

NEGATIVE AFFECT PREDICTING GOAL PURSUIT AFTER SELF-CONTROL FAILURE

Master thesis

Experiencing affective reactions: How can negative affect predict goal pursuit after self-control failure?

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Abstract

Self-control is crucial in understanding human behaviour and reasoning. It has a huge impact on one's mental as well as physical well-being, among many other areas. However, it is inevitable to experience self-control failure, where we give in to temptations that hinder us in our goal pursuit. Such a failure does not have to be seen as a defeat – some may actually come out stronger and become more confident in pursuing their goal. Nevertheless, some decide to quit after failing once or multiple times. The current study focussed on the process of self-control failure in goal pursuit, and how negative emotions experienced after self-control failure predict goal pursuit. This mediating effect was explored through means of an online questionnaire, which covered the (1) main characteristics of the participants, (2) self-control failure, (3) goal pursuit, and (4) the PANAS scale, (5) importance of the goal, and (6) type of goal. The results showed no significant effect for a mediation of negative affect in goal pursuit only a significant (negative) direct effect between self-control failure and goal pursuit. Therefore, the hypothesis was not supported. An exploratory analysis was performed, where positive affect was examined as the mediator. These did give a significant negative mediation effect, meaning that not experiencing positive affect after self-control failure would negatively predict goal pursuit. Unfortunately, this study was severely underpowered, thus no definitive conclusions could be drawn. Further research with a larger sample size is needed to determine the actual significance of these effects.

Keywords: *self-control failure, negative affect, positive affect, goal pursuit, mediation*

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Introduction

While some may be able to walk through the aisle filled with different types of chocolate bars, inhaling the sweet aroma, and still be able to resist the temptation of buying them, others cannot control their impulses and give in to this sweet enemy. Self-control is known as the self's ability to override unwanted thoughts, emotions, impulses, and automatic or habitual behaviours (Mead et al., 2010). Those who are naturally born with it have a high level of trait self-control (Ent et al., 2015) and use certain strategies (Duckworth et al., 2016), while others need to train themselves (Friese et al., 2017). Self-control has been found to have a large (positive) impact on a range of outcomes, such as one's health, well-being, academic performance, and relationships (Tangney et al., 2004)– which are generally all long-term goals. Yet, many are still unable to act in a manner consistent with one's long-term goals and values, such as losing weight, quitting smoking, or exercising more. The Dutch have come up with a nice term to coin this phenomenon: 'geen ruggegraat hebben' (which simply translates to: not having a spine). In academic terms, this constitutes 'self-control failure' (Fujita, 2011).

Self-control failure may impact whether one will continue pursuing their goal, as self-control increases motivation for active goal pursuit (Jia et al., 2019). While some will discontinue their goal altogether, others may remain motivated to continue their goal pursuit despite their fallback - or even come back stronger than ever. As an example: if one's long-term goal is to lose weight, eating the whole bag of sweets that was left in the back of the cupboard would probably be seen as a failure in their self-control – as they gave in to their temptation of eating the sweets. In some cases, this failure will lead people to think they cannot lose weight because they cannot control themselves the way they should, while in other cases they will still continue to focus on their goal of losing weight despite their slip.

Nonetheless, those who have high self-control in a particular situation may still fail in another or even experience ego-depletion – which occurs when self-control gets tired out through exertion (Muraven et al., 1998). Therefore, even the best self-controllers amongst us will experience a failure at one point in time. So then: how can it be that some may stop trying to reach their goal, while others continue in similar situations? What is the underlying mechanism in this process? Does it have to do with certain emotions that are at play after such a failure? These are the questions that guide this current study.

Goal setting and self-control

A goal may be defined as an object or aim that an individual strives to attain (Locke et al., 1984). Goals can vary from short-term, such as going to bed early that day, to long-term, such as achieving academic success and leading a happy life. Therefore, the degree to which self-control is needed may vary, such that short-term tasks may require only small amounts of self-control in order to achieve them, while long-term goals may require more.

Interestingly, the definition of self-control includes the ability to delay immediate gratification of smaller rewards, such as with short-term goals, for a possible larger reward at a later stage, as with long-term goals (Ainslie, 1975; Mischel et al., 1989; Kirby et al., 1995). What comes forward from this definition is the dilemma between the short-term and long-term: the longer-term option provides a larger reward yet requires more self-control to inhibit the immediate (short-term) reward (Gillebaart, 2018). Important when setting a goal is the ability to translate one's intentions into action. Some of us may want to lose weight and see that as their long-term goal, but actually fail to take the necessary steps in order to pursue this. This is also known as the intention-behaviour gap (Sheeran, 2002), where one fails to translate their intentions into their current behaviour. This gap can once again be explained by self-control, as a higher trait self-control predicts a smaller intention-behaviour gap (Pfeffer et al., 2017).

Self-control failure, goal pursuit, and affect

So, when is self-control most likely to fail? According to Heatherton and Wagner (2011), the most common circumstances are when people are in bad moods, when people are overwhelmed by immediate temptations or impulses, and when control itself is impaired – for example after alcohol consumption or when experiencing depletion. Especially negative emotions and aversive feelings (such as anger, sadness, and anxiety) disrupt individuals' attempts at self-control, resulting into impulsive behaviours and decisions and in the end – self-control failure (Chester et al., 2016; Heatherton et al., 2011). Also, Moberly and Watkins (2010) found that at low levels of goal success (thus, high rate of failure) participants experienced greater levels of negative affect when they were pursuing important goals.

Thus, we know the negative effect that negative mood and emotions have on self-control and that these often lead to self-control failure. After failing, one may once again experience negative affect – but how does this impact one's goal pursuit? Also, instances where self-control

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is required happen multiple times throughout the day and not just once. Therefore, it is important to understand the impact of self-control failure on one's affective reactions after the failure has occurred. According to Aarts et al. (2007), failure events evoke a variety of negative emotional responses, which may cause people to reformulate and work harder on their goals up until the negative cues become recurrent, which will then lead to disengagement of the goal. Could it then be that experiencing negative affect after self-control failure eventually prevents the pursuit of goals altogether?

Hence, since past research on self-control has mainly been focussing on how bad moods and negative affect influences self-control pre-failure, it is interesting to explore further how negative affect influences goal pursuit after undergoing self-control failure. Moreover, this will be useful for further understanding goal setting behaviour and the regulation of goal pursuit after self-control failure, as experiencing such a failure is inevitable at some point in time.

Research question and hypothesis

The aim of the present study was to investigate how experiencing negative affect after self-control failure is associated with goal pursuit. Therefore, the research question followed 'how do negative affective reactions mediate the association between self-control failure and goal pursuit?'

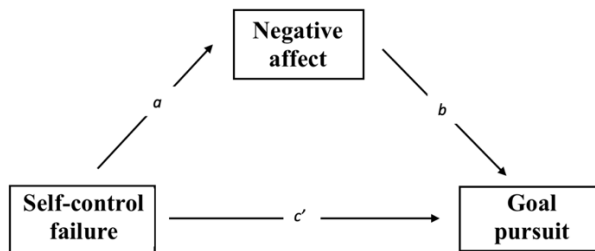
From the research question, the following hypothesis was formulated: Feelings of negative affect after self-control failure are associated with a discontinuation of one's goal pursuit. The mediation effect is visualised in Figure 1. This study focussed on negative affect as having a mediating effect on the relationship between self-control failure and goal pursuit in one's New Year's resolutions, as they are a common example where intentions and behaviours do not align. According to a Forbes article (Brower, 2022) the most popular New Year's resolutions include living healthier (23%), losing weight (20%), meeting career or job goals (16%), improving relationships (11%), exercising more (7%), and quitting smoking (5%) – mostly long-term goals. Unfortunately, according to a study conducted by Norcross and Vangarelli (1988), where 200 individuals were tracked over a 2-year period, only 8% of these resolutions were actually achieved. Fifty-three percent of those who did achieve their goal were said to experience at least one failure in their self-control. Some reasons for failure were said to be caused by a lack of personal control and experiencing negative emotions.

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In addition to the main hypothesis, this study also allowed for several exploratory variables to be measured. First, positive affect was explored to see how positive affective reactions mediate the association between self-control failure and goal pursuit (as opposed to negative affect). The PANAS scale includes both the positive and negative affect scales, thus both were measured in the questionnaire. Other exploratory variables were goal importance and type of goal, as these may also influence one's goal pursuit.

Figure 1.

Mediation effect.



Method

Participants and Design

To collect data for this study, an online questionnaire was set up on the online platform Qualtrics. The power analysis was conducted according to Fritz and Mackinnon's (2007) results on empirical estimates of sample sizes needed for .8 power. These results suggest that the required sample size to detect a mediating effect with a small α path and medium β path is 400. Small to medium paths were chosen since most effect sizes involving (trait) self-control are small to medium (De Ridder et al., 2011). Considering the variables that are to be measured and the current Covid-19 situation, an online survey was most plausible for data collection. Participants were recruited through the researcher's personal and university networks. In total there were 193 responses to the questionnaire. Participants were recruited by using network and snowball sampling.

Measures

Data were collected by means of an online survey. It contained 35 questions covering the (1) main characteristics of the participants, (2) self-control failure, (3) goal pursuit, and (4) the PANAS scale, (5) importance of the goal, and (6) type of goal (long-term vs. short-term).

Demographics. In order to examine how representative the collected sample would be participants were asked about their gender, age, and educational level. This was important since the participants would stem from the researcher's social network, meaning most respondents would be West-European university students (most of which also studying a behavioural science).

Self-control failure was measured through a retrospective questionnaire, in which the participants were asked to recollect their New Year's resolution. This was specifically chosen in order to aid recollection of a(n) (important) goal, considering the timing of the questionnaires was only a few months after the beginning of the new year. The participants could indicate to what extent they had experienced a point in their goal pursuit when they failed at self-control, on a scale from 1 (no, not at all) to 7 (yes, very much).

Goal pursuit as the outcome variable was measured by asking to what extent they continued to what extent they persevered in achieving their goal after the failure. This was also measured on a scale from 1 (no, not at all) to 7 (yes, very much).

Affect was measured through discrete emotion scales using the Positive and Negative Affect Schedule (PANAS) scale - a reliable and valid measure (Crawford et al., 2004). The reliability of the scales was found to be $\alpha = .90$ for positive affect and $\alpha = .89$ for the negative affect scale. The scale consists of 10 adjectives describing positive affective states (e.g., excited) and 10 adjectives describing negative affective states (e.g., irritable), each rated along a five-point scale from 1 ('Very slightly or not at all') to 5 ('Extremely') (Watson et al., 1988). These questions asked about their feelings of failing (or not yet reaching) their goal and to indicate how strongly they felt a certain emotion at that point in time. The total score was then computed by calculating the sum of the 10 positive items and the 10 negative items. The total scores then ranged from 10 to 50 for both sets of items. For the total negative score, a higher score indicates more negative affect, and vice versa for the positive score (Watson et al., 1988). The main research focussed on the influence of negative affect, but considering the interest in the positive affect as exploratory analysis it was decided to include the positive affect scales in the questionnaire too.

Goal importance was included as an extra exploratory variable to see if the importance of a goal could have a potential influence on goal pursuit. The questions asked included how important the goal was when they started, measured on a scale from 1 (barely important) to 5

(extremely important)), whether it was still as important as important to them now as when they made their resolution (by answering yes/no). If they answered no, then there would be an extra question on how important is this goal currently was (measured again on a scale from 1 (barely important) to 5 (extremely important)).

Type of goal, for which the participants had to indicate one of the two options of whether they regarded their goal as a long- or short-term goal. This was also measured as a potential exploratory variable.

Procedure

This research was approved by the Ethics Committee of the Faculty of Social and Behavioural Sciences of Utrecht University. After approval, the questionnaire was published online and distributed among personal and university networks. The questionnaire first included an information letter and an informed consent form. After active consent, the questionnaire continued to the demographic questions (gender, age, education), followed by an open question on the description of their New Year's resolution. The following questions were about the importance of that goal, whether it was a long- or short-term goal, and to what extent they continued to achieve their goal pursuit towards their resolution when they failed. The next section included two questions about goal pursuit, asking 1) to what extent there was a point in their pursuit when they failed to achieve it, and 2) to what extent they continued in their goal pursuit despite their failure. Afterwards, the PANAS scale was introduced and the participants were asked to think back to their moment of failure when answering (see Appendix A for complete questionnaire). At the end of the survey the participants were thanked for their responses.

Statistical analysis

Descriptive statistics were examined for all variables; assumptions and correlations among study variables were then tested. As it is typically common with sampling online questionnaires that some do not fully complete it, it was decided that the participants should have filled in the questions on self-control failure, goal achievement and fully complete the PANAS scale in order to be included into the analysis - as these three were to be entered in the mediation analysis and therefore regarded as most important.

To test a mediation effect, a PROCESS macro analysis (Hayes, 2022) was performed using SPSS. The number of bootstrap samples for percentile bootstrap confidence intervals used was 5000, since this is the default, at the confidence interval level of 95. The variables entered are self-control failure (scaled 1-7) as the independent variable (x), the negative affect subscale, for which a new variable was created that contained the total scores of the negative affect scale (M), and goal pursuit (scaled 1-7) as the outcome variable (y). Afterwards, the positive affect scores were also calculated to create a new variable with the total scores. This was then entered as the mediator to test this exploratory variable in a similar model.

Results

In the end, 98 responses were excluded due to incomplete answers. These participants mainly did not fill in the PANAS scale completely – which was crucial to the analysis. Therefore, the analysis was performed on the data that was obtained from 93 participants. Of these, 63 were female and 29 male, where one did not fill in their gender; their ages ranged from 20 to 68 ($M = 28.84$, $SD = 9.76$). The main characteristics of participants are shown in Table 1, where Table 2 shows the descriptive statistics and correlations between the study variables.

Table 1.

Main characteristics of participants.

<i>Education level</i>	<i>N</i>	<i>Gender</i>	<i>N</i>
VMBO	0	Male	29
MBO	11	Female	63
HBO	35	Other	0
WO Bachelor	24	Missing	1
WO Master	21		
None of the above	2		

Table 2.

Means, standard deviations (SD), and intercorrelations among study variables.

	<i>Mean</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1. Total PA	25.12	8.50		-.133	-.238*	.375*
2. Total NA	22.72	8.25	-.133		.145	.002
3. Goal Pursuit	4.33	1.76	-.238*	.145		-.244*
4. Self-control failure	5.47	1.67	.375*	.002	-.244*	

* *Correlation is significant at the 0.01 level (2-tailed).*

The correlations in Table 2 show that there was a significant negative relationship between goal pursuit and positive affect (Total PA). Also, the significant relationship between self-control failure and Total PA was negative. Goal pursuit and self-control failure was also found to be significant, with a negative relationship. However, all correlations were found to be relatively low.

Afterwards, the assumptions for performing the mediation analysis were tested. Bootstrapping, which is a nonparametric resampling procedure, is a method for testing mediation that does not impose the assumption of normality (Preacher et al., 2018). Therefore, testing the assumption of normality was not necessary for this analysis. The other assumptions were tested as follows: *uncorrelatedness of residuals* was tested by the Durbin-Watson statistic, its value being near 2 (2.086), an indicator of uncorrelated residuals. The variance inflation factor (VIF), testing *multicollinearity*, was <10 for the independent (8.71) and mediating variable (6.00), meaning no multicollinearity subsisted. The scatterplot showed heteroscedasticity. The partial scatterplots do not show a nonlinear relationship (i.e., no (inversely)u-shaped curve), meaning the assumption of linearity was met.

A mediation analysis using the PROCESS macro (Hayes, 2022) was then performed. Self-control failure had a significant (negative) direct impact on goal pursuit ($b = -.35, t = -3.59, p < .001$). However, self-control failure did not have a significant impact on negative affect ($b = .49, t = 1.63, p = .108$) and negative affect also did not have significant impact on goal pursuit ($b = .02, t = .79, p = .435$). Also, the indirect effect of self-control failure on goal pursuit, mediated by negative affect, was not found to be significant ($b = .01, \text{bootstrapped } 95\% \text{ CI } [-.02; .08]$). Table 3 provides the overview of these results, where Figure 2 portrays the findings visually in the

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mediation model. The full analysis showed that there was no mediation effect occurring, as the CI for the indirect effect included 0, and therefore not significant (see Table 3). Therefore, the hypothesis could not be supported.

Table 3.

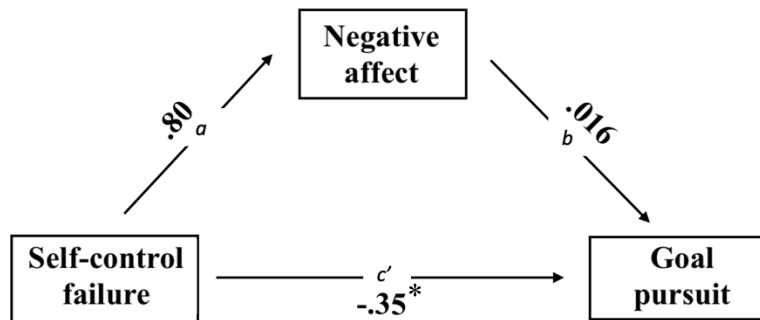
Bootstrapping effects and 95% confidence intervals (CI) for the final mediational model.

	<i>Effect</i>	<i>t</i>	<i>p</i>	<i>95% CI</i>	
				<i>Lower</i>	<i>Upper</i>
Self-control failure -> Goal pursuit	-.35	-3.59	< .001*	-.52	-.15
Negative affect -> Goal pursuit	.02	.78	.435	-.02	.06
Self-control failure -> negative affect	.80	1.63	.108	-.18	1.79
Self-control failure -> negative affect -> GP	.01			-.02	.08

* Correlation is significant at the 0.001 level (2-tailed).

Figure 2.

Bootstrap mediation effects.



Exploratory analyses

As the initial analysis did not support the main hypothesis, alternative explanations were explored.

Positive affect was also measured through the PANAS scale. A mediation analysis was performed using the PROCESS macro (Hayes, 2022) where the total scores of the positive affect

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scales were used as the mediating variable instead of the negative affect scales. These results are summarised below in Table 4.

The direct path from self-control failure to positive affect was significant ($b = -1.58$, $t = -3.24$, $p = .002$), as were the paths from self-control failure to goal pursuit ($b = -.22$, $t = -3.59$, $p = <.001$) and positive affect to goal pursuit ($b = .07$, $t = 3.84$, $p = <.001$). Since the CIs for the indirect effect model did not include 0 (bootstrapped 95% CI [-.23;-.03]) this mediation effect was found to be significant. These effects had a negative influence on goal pursuit, suggesting that experiencing positive affect after experiencing self-control failure would be able to predict that one would continue in pursuing their current goal.

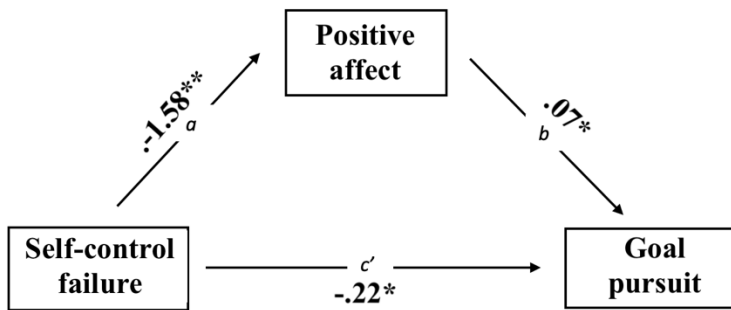
Table 4.

Bootstrapping effects and 95% confidence intervals (CI) for the exploratory mediational model.

	<i>Effect</i>	<i>t</i>	<i>p</i>	<i>95% CI</i>	
				<i>Lower</i>	<i>Upper</i>
Self-control failure -> Goal pursuit	-.22	-3.59	<.001*	-.40	-.03
Positive affect -> Goal pursuit	.07	3.84	<.001*	.04	.11
Self-control failure -> positive affect	-1.58	-3.24	.002**	-2.56	-.61
Self-control failure -> positive affect - > GP	-.12			-.23	-.03

* Correlation is significant at the .001 level (2-tailed).

** Correlation is significant at the .01 level (2-tailed).

Figure 3.*Bootstrap mediation effects for positive affect.*

* Correlation is significant at the .01 level (2-tailed).

** Correlation is significant at the .01 level (2-tailed).

Goal importance. Research has found that the combination of low goal success (thus high instances of failure) and high goal importance was associated with the highest levels of negative affect (Moberly et al., 2010). Therefore, the level of goal importance could have a moderating effect on this mediation model. This variable could be added into the current mediation to turn it into a moderation mediation analysis. The same goes for the *type of goal*, which could analyse whether there is a difference between short- term and long-term goals in their pursuit. However, considering the power of this study was not sufficient, it was decided not to perform this analysis as it would not allow for conclusions to be made. For future studies with larger sample sizes this would be a very interesting moderator variable.

Discussion

Past research on self-control has mainly been focussing on how bad moods and negative affect directly influence self-control and how this may lead to a failure in self-control (Chester et al., 2016; Heatherton et al., 2011; Moberly et al., 2010). Little is said about what happens after self-control failure – whether an individual continues their goal pursuit or decides to quit altogether. Negative affective reactions may occur after experiencing an instance of self-control failure, which is why the goal of this study was to investigate how one’s negative affect *after* self-control failure can explain one’s goal pursuit. It was hypothesised that those experiencing negative affect after a self-control failure would be more likely to discontinue their goal pursuit.

According to the mediation analysis, self-control failure had a significant (negative) direct impact on goal pursuit, implying that a self-control failure is associated with a

discontinuation of one's goal pursuit. This is in line with what is found in the current literature, which states that self-control helps to align behaviour with (long-term) goals (Bernecker et al., 2020; Kivetz et al., 2002; Kokkoris et al., 2021; Norcross et al., 1988; Oettingen et al., 2004), thus a failure in self-control could decrease this alignment and possibly a discontinuation of goal pursuit. However, self-control failure did not have a significant impact on negative affect and negative affect also did not have significant impact on goal pursuit. As a result, the indirect effect of self-control failure on goal pursuit, mediated by negative affect, was not found to be significant. Therefore, the current hypothesis could not be supported.

There could be several explanations for this result. Firstly, and most importantly, the sample size was not large enough to reach the required power. This low power reduces the chance of detecting a statistically significant result and thereby not finding a true effect (Button et al., 2013). Since the p-values for the effect between self-control failure and negative affect were close to being significant, it could have been a significant result if the sample size were bigger. However, this could only be made certain with a follow up study.

Another possible explanation for this result is that negative affect may not play the hypothesised role, as there were also no significant correlations to be found with negative affect while there were significant relationships with positive affect, despite the power problem (see Table 2). Perhaps, only specific negative emotions in the negative affect scale would lead to a discontinuation, while others may still encourage goal pursuit. As an example, it is known that when striving for an introjected goal - as opposed to when following an intrinsic, external, or identified goal - feelings of guilt, shame, and anxiety are evoked when this goal is not pursued (Ryan et al., 1989). Thus, in order to avoid these feelings, one might continue pursuing their goal, while other negative feelings (such as sadness) might not have the same impact and lead to a discontinuation instead. Another study has also found that shame leads to avoiding your goal and therefore violating it, while guilt would lead to striving harder towards the goal (Seeman et al., 2010). Thus, these two negative emotions contradict each other, while the PANAS scale measures both of them as if they lead to the same outcome. This might explain why negative affect, measured through the PANAS scale, was not found to mediate the relationship between self-control failure and goal pursuit, as it may be that specific emotions may lead to the hypothesised effect, but not all of them together.

In addition, the exploratory analysis was performed with positive affect as the mediating variable. The intercorrelations showed the relationship between self-control failure and positive affect to be negative, thus the more self-control failure the less positive affect occurs. This is logical, as failures are often seen as something bad and therefore evoke negative feelings (Carver et al., 1990). Also, a significant relationship between goal pursuit and positive affect (Total PA) was found. Interestingly enough, this relationship is negative, which means that as Total PA increases, goal pursuit decreases. Perhaps this means that individuals need some level of negative affect in order to drive them forward, while if the failure is seen as something positive then it might not motivate enough to continue their goal pursuit. The current literature suggests that feeling good does not promote further actions, especially if these actions result into an impairment of one's positive mood (Handley et al., 2004). However, there is also contradicting research that has proven that positive mood can promote the pursuit of long-term goals (Aspinwall, 1998; Trope et al., 1994). It is therefore difficult to understand the results of this study, as the current literature is not very clear about it either, which shows how important it is for future research to focus on these relationships.

The mediation analysis also conjured some interesting results, as the indirect effect were found to be significant. These results indicate that (decreased) positive affect could perhaps have a stronger impact on goal pursuit after self-control failure rather than (increased) negative affect. What is also interesting is that the effects are all negative. An interpretation of this could be that affect plays a supportive role in goal pursuit but not in a way that makes people experience negative affect, but in a way where they simply do not experience positive affect. Thus, they do not feel good about themselves when they fail or do not continue their goal pursuit. Perhaps, the absence of positive affect is a stronger drive towards goal pursuit than the presence of negative affect.

Strengths and limitations

There are several limitations to this present study. The biggest one being that the sample size did not reach $N = 400$, which is what was needed according to the power analysis to be able to draw definitive conclusions based on the current results. Also, because of the study being

underpowered, the two other exploratory variables (importance and type of goal) could not be analysed further.

Next to that the sample was not generalisable to the general population. It was limited to the researcher's network and therefore a convenience sample, which mainly consisted of Western European female students studying at HBO level or higher. These characteristics could be deduced from the demographics of the respondents, which showed there were twice as many females who filled in the questionnaire and 86% had graduated at HBO level or higher. Therefore, there was an unequal distribution in gender and educational level, decreasing the external validity of this research. Knowing that most respondents have followed a path in higher education, it is also very likely that most are familiar with these types of online questionnaires, as their studies often require them to do the same. This may have led to a demand characteristic, which is a type of bias where participants form an interpretation of the purpose of the survey and thereby (unconsciously) change their responses to fit that interpretation. Similar to the demand characteristic bias, social desirability, which is the tendency of subjects to give socially desirable responses instead of choosing responses that are reflective of their true feelings, could also have had an impact. Respondents may therefore have filled in higher scores for positive affect to depict a more positive image of themselves, which may explain why the results for the positive affect scale were significant but the negative affect mediation was not.

Another limitation is that the questionnaire was a retrospective self-reporting measure. Recollecting a New Year's resolution may have been difficult for some, especially to remember their true feelings when they failed to achieve it, and to actively assess what emotions they felt or how strongly they felt the emotion. Also, regarding the PANAS scale, it can also make it more challenging to accurately assess a person's state of mind as mood tends to be subjective and also mood dependent (Magyar-Moe, 2009). Suggestions for improvement might be to create an experimental set up, in which the participants experience an actual self-control failure in the moment, are then asked about their affective reactions towards the failure and whether they would still pursue the goal. Another suggestion is turning the current set-up into a more longitudinal study, where the participants are followed from their New Year's resolution set-up until they achieve/fail their resolution.

On the other hand, the study also had certain strengths. These include the length of the questionnaire, as the average time of filling in the online survey (according to Qualtrics) was 3

minutes. Also, since it was an online survey, it allowed participants to fill it in anonymously and also in their own time. The nature of the survey also made it easy to distribute among the social networks.

Future directions and theoretical implications

Further research is needed to determine whether negative affect could play a mediating role between self-control failure and goal pursuit. Other explanations, such as goal importance and type of goal, could also have an impact on the relationship, and could be taken into consideration for future studies with larger sample sizes that reach the required power. Also, as mentioned before, it might be interesting to break down the negative affect scale and focus on each emotion individually – perhaps it is not negative affect as a whole that plays as a mediator, but the individual emotions.

In addition, the mediation model with positive affect shows some potential. It would be interesting to see if positive affect still shows the same (negative) effect when the sample is bigger - perhaps it may have an even stronger influence than negative affect on goal pursuit after self-control failure. Perhaps, the absence of positive affect might be a stronger drive towards goal pursuit than the presence of negative affect. This would be interesting to explore further in future research, as little is known about this.

Worthy of note was the contrasting results in the mediating role of positive and negative affect between self-control failure and goal pursuit. This could mean that despite the initial idea that experiencing negative affect after self-control failure would have a larger impact on discontinuing one's goal pursuit, it may, on the contrary, be that feelings of positive affect after self-control failure have a larger influence. However, the current findings contradict what is found in the current literature, where positive mood is said to promote the pursuit of long-term goals (Igou et al. (2006). Perhaps, the absence of positive affect is a stronger drive towards goal pursuit than the presence of negative affect. Therefore, it would be interesting to explore this further with a larger sample, to see if these effects would remain the same when the required power is reached.

Conclusion

Overall, it can be concluded that even though the sample size was not large enough to draw any definitive results, some interesting interpretations could be made. Especially the exploratory analysis shed some light on a different perspective of this study that was not thought of beforehand. Perhaps it is not negative affect, but positive affect that plays a stronger mediating role in the relationship between self-control failure and goal pursuit. Even more specifically: the absence of positive affect. When individuals do not feel good about their self-control failure, this may motivate them to continue their goal pursuit in order to feel good about themselves again. Also, considering that the current literature has found that different negative emotions play distinct roles in goal pursuit - such that guilt predicts a continuation in goal pursuit, yet shame does not – future research could focus more on the negative emotions separately, instead of as a whole.

Since little is known about the effect of the absence of positive feelings on goal pursuit, or the impact that negative affective reactions have after self-control failure, these findings create a stepping stone towards further research on this topic.

References

- Aarts, H., Custers, R., & Holland, R. (2007). The nonconscious cessation of goal pursuit: When goals and negative affect are coactivated. *Journal of personality and social psychology*, 92, 165-78. <http://dx.doi.org/10.1037/0022-3514.92.2.165>.
- Aarts, H., Gollwitzer, P. M., & Hassin, R. R. (2004). Goal contagion: Perceiving is for pursuing. *Journal of Personality and Social Psychology*, 87(1), 23-37. <https://doi.org/10.1037/0022-3514.87.1.23>
- Ainslie, G. (1975). Specious reward: a behavioral theory of impulsiveness and impulse control. *Psychol. Bull.* 82, 463–496. <https://doi.org/10.1037/h0076860>
- Aspinwall, L. G. (1998). Rethinking the role of positive affect in self regulation. *Motivation and Emotion*, 22, 1–32. <https://doi.org/10.1023/A:1023080224401>
- Bernecker, K., & Becker, D. (2020). Beyond self-control: Mechanisms of hedonic goal pursuit and its relevance for well-being. *Personality and Social Psychology Bulletin*, 47(4), 627–642. <https://doi.org/10.1177/0146167220941998>
- Brandstätter, V., & Bernecker, K. (2022). Persistence and disengagement in personal goal pursuit. *Annual Review of Psychology*, 73(1), 271–299. <https://doi.org/10.1146/annurev-psych-020821-110710>
- Brower, T. (2022, January 13). *4 reasons to make New Year's resolutions (even if you don't keep them)*. Forbes. <https://www.forbes.com/sites/tracybrower/2021/12/31/4-reasons-to-make-new-years-resolutions-even-if-you-dont-keep-them/>
- Button, K. S., Ioannidis, J. P., Mokrysz, C., Nosek, B. A., Flint, J., Robinson, E. S., & Munafò, M. R. (2013). Power failure: Why small sample size undermines the reliability of neuroscience. *Nature Reviews Neuroscience*, 14(5), 365–376. <https://doi.org/10.1038/nrn3475>
- Carver, C. S., Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review*, 97(1), 19–35. <https://doi.org/10.1037/0033-295X.97.1.19>
- Chester, D. S., Lynam, D. R., Milich, R., Powell, D. K., Andersen, A. H., & DeWall, C. N. (2016). How do negative emotions impair self-control? A neural model of negative urgency. *NeuroImage*, 132, 43–50. <https://doi.org/10.1016/j.neuroimage.2016.02.024>

- Crawford, J. R., & Henry, J. D. (2004). The positive and negative affect schedule (PANAS): construct validity, measurement properties and normative data in a large non-clinical sample. *The British journal of clinical psychology*, *43*(3), 245–265.
<https://doi.org/10.1348/0144665031752934>
- De Ridder, D. T., Lensvelt-Mulders, G., Finkenauer, C., Stok, F. M., & Baumeister, R. F. (2011). Making Stock of Self-Control: A Meta-Analysis of How Trait Self-Control Relates to a Wide Range of Behaviors. *Personality and Social Psychology Review*, *16*(1), 76–99.
<https://doi.org/10.1177/1088868311418749>
- Duckworth, A. L., White, R. E., Mattheucci, A. J., Shearer, A., & Gross, J. J. (2016). A stitch in time: Strategic self-control in high school and college students. *Journal of educational psychology*, *108*(3), 329. <https://doi.org/10.1037/edu0000062>
- Ent, M. R., Baumeister, R. F., & Tice, D. M. (2015). Trait self-control and the avoidance of temptation. *Personality and Individual Differences*, *74*, 12–15.
<https://doi.org/10.1016/j.paid.2014.09.031>
- Friese, M., Frankenbach, J., Job, V., & Loschelder, D. D. (2017). Does self-control training improve self-control? A meta-analysis. *Perspectives on Psychological Science*, *12*(6), 1077–1099. <https://doi.org/10.1177/1745691617697076>
- Friese, M., & Hofmann, W. (2016). State mindfulness, self-regulation, and emotional experience in everyday life. *Motivation Science*, *2*(1), 1–14. <https://doi.org/10.1037/mot0000027>
- Fritz, M. S., & Mackinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological science*, *18*(3), 233–239. <https://doi.org/10.1111/j.1467-9280.2007.01882.x>
- Fujita, K. (2011). On conceptualizing self-control as more than the effortful inhibition of impulses. *Personality and social psychology review*, *15*(4), 352–366.
<https://doi.org/10.1177/1088868311411165>
- Gillebaart, M. (2018). The ‘operational’ definition of self-control. *Frontiers in Psychology*, *9*.
<https://doi.org/10.3389/fpsyg.2018.01231>
- Gillebaart, M., Benjamins, J., van der Weiden, A., Ybema, J. F., & De Ridder, D. (2020). Practice makes perfect: Repeatedly dealing with response conflict facilitates its identification and speed of resolution. *Journal of Research in Personality*, *86*.
<https://doi.org/10.1016/j.jrp.2020.103955>

NEGATIVE AFFECT PREDICTING GOAL PURSUIT AFTER SELF-CONTROL FAILURE

- Handley, I. M., Lassiter, G., Nickell, E. F., & Herchenroeder, L. M. (2004). Affect and automatic mood maintenance. *Journal of Experimental Social Psychology*, 40, 106–112.
<https://doi.org/10.1037/0022-3514.93.2.158>
- Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd edition). The Guilford Press.
- Heatherton, T. F., & Wagner, D. D. (2011). Cognitive neuroscience of self-regulation failure. *Trends in Cognitive Sciences*, 15(3), 132–139. <https://doi.org/10.1016/j.tics.2010.12.005>
- Igou, E. R., & Burke, C. T. (2006). Mood as a resource in structuring goal pursuit. *Affect in Social Thinking and Behavior*, 229–246. <https://doi.org/10.4324/9780203720752-20>
- Jia, L., Hirt, E. R., & Fishbach, A. (2019). Protecting an important goal: When prior self-control increases motivation for active goal pursuit. *Journal of Experimental Social Psychology*, 85, 103875. <https://doi.org/10.1016/j.jesp.2019.103875>
- Kirby, K. N., and Herrnstein, R. J. (1995). Preference reversals due to myopic discounting of delayed reward. *Psychol. Sci.* 6, 83–89.
<https://doi.org/10.1111/j.1467-9280.1995.tb00311.x>
- Kivetz, R., & Simonson, I. (2002). Self-Control for the Righteous: Toward a Theory of Precommitment to Indulgence. *Journal of Consumer Research*, 29 (2), 199–217.
<https://doi.org/10.1086/341571>
- Kokkoris, M. D., & Stavrova, O. (2021). Staying on track in turbulent times: Trait self-control and goal pursuit during self-quarantine. *Personality and Individual Differences*, 170, 110454. <https://doi.org/10.1016/j.paid.2020.110454>
- Locke, E. A., & Latham, G. P. (1984). *Goal setting: A motivational technique that works!* Englewood Cliffe, NJ: Prentice Hall. [https://doi.org/10.1016/0090-2616\(79\)90032-9](https://doi.org/10.1016/0090-2616(79)90032-9)
- Magyar-Moe, J. L. (2009). *Therapist's guide to positive psychological interventions*. Elsevier Academic Press. [https://doi.org/10.1016/S1873-0450\(09\)X0003-3](https://doi.org/10.1016/S1873-0450(09)X0003-3)
- Mead, N., Alquist, J., Baumeister, R. (2010). Ego Depletion and the Limited Resource Model of Self-Control. <https://doi.org/10.1093/acprof:oso/9780195391381.003.0020>
- Mischel, W., Shoda, Y., and Rodriguez, M. I. (1989). Delay of gratification in children. *Science*, 244, 933–938. <https://doi.org/10.1126/science.2658056>
- Moberly, N. J., & Watkins, E. R. (2010). Negative affect and ruminative self-focus during everyday goal pursuit. *Cognition & emotion*, 24(4), 729–739.

<https://doi.org/10.1080/02699930802696849>

- Muraven, M., Tice, D. M., & Baumeister, R. F. (1998). Self-control as a limited resource: regulatory depletion patterns. *Journal of Personality and Social Psychology*, 74(3), 774–789. <https://doi.org/10.1037/0022-3514.74.3.774>
- Oettingen, G., Bulgarella, C., & Henderson, M., & Gollwitzer, P. (2004). The Self-Regulation of Goal Pursuit.: *Motivational analysis of social behavior: Building on Jack Brehm's contributions to psychology*. 225-244.
- Pfeffer, I., & Strobach, T. (2017). Executive Functions, Trait Self-Control, and the Intention-Behavior Gap in Physical Activity Behavior. *Journal of sport & exercise psychology*, 39(4), 277–292. <https://doi.org/10.1123/jsep.2017-0112>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. <https://doi.org/10.3758/brm.40.3.879>
- Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57, 749–761. <https://doi.org/10.1037/0022-3514.57.5.749>
- Semaan, R., & Gould, S., (2010). I Shouldn't, Or Should I? Distinguishing Shame and Guilt in Goal Pursuit. *Advances in Consumer Research*, 37, 903-904.
- Sheeran, P. (2002). Intention-behaviour relations: A conceptual and empirical review. *European Review of Social Psychology*, 12, 1-36. <https://doi.org/10.1080/14792772143000003>
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72(2), 271–324. <https://doi.org/10.1111/j.0022-3506.2004.00263.x>
- Trope, Y., & Neter, E. (1994). Reconciling competing motives in selfevaluation: The role of self-control in feedback seeking. *Journal of Personality and Social Psychology*, 66 (4), 646 – 657. <https://doi.org/10.1037/0022-3514.66.4.646>
- Watson, D., Clark, L.A., Tellegen, A. (1998). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–70. <https://doi.org/10.1037//0022-3514.54.6.1063>

Appendix A: Questionnaire

Section 1: Information letter and informed consent

Beste deelnemer,

Bedankt dat je wilt deelnemen aan deze vragenlijst. Het doel van deze studie is om meer inzicht te krijgen in hoe bepaalde emoties, na het falen van je doel, ervoor zorgen dat je stopt of juist doorgaat met het werken naar je doel. In deze vragenlijst zullen verschillende stellingen aan je worden voorgelegd over je goede voornemens voor 2022, of je deze behaald hebt of niet en de emoties die je toen voelde. Er wordt je gevraagd om zo eerlijk en accuraat mogelijk te antwoorden. Er zullen verschillende antwoordschalen voorkomen, hierbij is het van belang dat je de vraag goed leest zodat je niet per ongeluk een antwoord geeft dat niet de bedoeling was. Er bestaan geen foute antwoorden, het gaat om jouw eigen beleving. Jouw gegevens zullen anoniem worden verzameld en verwerkt en deze zullen niet tot jou te herleiden zijn.

Deze vragenlijst zal ongeveer 5-10 minuten in beslag nemen. De deelname aan deze vragenlijst is geheel vrijwillig. Wanneer je op een bepaald moment besluit niet meer mee te willen doen, ben je vrij om te stoppen op elk gewenst moment. Je hoeft hier geen reden voor te geven. Wanneer je besluit te stoppen zullen hier geen gevolgen aan zitten. Wel zullen de tot dan toe verzamelde gegevens worden gebruikt voor de onderzoeksdoeleinden. Er zijn geen gezondheidsrisico's verbonden aan deelname van deze vragenlijst. Wanneer je na het lezen van deze tekst nog vragen hebt, kan je de onderzoeker bereiken op het volgende emailadres: j.n.pearson@students.uu.nl.

Alvast bedankt voor het invullen van deze vragenlijst!

Met vriendelijk groet,
Jessica Pearson
Universiteit Utrecht

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In onderstaande tekst wordt uw toestemming gegeven voor deelname aan dit onderzoek:

1. Ik ben 18 jaar of ouder
2. Ik verklaar dat ik duidelijk ben geïnformeerd over de inhoud en het doel van het onderzoek.
3. Ik weet dat mijn resultaten en gegevens op een beveiligde server worden opgeslagen en kunnen worden gebruikt voor toekomstig wetenschappelijk onderzoek. Persoonlijke informatie zoals naam en leeftijd zullen nooit aan derden worden verstrekt
4. Ik ben me ervan bewust dat deelname aan dit onderzoek geheel vrijwillig is. Ik kan op elk moment zonder gevolgen stoppen en/of mijn gegevens uit de database laten verwijderen als ik dat wil (u dient de onderzoeker hiervan op de hoogte te stellen).
5. Ik ben me ervan bewust dat ik zal deelnemen aan een online-enquête over mijn goede voornemens voor het nieuwe jaar, mijn affectieve reacties en het nastreven van mijn doelen.
6. De onderzoeker kan eventuele vragen over het onderzoek achteraf beantwoorden door een e-mail te sturen naar j.n.pearson@students.uu.nl

Hierbij geef ik toestemming voor het anoniem verzamelen, opslaan en gebruiken van mijn gegevens voor dit onderzoek.

- Ja (1)
- Nee (2)

Section 2: demographic characteristics

1. Wat is je geslacht?

Man (1)

Vrouw (2)

Anders (3)

1. Wat is je leeftijd?

2. Wat is je hoogst behaalde opleidingsniveau?

VMBO (1)

MBO (2)

HBO (3)

WO Bachelor (4)

WO Master (5)

Geen van de bovengenoemde (6)

Section 3: description of goal; type, and importance.

3. Wat was jouw goede voornemen voor 2022? Indien je er meerdere had, omschrijf hier het belangrijkste voornemen.

4. Lang/korte termijn Was het een doel op korte of lange termijn?

Korte termijn (1)

Lange termijn (2)

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5. Hoe belangrijk was dit doel voor jou toen je begon?
- Nauwelijks/Helemaal niet (1)
 - Enigszins (2)
 - Behoorlijk (3)
 - In sterke mate (4)
 - In extreme mate (5)
6. Is dit doel nog steeds net zo belangrijk voor je?
- Ja (1)
 - Nee (2)
7. Nee Indien nee: hoe belangrijk is dit doel voor jou nu?
- Nauwelijks/Helemaal niet (1)
 - Enigszins (2)
 - Behoorlijk (3)
 - In sterke mate (4)
 - In extreme mate (5)

Section 4: self-control failure

8. Heb jij je goede voornemen al behaald?
- Ja (1)
 - Nee (2)
 - Nog niet (3)

Section 5: Goal pursuit

9. Is er een moment geweest in het streven naar je goede voornemen waarop het je niet lukte om het te behalen?

Nee, (2) (3) (4) (5) (6) Ja, heel
 helemaal erg (7)
 niet (1)

Is er een))))))))
 moment
 geweest in
 het streven
 naar je
 goede
 voornemen
 waarop het
 je niet lukte
 om het te
 behalen?
 (1)

10. Het volhouden van goede voornemens kan lastig zijn. Zo kunnen er momenten zijn dat je het gevoel krijgt dat je niet goed bezig bent, of misschien zelfs gefaald hebt. In de situatie dat jouw goede voornemens faalden: in hoeverre ben je toen toch doorgegaan met het bereiken van je doel?

Helemaal (2) (3) (4) (5) (6) Heel Niet van
 niet (1) erg (7) toepassing
 (8)

in hoeverre))))))))
 ben je toen
 toch
 doorgegaan

met het
bereiken
van je
doel? (1)

Section 6: PANAS scale

Denk terug aan dit moment bij het beantwoorden van het volgende deel. Hieronder staan twintig verschillende gevoelens en emoties. Geef bij ieder item aan hoe je je voelde toen je dacht dat je je doel niet zou halen.

11. Geïnteresseerd

- Nauwelijks/Helemaal niet (1)
- Enigszins (2)
- Behoorlijk (3)
- In sterke mate (4)
- In extreme mate (5)

12. Gespannen

- Nauwelijks/Helemaal niet (1)
- Enigszins (2)
- Behoorlijk (3)
- In sterke mate (4)
- In extreme mate (5)

13. Opgewonden

- Nauwelijks/Helemaal niet (1)
- Enigszins (2)
- Behoorlijk (3)
- In sterke mate (4)
- In extreme mate (5)

14. Van streek

- Nauwelijks/Helemaal niet (1)
- Enigszins (2)
- Behoorlijk (3)
- In sterke mate (4)
- In extreme mate (5)

15. Sterk

- Nauwelijks/Helemaal niet (1)
- Enigszins (2)
- Behoorlijk (3)
- In sterke mate (4)
- In extreme mate (5)

16. Schuldig

- Nauwelijks/Helemaal niet (1)

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- Enigszins (2)
- Behoorlijk (3)
- In sterke mate (4)
- In extreme mate (5)

17. Bang

- Nauwelijks/Helemaal niet (1)
- Enigszins (2)
- Behoorlijk (3)
- In sterke mate (4)
- In extreme mate (5)

18. Vijandig

- Nauwelijks/Helemaal niet (1)
- Enigszins (2)
- Behoorlijk (3)
- In sterke mate (4)
- In extreme mate (5)

19. Enthousiast

- Nauwelijks/Helemaal niet (1)
- Enigszins (2)
- Behoorlijk (3)

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In sterke mate (4)

In extreme mate (5)

20. Trots

Nauwelijks/Helemaal niet (1)

Enigszins (2)

Behoorlijk (3)

In sterke mate (4)

In extreme mate (5)

21. Geïrriteerd

Nauwelijks/Helemaal niet (1)

Enigszins (2)

Behoorlijk (3)

In sterke mate (4)

In extreme mate (5)

22. Alert

Nauwelijks/Helemaal niet (1)

Enigszins (2)

Behoorlijk (3)

In sterke mate (4)

In extreme mate (5)

23. Beschaamd

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Nauwelijks/Helemaal niet (1)

Enigszins (2)

Behoorlijk (3)

In sterke mate (4)

In extreme mate (5)

24. Geïnspireerd

Nauwelijks/Helemaal niet (1)

Enigszins (2)

Behoorlijk (3)

In sterke mate (4)

In extreme mate (5)

25. Nerveus

Nauwelijks/Helemaal niet (1)

Enigszins (2)

Behoorlijk (3)

In sterke mate (4)

In extreme mate (5)

26. Vastberaden

Nauwelijks/Helemaal niet (1)

Enigszins (2)

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- Behoorlijk (3)
- In sterke mate (4)
- In extreme mate (5)

27. Scherp

- Nauwelijks/Helemaal niet (1)
- Enigszins (2)
- Behoorlijk (3)
- In sterke mate (4)
- In extreme mate (5)

28. Onrustig

- Nauwelijks/Helemaal niet (1)
- Enigszins (2)
- Behoorlijk (3)
- In sterke mate (4)
- In extreme mate (5)

29. Energiek

- Nauwelijks/Helemaal niet (1)
- Enigszins (2)
- Behoorlijk (3)
- In sterke mate (4)

In extreme mate (5)

30. Bezorgd

Nauwelijks/Helemaal niet (1)

Enigszins (2)

Behoorlijk (3)

In sterke mate (4)

In extreme mate (5)