

**The Moderating Effect of Self-efficacy on the Relationship between Goal Focus and
Successful Goal Pursuit**

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Abstract

It is a common occurrence for people not to attain their goals. One strategy that may help individuals attain their goals is increasing attention to either the process or the outcomes of a goal, we call this goal focus. The present research examined the moderating effect that self-efficacy has on the relationship between goal focus (process or outcome) and success in goal pursuit. 60 participants, aged 17-66, were recruited through the University of Groningen and the researchers' personal networks and took part in a two-part online questionnaire. In the first part goal focus was manipulated and moderators were measured, in the second part success in goal pursuit was measured. There was no moderating effect of self-efficacy detected. To add to this, the only effect of goal focus that was detected was a marginally significant effect favoring outcome focus for goal pursuit. This is contrary to the literature, in which process focus is often more beneficial to goal pursuit than outcome focus. The absence of a moderating effect of self-efficacy may The unexpected finding that process focus was not more beneficial to goal pursuit than outcome focus leads us to believe that more studies are needed to determine the context dependencies of goal focus' effect on goal pursuit. This also means that when goal focus based interventions are created in the future to facilitate goal pursuit it may be important to take contextual factors into account.

Keywords: Goal focus, Self-efficacy, Goal pursuit

The Moderating Effect of Self-efficacy on the Relationship between Goal Focus and Successful Goal Pursuit

Goals are often considered essential to human life (Kaftan & Freund, 2018). A goal can be defined as a cognitive representation encompassing the linking of means to desired outcomes (Kaftan & Freund, 2018). Simply stated, goals are composed of means and ends. This linking of means and ends helps us to make sense of the world by rearranging the information contained within it. Goals provide us with meaning, a sense of direction and increase happiness and subjective well-being (Freund et al. 2019; Freund & Riediger, 2006). Goals have even been called the very building blocks of personality and development in adulthood (Freund & Riediger, 2006). It is clear that having goals is beneficial in many ways (Kaftan & Freund, 2018) and that an absence of goals might have many negative consequences (Austin & Vancouver, 1996). However, having the right goals by itself is not enough. As one might imagine, successful goal pursuit and attainment is also necessary for optimal well-being (Klug & Maier, 2015; Kaftan & Freund, 2018; Affleck et al., 2018). Conversely, goal nonattainment can lead to anger, sadness and depression (Austin & Vancouver, 1996). Intentions to achieve goals are regularly set but of course goals are not always achieved. That is why it is essential to scrutinize the strategies that can help facilitate goal pursuit.

One of the strategies that a person may employ to help solve some of the problems that manifest during goal pursuit is the use of an appropriate goal focus. Goal focus describes the amount of attention a person pays to either the process, outcome or both aspects of a goal. As an example, imagine a swimmer, he or she might focus on the right technique (the means), or on achieving a personal best (the ends). This distinction has also been made in research, and some results suggest that a simple redistribution of focus may have a positive effect on goal pursuit (swimming faster). This, of course, is a promising proposition as control over attention

is free and may be used by any person at any time. Another variable that has often been linked to successful goal pursuit is self-efficacy (Pajares, 1996). Self-efficacy refers to the belief that one is capable of executing the behaviors necessary to achieve one's goals (Bandura, 1977). Because Self-efficacy and goal focus are both related to success during goal pursuit, the present research aims to investigate whether self-efficacy regarding a chosen task moderates the effect that the type of goal focus may have on goal pursuit (Pajares, 1996).

Goal pursuit

Goal pursuit may be defined as the process of attempting to achieve a desired future outcome (Gollwitzer & Brandstätter, 1997). As noted, having goals, pursuing them and achieving them are all important to a balanced life. The pursuit of goals is obviously the most actionable (and thus most attractive for intervention). The process of goal pursuit consists of four phases: setting preferences (predecisional phase), planning how to get started (preactional phase), all the way from initiation to completion of goal-directed action (actional phase) and evaluation (postactional phase). Each of these phases brings unique challenges and requires different capacities to overcome them. Pursuit and achievement of goals are important to the well-being of a person, and self-regulatory problems regarding goals, such as procrastination, can lead to stress and ill health. (Kaftan & Freund, 2018; Kaftan & Freund 2020). Even though the importance of goal pursuit and achievement is clear, goal pursuit often fails. Research on new years' resolutions shows that around half of people don't achieve their new year's resolutions, a type of goal which for which people are probably quite motivated (Nocross et al., 2002; Oscarsson et al., 2020). The question of how failure during goal pursuit may be mitigated remains.

In both goal setting and goal striving, the two most important and well-known self-regulatory strategies are mental contrasting and implementation intentions (Ryan, 2019). Implementation intentions are if-then plans that define when and where a person wants to act

on a goal-related opportunity (if-component), and specify how and what kind of action will be performed (then-component) (Ryan, 2019). Mental contrasting entails first imagining the desired future state and then reflecting on the current situation. These strategies are more effective when combined than either strategy alone (Kaftan & Freund, 2018).

Mental contrasting and implementation intentions both benefit goal pursuit in unique ways. Mental contrasting is beneficial because it produces a discrepancy between the future and reality, and thus motivates a person to act (Ryan, 2019). Focusing only on either the wished-for future or the negative present reality does not produce the same discrepancy and so the need for action is not realized. Implementation intentions are beneficial because they establish a mental link between if- and then components (Ryan, 2019). This link between the components means that goal-related opportunities will be more readily detected, attended to and linked to a specified response, thus increasing the chances of goal attainment (Ryan, 2019). However, even when both of these strategies are employed to their fullest potential, any number of problems may still occur during goal pursuit (Kaftan & Freund, 2018). Importantly, many of these problems may be partially mitigated by employing the use of the right type of goal focus during goal pursuit (Kaftan & Freund, 2018). Theory and interventions related to mental contrasting and implementation intentions have been well established but the literature on goal focus is only now beginning to grow. This means that we have an opportunity to improve interventions by taking this new, goal focus related approach.

Goal focus

Process focus is the degree to which someone attends to the means related to achieving a goal, and outcome focus is the degree to which someone attends to the outcomes of a goal (Kaftan & Freund, 2018). Thus, a process focus describes focusing on what steps need to be taken to achieve a goal, and an outcome focus describes focusing on the reasons for and consequences of pursuing a goal (Freund & Hennecke, 2015). Every person needs to attend to

both the process and the outcomes of goals during goal pursuit. However, the process and outcomes are not always equal in the amount of attention they receive (Krause and Freund, 2014). How much attention each of the two goal foci naturally receives depends partly on personal factors such as age and the amount of available resources (Freund et al., 2019). However, it also depends on goal-related factors such as what type of goal one is pursuing. (Freund et al., 2019) Studies on goal focus observe the differential effect that actively attending to either the means or the ends of a goal might have on several outcome variables.

A process focus has been shown to be more beneficial than an outcome focus to five outcome variables (Freund & Hennecke, 2012; Freund et al., 2010). The first two are higher subjective well-being and a more positive affect during goal pursuit (Kaftan & Freund, 2018; Kaftan & Freund, 2020; Fishbach & Choi, 2012; Freund & Hennecke, 2012; Freund et al., 2010). Thirdly, a process focus induced higher confidence in participants that they would be able to achieve their desired outcomes (Kaftan & Freund, 2020). Fourthly, maintaining a process focus during skill acquisition has been shown to result in higher intrinsic motivation to continue to pursue the skill after acquisition (Zimmerman and Kitsantas, 1999). Finally, a process focus benefits goal pursuit in many different forms as is shown in studies on weight loss, exercise, academic performance and skill acquisition. (Freund et al, 2019; Freund & Hennecke, 2012; Zimmerman & Kitsantas 1997, 1999; Kaftan & Freund, 2020; Freund et al., 2010; Taylor et al., 1998; Pham & Taylor, 1999).

Many explanations have been given for the beneficial effect of process focus on outcome variables, we list four. Two common explanations are better emotion regulation and better planning (Pham and Taylor 1998, 1999; Fritzsche, 2003; Steel, 2007). Process focus might lead to better planning because it leads to higher salience of the steps needed to achieve a goal and better use of opportunities during goal pursuit (Taylor et al., 1998; Freund et al., 2019). Better emotion regulation may be partly achieved by the fact that a process focus

offers more positive reinforcement by giving the chance to observe successful use of means as opposed to only focusing on the outcome which may be far away during goal pursuit (Krause & Freund, 2014) Thirdly, less procrastination has been brought forward as an explanation for more successful goal pursuit when maintaining a process focus (Krause & Freund, 2014). Process focus may reduce procrastination because it reduces task aversiveness and fear of failure, two factors frequently associated with procrastination (Krause & Freund, 2016). Fourthly, process focus has been shown to increase persistence (Freud et al. 2010; Fischbach and Choi, 2012). This effect may be partly mediated by the effort heuristic meaning that with higher perceived expended effort, the goal is valued more. When a process focus is active the perceived expended effort is higher because the (effortful) means are being attended to (Freund & Hennecke, 2015; Kruger et al., 2004).

There has also been some evidence that outcome focus sometimes has benefits over process focus, we give four contexts where this may be the case. Firstly outcome focus seems to be most adaptive when comparing different goals and when making a decision whether a goal should be adopted. And secondly, when a deadline for a goal is near. (Freund & Hennecke, 2015; Freund et al., 2019; Fishbach & Choi, 2012; Kaftan & Freund, 2018). Thirdly, when re-evaluating a goal to re-establish motivation, outcome focus may also be more adaptive (Freund and Hennecke, 2012). Finally, Outcome focus may also be more beneficial when engaged in an easy goal (Freund & Hennecke, 2012; Kaftan & Freund, 2018). Outcome focus may be more beneficial in early goal pursuit because it can help in establishing goal motivation and because the deliberation of what goals to pick lends itself more to an abstract manner of thinking about the goal (Freund et al., 2019). Outcome focus may be helpful in late phases of goal pursuit because it can give a final boost to motivation when the goal is near (Freund et al., 2012). When re-establishing motivation an outcome focus may be beneficial because it helps in seeing the big picture and reminds one of the

reasons why the goal is being pursued (Freund & Hennecke, 2012). In the context of easy goals, an outcome focus may be more adaptive because it helps people appreciate and consolidate their motivation to strive and helps re-energize them towards completing their goal (Kaftan & Freund, 2018).

What we conclude thus far about goal focus is that attending to the means is often beneficial to goal pursuit, but in some situations, outcome focus may be more beneficial. Importantly, we propose that which focus works best, might depend on other factors. In particular, we believe that a person's self-efficacy may be a key moderator.

Self-efficacy

As noted before, self-efficacy refers to someone's belief that they will be able to execute the behaviors necessary for achieving goals. Self-efficacy reflects confidence in the ability to exert control over one's motivation, behavior, and social environment (APA, 2009). The concept has received a lot of attention since its inception in 1977, with some of the articles authored by Bandura being among the most cited in all of psychology. The concept of self-efficacy has had a considerable influence on research, education and clinical practice (APA, 2009).

Self-efficacy has been shown many times to be an important predictor of a wide variety of outcome variables. Bandura views increased effort and persistence to be the central outcomes of self-efficacy (Bandura, 1977; Bandura, 2013). Self-efficacy has also been verified in predicting other variables such as motivation, communication skills, level of commitment, affect and health (Zimmerman, 2000; Locke and Latham, 2002; O'Leary, 1992). Low self-efficacy has been linked to increased stress and increased risk of burnout (Schwarzer & Hallum, 2008).

Self-efficacy has a substantial effect on the amount of success during goal pursuit. To quote Bandura (1997), "knowing what to do is only part of the story" (p. 223). He and other

researchers suggest that a certain amount of belief in what one is capable of is paramount to success in goal pursuit (Zimmerman, 2000). In confirmation of this, self-efficacy is a strong predictor of performance and has been linked to performance in a diverse body of research (Bandura and Locke 2003; Pajares, 1996). The effects of self-efficacy on performance have been found in both academic as well as workplace environments (Cherian & Jacob, 2013; Barling & Beattie, 1983; Multon et al., 1991, Schunk & Schwartz, 1993; Klassen et al., 2008; Zimmerman, 2000; Fritzsche, 2003; Zajacova, 2005).

We postulate that, because self-efficacy is so important for performance, the beneficial effect of process focus on goal pursuit may make a bigger difference for people low in self-efficacy than for people high in self-efficacy. As mentioned performance, persistence, effort and motivation are central outcomes to self-efficacy (Bandura & Locke, 2003; Bandura, 1977; Bandura, 2013; Zimmerman, 2000). Logically persons low in self-efficacy may also score lower on these outcome variables. Importantly performance, persistence and motivation are some of the things enhanced by a process focus (Krause & Freund, 2015; Freund et al. 2019). Leading us to wonder whether the lack of performance, persistence and motivation in people with low self-efficacy may be mitigated by the adoption of a process focus. Adopting a process focus may of course also benefit the goal pursuit of people high in self-efficacy but we suggest that it may be less crucial for this subset of people because they are already predisposed to higher levels of things such as persistence and motivation and may thus proportionally depend less on the right type of goal focus. Our main hypothesis was that for participants low in self-efficacy process focus results in more successful goal pursuit than outcome focus (and that this difference would follow a similar pattern, but less pronounced for participants high in self-efficacy).

The present research

The present study consists of a two-part online questionnaire in which participants will either be induced to have a process focus or an outcome focus. After five days, in part two, we will look at the effect that goal focus has on goal pursuit. We believe this study to be important because of the following two points. Firstly, there have been few experimental studies on the effect of goal focus on goal pursuit. Secondly, to our knowledge there have not been any studies on the moderating effect of self-efficacy on the relationship between goal focus and success in goal pursuit. As Kaftan & Freund (2020) have noted, experimental research on goal focus may allow us to take a step toward conclusions about whether goal focus is either a cause or an effect. Lastly, the somewhat naturalistic nature of our study has not been employed often in the literature on goal focus and adds to the generalizability of our findings.

Method

Participants & Design

There were 267 cases in the dataset. 202 of the participants were removed due to incompleteness. We deemed participation incomplete if a participant did not fill out the survey until at least the seriousness check (the final question in the second part of the study). 141 of these participants did not complete part 1 of the study. It is important to note that many of these 141 cases did not even fill out 1 question. Others filled out a few questions and then left. Of the 126 participants who did fill out part 1, 5 forgot to submit their answers. Their answers were not saved and they did not receive an e-mail to part 2. Of the remaining 121 participants, only 65 filled out part 2. One further person indicated that they did not take part seriously and was removed. Two participants were removed because they switched goals between part 1 and part 2. Two more participants were removed because they did not write

down a goal in part 2 making it impossible for us to verify whether they stuck to the same goal for the duration of the study. In the end, we were left with 60 participants.

Our sample consisted of 35 females and 24 males, 1 participant did not wish to share their gender. The age range of our participants was between 17 and 66 ($M = 31.58$, $SD = 14.62$). Participants were recruited in two ways. Firstly, they were recruited through the personal networks of the researchers. In addition, first-year psychology students enrolled at the University of Groningen participated in exchange for course credit.

Our study used a between-subjects design. We had one independent variable, goal focus, consisting of two levels (process focus vs outcome focus) to which participants were randomly assigned. Our dependent variable was successful goal pursuit and our moderator was self-efficacy. This study was part of a bigger project which included additional variables which will not be discussed in detail here, an overview of all the variables that were measured can be found in Table 1 in appendix A.

Materials & Procedure

This study was a Qualtrics study. The study consisted of two parts, each part consisting of a questionnaire. The first thing that was presented to the participants was an informed consent form, which was followed by an introduction.

Goal recall task

We asked participants to recall a goal on which they could actively work the next five days and that they had not worked on for longer than three months. We then asked the participants to clearly describe their goal. We were not interested in goals that had been pursued for longer than three months. Our main reason for setting this criterion is that we suspected that participants would already have adopted a fixed strategy if they had already worked on a goal for more than 3 months. Additionally, we felt that the progress that participants could make in 5 days regarding such a relatively big goal may not be significant

enough. Participants were allowed to pick a big goal or a small goal and were free to choose whether they wanted to work on a new or an existing goal. We left the participants freedom in these regards because we wanted the goals to be meaningful to the participants. In many other studies, goals were given and may or may not have been meaningful to the participants. We also left the participants freedom in choosing their goals because we believed that switching between goal foci may be relevant for goals with all kinds of different characteristics.

Self-efficacy

Next, self-efficacy was measured through eight items from the general self-efficacy scale combined with three items from the new general self-efficacy scale ($\alpha = .88$). Items were measured using a 7-point Likert scale, the anchors ranged from strongly disagree to strongly agree. The items used were adapted from measures of global self-efficacy, to task-specific self-efficacy. Task-specific self-efficacy has to do with a person's perception of their ability to perform the actions specific to a situation (Dullard, 2014). General self-efficacy describes the person's perception of their ability to perform actions in any situation. Items included in the self-efficacy scale included items such as: "I can manage to solve difficult problems pertaining to my chosen goal if I try hard enough.". This item was adapted from the original item "I can always manage to solve difficult problems if I try hard enough", which measured global self-efficacy. We transformed and combined items from both general self-efficacy scales to get a more complete measurement of task-specific self-efficacy, picking the items from each scale that were most suited for adaptation to goal-specific self-efficacy.

Goal focus manipulation

Lastly, participants were manipulated to induce either process- or outcome focus. Participants in both groups were first presented with a quote and an affirmation of research evidence about their assigned goal focus. The quote for the process focus condition was: "A Goal without a Plan is just a Wish". For the outcome condition: "Begin with the End in Mind"

For the outcome focus the affirmation looked like this: “ Current research has shown that, when pursuing a goal, focusing on the desired outcome is a very effective approach to achieve one's goal.” For the process focus the affirmation claimed that focusing on the process was more beneficial. After this, participants were asked to visualize either outcome or process of the goal. Participants were also asked in three different ways to describe how their assigned goal focus might affect goal pursuit. In the outcome condition participants were asked to describe their desired outcome, how they would feel when achieving it and how thinking about the outcome might help them pursue their goal. In the process condition participants were asked to describe three steps they could take to work on their goal right now, how these steps would help them pursue their goal and how they would feel while working on these steps. Lastly, the participants were reminded to focus on either outcome or the process of their goal over the next five days.

We chose to include a variety of manipulations to improve our chances of successful manipulation overall. The quote and the appeal to research were added so that participants would gain confidence in their assigned goal focus. We specifically refrained from mentioning the opposite focus, to avoid that merely mentioning it might inadvertently trigger the wrong focus. Visualization had been used in previous studies on goal focus and makes the subject participate in the manipulation (Pham and Taylor, 1999). The descriptions we asked the participants to give also had the goal of actively involving the participants in the manipulation by having the participant think, formulate and write down how they thought either type of goal focus may affect their goal pursuit.

Successful goal pursuit

Two days after the first survey participants got an e-mail reminder, that reminded them of their intent to pursue their goal. The participant received the link to the second part of the study five days after completing the first. In the second part we measured the dependent

variable of the present study, which was successful goal pursuit. This was measured through two questions namely: to what extent participants thought they successfully pursued their goal over the last five days and to what extent they thought they made progress towards their goal over the last five days ($\alpha = .88$). The answers to both of the preceding questions were recorded on a seven-point Likert scale with anchors ranging from “not at all” to “extremely”.

Manipulation check

We also added a manipulation check where we simply asked the participants to what extent they had focused on either the process or the outcome of their goal. The answers were recorded on a seven-point Likert scale with anchors ranging from “the process towards my goal” to “the outcome of my goal”, with “the process and outcome equally” being the neutral answer. Lastly, at the end of the second survey we added a seriousness check.

Results

For the analysis of the data, we used SPSS and the PROCESS macro by Hayes (2013). There were no violations of statistical assumptions.

Manipulation check

To test whether our manipulation worked as intended, we ran an ANOVA with our goal focus manipulation as the independent variable and our manipulation check item as the dependent variable. Participants in the outcome focus group scored higher on outcome focus ($M = 4.42$, $SD = 1.82$) compared to the process focus group ($M = 3.63$, $SD = 1.84$). However, there was no significant effect found, $F(1,58) = 2.80$ $p = 0.10$. We expected a clearer difference between the groups as the goal of our manipulation was to induce different types of goal focus in the process focus and outcome focus group. However, this result is still marginally significant and the absolute difference between the groups is still substantial. Especially when taking our small sample size into account. But because this effect was not significant, our results need to be interpreted with some caution.

Hypothesis test

To test our hypothesis that for participants low in self-efficacy, process focus results in more successful goal pursuit than an outcome focus and that this effect would be less pronounced for participants high in self-efficacy we ran an analysis with goal focus as the independent variable, successful goal pursuit as the dependent variable, and self-efficacy as the moderator. The interaction effect was not significant, $t(59) = -0.35, p = 0.73$. Thus our main hypothesis was not supported by our data, as we thought the moderating influence of self-efficacy would be substantial. The main effect of goal focus was also not significant, $t(59) = 0.24, p = 0.81$. For participants in the process focus condition, the score ($M = 3.96, SD = 1.46$) on successful goal pursuit was about the same as for participants in the outcome focus condition ($M = 4.06, SD = 1.46$). Lastly, the main effect of the moderator was not significant, $t(59) = -0.30, p = 0.76$.

Explorative analysis

Because our manipulation did not work as intended, we wanted to repeat our main analysis with the manipulation check (where we asked the participants to what extent they had focused on either the process or the outcome of their goal in the last couple of days) as the independent variable, successful goal pursuit as the dependent variable and self-efficacy as the moderator. In lieu of effective manipulation we used the manipulation check as the independent variable in hopes of observing more of a correlational effect between type of goal focus and successful goal pursuit. Using the manipulation check as the IV is informative, because here we test whether the focus people actually reported using (regardless of what condition participants were assigned to) predicted their goal pursuit. The downside of this is that we of course only measured the manipulation check afterwards and did not manipulate it beforehand as we did our original independent variable. That means that, while the effects may be informative, we have to be really careful with ascribing causality to them. The

interaction effect was not significant ($t(59) = -0.33, p = 0.75$), which again was not in line with our hypothesis. The main effect of the manipulation check was marginally significant ($t(59) = 1.71, p = 0.09$). Participants who had a higher score on the manipulation check scored higher on goal pursuit. This indicates that participants with higher outcome focus scored higher on successful goal pursuit. It is surprising, given the literature, that an outcome focus (rather than a process focus) would be associated with more successful goal pursuit. Lastly, the main effect of the moderator was not significant, $t(59) = -0.57, p = -0.63$.

Discussion

In this study, we wanted to investigate whether self-efficacy would have an effect on the relationship between goal focus and goal pursuit. Our main hypothesis was that for participants low in self-efficacy process focus results in more successful goal pursuit than outcome focus (and that this difference would follow a similar pattern, but be less pronounced for participants high in self-efficacy). Our results do not support this hypothesis. We did not find a moderating effect of self-efficacy.

This is a surprising finding. We would have expected to find a bigger difference between the two goal foci in people low in self-efficacy. As mentioned in the introduction, our thinking was that for people low in self-efficacy the advantage of a process focus over an outcome focus may be more impactful than for people high in self-efficacy. Our current results would suggest that this is not the case. We also did not find a main effect of goal focus on goal pursuit. Even though we made no direct predictions regarding this, it is quite surprising as process focus consistently emerges from the literature as more beneficial to goal pursuit (Freund et al, 2019; Freund & Hennecke, 2012; Freund & Hennecke, 2015; Zimmerman & Kitsantas 1997,1999). What was perhaps most surprising was the fact that, in our explorative analysis, we found a marginally significant effect in favor of outcome focus

over process focus. This is not in line with the literature and thus quite unexpected (Kaftan & Freund, 2020; Freund et al., 2010; Taylor et al., 1998; Pham & Taylor, 1999).

Methodological explanations

When looking for reasons why the results of our study are not consistent with the literature one of the things that draws our attention is our manipulation. Especially given the fact that when using the manipulation check as the independent variable we did find an effect, although not in the expected direction. There may be multiple possible reasons why our manipulation did not produce the expected effect. Three of these reasons have to do with the way goals were chosen in our study. Firstly, the lack of effect may have had to do with the type of goal that our participants chose. For example, one possible explanation that may come to mind is that participants picked goals that they wanted to finish, or come close to finishing, within these five days because they viewed this study as a unique motivational opportunity for finishing their important goals. As noted in the introduction, research shows that goal pursuit regarding goals that are close to their can benefit more from outcome focus than from a process focus (Freund & Hennecke, 2015; Freund et al., 2019; Fishbach & Choi, 2012; Kaftan & Freund, 2018). According to Kaftan and Freund (2018) outcome focus may be beneficial when a deadline is close because it “might revive the importance of a goal and give a final “boost” to motivation” (p.8). One possible caveat is that many of our participants picked habit goals which, by definition are never done. That being said, it may have been the case that the nearing of the second questionnaire acted as sort of an artificial deadline. So although there are possible counter-arguments that may be brought forward, we believe that the argument of the nearing deadline is quite plausible. Secondly, it could also have been that the type of tasks that our participants picked were easy tasks. As we mentioned in the introduction, easy tasks also benefit more from an outcome focus than from a process focus (Freund & Hennecke, 2012; Kaftan & Freund, 2018). This may be the case because when a task is easy to master an

outcome focus may be more effective at increasing motivation to continue to strive (Kaftan & Freund, 2018). Many of our participants picked simple habit goals such as eating healthier and exercising more. While simple does not necessarily mean easy, there were plenty of these goals that were quite achievable such as “eat less sugar”, “drink more water”, “doing a workout when my body it up to it” and “more walking outside”. Finally, it may have been that a large proportion of the sample picked a new goal. We explicitly stated in the first survey that picking a new goal was allowed. As was mentioned in the introduction, the literature suggests that outcome focus may be more beneficial during the initiation of a goal. However, an outcome focus is really only more beneficial in the pre-decisional phase. In this phase goals and their desirability and feasibility are compared. To compare different goals and their outcomes an outcome focus is pretty much a requirement. (Freund & Hennecke, 2015; Freund et al., 2019; Fishbach & Choi, 2012; Kaftan & Freund, 2018). However, in the current study we did not take the efficiency of goal setting into account when looking at outcomes of goal focus, which means that the benefits of an outcome focus during goal initiation may not apply in our study. Any advantage of an outcome focus during initiation of goals may be prevented in future studies by controlling for new goals or by extending the length of the study so that participants could be expected to go through several phases of goal pursuit.

Another reason that one may think of for the absence of an effect may have been that our manipulation text was simply not strong enough. Even though we asked the participants to describe things related to their goal in a manner that was supposed to induce a way of thinking in line with one of the foci, this is not the same as actually inducing either type of goal focus. And even though writing things down may count as active participation, one could easily see how participants could see these tasks as part of the survey they needed to get through, not as inducing a state of mind that is one of the main goals of the survey. That being said we don't

believe that this point was a major cause of the absence of an effect because even though the difference between the two conditions that we recorded with the manipulation check was not significant we did observe a sizable difference between the conditions.

It may have also been that the type of manipulation we used may not have been enough to sustain sufficient manipulation during the five-day period between the surveys. It may be more effective to give our participants actual practical daily homework such as a daily visualization task, as did Pham and Taylor (1999). One could easily imagine that the participants' grasp on the idea of a goal focus waned as the days went by. It may have been unclear for participants what they were supposed to 'do' to retain a certain type of goal focus. Although our manipulation in the first survey consisted of various components and explanations, for the next five days none of these components were present, making us unsure whether the participants were actually sufficiently manipulated toward a certain goal focus. We did, of course, remind them to keep a certain goal focus in mind for the next five days and sent a reminder two days after the first questionnaire. However, the email did not reaffirm the respective goal focus, rather only a reminder to continue to pursue the goal, because all participants received the same email and we could not send separate e-mails depending on the condition. This means that the affirmation of a certain goal focus was only presented once and this reminder consisted of two sentences which, logically, may not have been enough to noticeably change the way our participants viewed and interfaced with their goals over the entirety of the next five days. One important caveat to introducing homework in a study like ours is that the participants did not share a common goal, making it harder for us to devise homework, as only general reminders could be given.

Another obvious reason that one may bring forward is the reason why we did not find any result regarding our hypothesis is that our scale for task-specific self-efficacy was inadequate. However, we do not think that this is very likely for two reasons. Firstly, the

items on our scale were carefully adapted from two of the most trusted measures of general self-efficacy. And secondly, our scale had a Cronbach's alpha of 0.88.

Theoretical explanations

The most obvious theoretical explanation for why we did not find an effect consistent with our hypothesis is that self-efficacy may not affect the relationship between goal focus and goal pursuit. Our thinking was that the benefits transferred through a process focus may be more important for low self-efficacious persons. It may however be the case that a process focus benefits people with all levels of self-efficacy equally. We hypothesized that because self-efficacy and process focus both boost performance, persistence and motivation that in absence of self-efficacy, the 'boost' in these factors gained from a process focus may be more crucial. Yet it may be the case that the boost in performance, persistence and motivation gained through a process focus may be proportionally the same for people with low and high self-efficacy. This would indicate that the benefit of process focus over outcome focus for performance is not a fixed absolute number but rather a proportionally consistent increase regardless of prior level of self-efficacy and corresponding advantages.

Effect of outcome focus

One possible explanation why, in the explorative analysis, an outcome focus was found to be more beneficial to goal pursuit than a process focus is that an outcome focus can also have benefits over process focus in some contexts. As mentioned before, outcome focus may be more adaptive during some of the phases of goal pursuit (Kaftan & Freund, 2018). What makes the issue of motivational phases as related to the adaptiveness of goal focus even more complex is the fact that even in phases when one type of goal focus is generally more adaptive, there may be some dynamic switching of adaptiveness of the goal foci. In the actional phase focusing on the outcome may generally prevent people from implementing goal-related action making an outcome focus less adaptive. However, outcome focus will

sometimes need to be activated during the actional phase to facilitate optimal goal pursuit (Hennecke & Freund, 2012). We provide three examples, the first two we already mentioned in the introduction. Firstly, activation may occur when goals and corresponding motivation need to be re-established because goal commitment may be slacking (Freund & Hennecke, 2012). Secondly, an outcome focus may be more beneficial when a deadline is looming (in the last part of the actional phase of goal pursuit). Lastly, outcome focus may be more adaptive during the actional phase when goal pursuit is perceived as highly unpleasant. In this situation focusing on the outcome may be more motivating than focusing on the unpleasant means (Freund et al. 2019). It may be the case that which goal focus and accompanying attributes are needed more during goal pursuit changes often (Freund and Hennecke, 2012). Generally what makes an outcome focus useful is that it allows a person to see the big picture and so reminds them of their motivation to pursue a goal. The downside of this is that an outcome focus may hinder the flexible adjustment of the means and may emphasize maximizing effort instead of efficiency (Freund et al. 2019). It may have been that the properties of an outcome focus were more often beneficial to goal pursuit within the situation of our study because of any of the reasons mentioned above as well as those mentioned in the methodological explanations section.

Theoretical implications

We suggest that our findings do not give reason to doubt the general trend in the literature that suggests a process focus to be more adaptive for goal pursuit. Rather, we believe that our results should serve to emphasize the fact that the adaptiveness of either type of goal focus may be quite dynamic and depend on context. It is possible that our study did not provide the right context for the reproduction of the results that were seen in other studies.

Limitations

There are three main limitations that we observed in our study. The first limitation to our research was the low sample size. As noted, this low sample size was the result of having to remove a large portion of participants. Many participants quit the survey before the first question. Before the first question, only two things were presented. Namely, the introduction and the informed consent form. We suggest that the informed consent form was not the major cause of participant dropout, but rather the introduction. The informed consent form was, to our knowledge, quite standard. However, our introduction may have had more potential for causing dropout. In this introduction, we told participants to “think of a goal” and to “actually pursue this goal actively for the next 5 days”. After this we emphasized again the importance of being able to work on this goal for five days. It may have been that the participants interpreted this as the main task of the study, to pick a goal and work on it. However, to us the actual goal and the working on it was not the focus. Our focus was on how participants viewed their goal. After the reading the introduction participants may have viewed the study as requiring five days of additional work, instead of five days of applying a new perspective to a goal that they wanted to work on anyway. We may have mitigated early drop out by emphasizing that participants did not need to perform additional tasks or create new goals beyond their daily routine to participate in the study. Another possibility may be that people forgot to fill out the second survey. They may not have checked their email or believed they had more time to fill out the second part. We did only leave a short window to fill out the second survey because we believed it might skew results otherwise. Lengthening of this window may have increased the number of participants to fill out the second survey. However the downsides of this would have been that the waning effectiveness of the manipulation may have become a bigger problem. It would have also created difference between participants in that some participants would have the opportunity to work longer on their goal than other (6

to 8 or maybe more, compared to 5). An additional reminder may also have been helpful to help people remember. We can imagine that a subset of our sample got discouraged by the idea of having to fill out another long survey, like the first part of our study. We may have benefited from a note that emphasized that the second part of the survey would be much shorter than the first part.

A second possible limitation of our study was that our sample partly consisted of participants that were selected based on convenience. Part of the sample consisted of friends and family of the researchers. This may have resulted in some form of sample bias. A solution would be to recruit participants through a variety of sources for sampling in a way that would not create a bias.

A third factor that some may think of as a limitation of the study was that there was little research available on which we could base our research methodology. As goal focus is such a new concept and experimental studies are very scarce, we had to rely mostly on logic and general scientific knowledge. However, we believe that the novelty of our study was in many ways a strength, as it broke new ground in terms of the topic but also in terms of our realism-based approach.

Future research

We suggest two main points which may be important for future research to look at. Firstly, we suggest that an important focus for future research could be experimental studies. As noted, there have been very few experimental studies on goal focus, and there are fewer that span multiple days. To conduct effective experimental studies it is important to determine good ways to manipulate goal focus. Especially in studies like ours, spanning multiple days or longer this may be a substantial challenge. Firstly, it may be difficult to create a manipulation that continually induces one type of goal focus across several days. It may be helpful to create a schedule of manipulations so that a certain goal focus can be induced daily or multiple times

a day. Secondly, it may be difficult to separate naturally occurring changes in goal focus from those that are induced by the manipulation. It may be useful to track the activation of both types of goal focus over the course of future studies to see how the manipulation of goal focus interacts with its natural fluctuations. To establish good, reliable manipulations of goal focus across multiple days we expect that multiple studies will be necessary. When good manipulations have been established experimental studies may contribute to our understanding of causality in the relationship between goal focus and goal pursuit. It will be especially interesting to see whether a certain goal focus indeed causes better goal pursuit or that goal pursuit in a certain context induces a certain type of goal focus.

Secondly, we suggest that future researchers take the context dependency and complex dynamic properties goal focus into account when constructing their studies. There is evidence that the adaptiveness of either type of goal focus may change depending on a number of moderating and mediating variables. Some examples of the factors that may influence the relationship between goal focus and goal pursuit are task difficulty, phase of goal pursuit, participant age and task complexity (Freund & Hennecke, 2012; Kaftan & Freund, 2018; Krause & Freund, 2014; Freund et al., 2019). There has also been some evidence that a process and an outcome focus can be activated simultaneously, that both can be beneficial to goal pursuit and that the greatest benefit may be seen by combined or subsequent activation of both types of goal focus (Kaftan, Freund, 2020; Zimmerman (1997, 1999). The points mentioned above highlight the fact that it is important to carefully construct future studies so that it is clear which type of goal focus (either or both) is induced, and to which contexts the results of a certain goal focus study pertain.

Conclusion

In this study we investigated the moderating effect of self-efficacy on the relationship between goal focus and goal pursuit. Even though we were not able to attain any conclusive

findings we hope that the current study will provide future researchers with some pointers as to what kind of research to conduct in the future and what to pay attention to when conducting future research.

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Appendix A

Tables

Table 1

All variables measured

Variable	Independent Variable(s)	Dependent Variable(s)	Moderator Variable(s)
1 st Row	Goal focus	Goal pursuit	Task Aversion
2 nd Row			Intrinsic/Extrinsic motivation
3 rd Row			Self-esteem
4 th Row			Goal difficulty
5 th Row			Self-efficacy