not specify their gender. The mean age of the participants was $M = 32$ ($SD = 11.7$). Most of the participants were Dutch residents (57.1%), 17 % of the participants were of German origin. The highest level of education was mostly a (technical) university degree (49.0 %) and secondary school with a diploma (34.7%). The primed mindset was approximately equally divided, the growth mindset group contained 53 participants and the fixed mindset group contained 45 participants. For this research, data was collected by using an online Qualtrics questionnaire, which involves manipulation vignettes and experimental tasks and measures. The questionnaire has been distributed through social media and family and work connections.

Statistical procedure

ANOVA

The obtained data has been analyzed in SPSS Statistics (version 26). The group means of the variables, fixed mindset, growth mindset, self-compassion, adaptive and maladaptive perfectionism, negative affect and success expectations were calculated through ANOVA. We set the significance level to $p = .05$. Assumptions for both the ANOVA and ANCOVA were checked.

ANCOVA

For the testing of hypotheses regarding the moderator variables, the ANCOVA procedure has been used. We use ANCOVA to compare the mean levels of Negative affect between the groups with fixed and growth mindsets, after controlling for the influence of Adaptive perfectionism. We sought to confirm the effect of the Adaptive perfectionism, instead of ruling it out. This was achieved by a test of normality, a p-p plot to test linearity, Levene's test to check homogeneity of variance.

Results

The data collected has been subjected to analysis using the SPSS Statistics Program . Table 2 displays the means, standard deviations, and correlations among the dependent variables, namely Negative Affect Trial 1 (NA1), Negative Affect 2 (NA2), Negative Affect Combined (NAC), and the moderator, Adaptive Perfectionism.

Assumptions

The normality assumption was assessed through the Shapiro-Wilk's test, with a significance level of $p < 0.05$ (refer to Table 3). For Negative Affect in Fixed Mindset, the assumption of normality was not violated ($W(45) = 0.96$, $p = 0.09$). The assumption of normality was met for Negative Affect in Growth Mindset ($W(52) = 0.98$, $p = 0.56$), and also for Negative Affect in Fixed Mindset ($W(45) = 0.95$, $p = 0.23$). However, the normality assumption for Negative Affect in Growth Mindset was violated ($W(52) = 0.90$, $p = 0.01$).

Table 2.

Means, Standard deviations and Correlations

	Growth		Fixed		NA_1	NA_2	NAC	AP
	M	*SD*	*M*	*SD*				
NA_1					1	0.61**	0.88**	0.22*
NA_2						1	0.91**	0.29**
NAC	41.7	21.7	34.9	23.3			1	0.29**
AP	5.5	1.2	4.9	1.3				1

*** $p < .01$

* $p < .05$

Table 3.

Test of Normality

	Shapiro – Wilk		
	Statistic	*df*	
Sign			
Negative affect			
Fixed mindset	0.96	45	0.09
Growth mindset	0.98	52	0.56
Adaptive perfectionism			
Fixed Mindset	0.96	45	0.23
Growth Mindset	0.90	52	0.00

Analysis of Hypotheses

The first objective of this study was to examine the hypothesis that individuals with an incremental mindset would experience a lower level of negative affect compared to those with an entity mindset when faced with workplace failure. Table 4 presents the results of the analysis of variance (ANOVA) conducted to investigate the impact of mindset (incremental vs. entity) on negative affect. The mean negative affect score for individuals with an incremental mindset was 34.9 (SD = 23.3), while those with an entity mindset had a mean score of 41.7 (SD = 21.7). However, the obtained p-value associated with the ANOVA analysis was .137. Based on the p-value, we find that the observed difference in negative affect between incremental theorists and entity theorists when confronted with workplace failure did not reach statistical significance. Therefore, we cannot conclude that incremental theorists experience a significantly lower level of negative affect compared to entity theorists in this context.

Another goal of this study was to examine the relationship between mindset (growth vs. fixed) and negative emotions related to work performance, with a particular focus on the moderating role of adaptive perfectionism. The hypothesis posited that employees with a growth mindset would experience fewer negative emotions compared to those with a fixed mindset, and this relationship

would be stronger among individuals with high levels of adaptive perfectionism. According to the table, both the main effects of mindset (F = 2.744, p = .007) and moderator (adaptive perfectionism) (F = 7.735, p = .007) were found to be statistically significant. Furthermore, the interaction effect between mindset and moderator (mindset * moderator) was also significant (F = 7.536, p = .010). These findings provide support for the hypothesis that employees with a growth mindset experience fewer negative emotions related to their work performance compared to those with a fixed mindset. Moreover, the relationship between mindset and negative emotions is strengthened among individuals with high levels of adaptive perfectionism, as indicated by the significant interaction effect.

Table 4.

Anova

Mindset	Fixed		Growth		$F(1,95)$	Sig	η^2
	M	SD	M	SD			
Negative affect	34.9	23.3	41.7	21.7	2.245	.137	.023

Table 5.

Ancova

	Sum of Squares	df	Mean Square	F	Sig
Intercept	12229,18	1	1229,2	5.594	.101
Mindset	3464,51	1	3464,5	2.744	.007

Moderator	3375,3	1	3375,3	7.735	.007
Mindset * Moderator	3112,2	1	3112,2	7.536	.010
Error	41654,3	93	447,9	6.949	

Discussion

In the present study, we researched how negative affect differs in a negative feedback situation in the workplace where individuals were allocated to two PSA mindset groups (growth, fixed). Furthermore, we looked at adaptive perfectionism as a possible moderator between the relationship between mindset and the level of negative affect. These hypotheses build upon on the work of Burnette and colleagues (2012), who created the SOMA-model which embeds implicit theories within the self-regulation cycle of goal pursuit (goal setting, goal operating, goal monitoring, and goal achievement).

The first hypothesis posits that individuals who are part of the growth PSA mindset condition will experience less negative affect in a negative feedback setting than their counterparts in the fixed PSA mindset condition. Looking at our results, an insignificant difference can be seen in the levels of negative affect between the two mindset groups. Thus, in the context of professional setbacks/receiving negative feedback, people who subscribe to a more growth-orientated PSA mindset in their workplace environment do not experience less negative affect than individuals with a fixed-orientated PSA mindset. This finding does not agree with the results of the meta-analysis by Burnette and colleagues (2012), where they found a moderate negative correlation between growth mindset and negative affect at the stage of goal monitoring. Furthermore, the results of the present study are also in contrast with the findings of Babij et al. (2020), where they found that people who believe that their ability is fixed feel more negative emotions after setbacks and think they hinder their progress. People who subscribe to a growth mindset and believe that they can improve with effort, feel fewer negative emotions and use these emotions as motivation to try harder. They see setbacks as part of the learning process, not as signs of their innate ability.

In the second hypothesis, we investigated the potential moderating role of adaptive perfectionism on the relationship between PSA mindset and negative affect. Our hypothesis suggested that individuals with a growth mindset would experience fewer negative emotions compared to those with a fixed mindset, and this effect would be further amplified among individuals with higher levels of adaptive perfectionism. Upon analysing the data, our results align with previous research conducted by Lo and Abbott (2019), where they found that individuals who exhibit higher levels of adaptive perfectionism are less emotionally impacted by both positive and negative feedback. Consistent with their findings, we observed a significant interaction effect between adaptive perfectionism and mindset in relation to negative affect. This significant interaction effect suggests that adaptive perfectionism does indeed act as a moderating variable in the connection between mindset and the level of negative affect following negative feedback. Therefore, individuals who demonstrate higher levels of adaptive perfectionism, coupled with a growth mindset, exhibit a reduced emotional impact in response to feedback, both positive and negative. This provides further support for the notion that adaptive perfectionism plays a crucial role in regulating and managing emotional responses to feedback, particularly for individuals with a growth mindset.

Strengths and Limitations

Although the present study did not lend support to the SOMA-model proposed by Burnette and colleagues, the study has several notable strengths. One of the key strengths is the comprehensive analysis of the impact of adaptive perfectionism as a moderator. By investigating this factor, the study provides a nuanced understanding of its role in shaping outcome measures. This analysis enhances the rigor and robustness of the study's findings, and it could offer valuable insights for future research in this area.

Another strength of the study is its innovative mindset manipulation. The researchers made use of Schmitt and Scheibe's Professional Skills and Abilities mindset. Because mindset has been operationalized within a workplace context, the use of Schmitt and Scheibe's work is a novel approach that enhances the external validity of the study. This manipulation is also field-consistent, it allows participants to engage with the manipulation in a way that aligns with their experiences and

expectations in their respective work environments, enabling participants to engage with the study's findings in a meaningful way. This aspect of the study design is particularly important because it provides an opportunity to generalize the findings to real-world settings.

However, there are some notable limitations to this study. Although it implemented a field-consistent manipulation, its generalizability across various professions may be complex since professional skills and abilities required for effective workplace performance can vary significantly across different professions. Additionally, the limited sample size poses challenges for generalizability, statistical power, and susceptibility to bias and outliers. The use of an artificial online environment in this study may limit its ecological validity since it may not fully capture the complexity of real-world settings. Factors such as face-to-face interactions, physical environment, and contextual cues, which can significantly influence behaviour, may be absent or altered online. Therefore, caution should be exercised when generalizing the study's findings to real-world workplace contexts.

Future Research

To enhance the external validity of future research in this area, it may be necessary to replicate the study using larger and more diverse samples from various professions and industries. In addition, incorporating a more naturalistic setting and leveraging diverse research methods, such as field studies, case studies, and surveys, may also enhance the ecological validity of the study. Overall, considering these limitations and implementing strategies to address them can lead to more robust and credible research findings. To improve the ecological validity of research on the variables influencing workplace outcomes, future studies should be conducted directly in the workplace. This can be achieved by using ecological momentary assessments or journaling, which would allow participants to record their responses to setbacks or failures in real-time. This approach would enhance the ecological validity of the study by capturing variables that are experienced during the pursuit of real work goals and setbacks. In addition, to further enhance the relevance of the research, future studies may consider utilizing profession-specific article vignettes for the manipulation of variables. While the present study used work-specific article vignettes for manipulation, future studies may benefit from increasing

the specificity of the articles to the particular profession of the participants. This would allow participants to identify with the context of the articles more readily, making it more relevant to their work experiences.

Conclusion

This study aimed to investigate the impact of growth and fixed mindsets on negative affect in a negative feedback scenario in the workplace, while examining the potential moderating role of adaptive perfectionism. The results indicated that there was no significant difference in negative affect between individuals with growth and fixed mindsets, and adaptive perfectionism did not moderate the relationship between mindset and negative affect. Despite some notable strengths of this study, including the use of a novel manipulation of professional skills and abilities mindset, complex analysis of moderators, and practical applications for workplace interventions, there were also several limitations. These limitations highlight the need for caution in drawing broad conclusions and generalizing beyond the scope of the study. To improve future research in this area, it is recommended to use larger and more diverse samples from various professions and industries and to incorporate more naturalistic settings and diverse research methods. Moreover, conducting studies directly in the workplace using ecological momentary assessments or profession-specific article vignettes may enhance the ecological validity and relevance of the research. Overall, this study contributes to a growing body of research on mindsets and workplace outcomes, emphasizing the importance of considering potential and limitations in interpreting research findings. The practical applications of this research for workplace interventions and human resource practices underscore the need for continued research and development in this area.

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