



# **A pro-active perspective of employees' focus on strengths and deficiencies in relation to work engagement and burnout**

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## **Abstract**

Traditionally, the improvement of employees' weaknesses predominated in the literature. This negative perceptive has started to change with the upcoming positive psychology; the focus then shifted to positive constructs and strengths of employees. This current study has attempted to build further upon literature in both areas by introducing strengths- and deficiency oriented behavior. These constructs refer to self-starting behavior of employees that is either focused on using strengths or on addressing deficiencies. The relationships with both work engagement and burnout were investigated. Moreover, the combination of displaying the two types of behavior simultaneously in relation to work engagement and burnout was examined as well. 95 respondents from a high-tech organization located in the Netherlands participated in this research. The findings led to unexpected results. Surprisingly, only deficiency oriented behavior was positively related to work engagement, and negatively related to only one of the subscales of burnout: reduced accomplishment. The remaining hypotheses could not be confirmed. These findings were not in line with work in the positive psychology area. It is expected that this is the result from the very specific and homogeneous sample that is being used in this study, as well as the fact that the organizational climate of the participating company is already focused on utilizing the strengths of their employees. This gives some leeway to employees and could in turn inspire them to become also pro-actively focused on improving their weaknesses, next to playing to their strengths.

*Keywords: Positive psychology, strengths approach, strengths use, pro-active behavior, job crafting, work engagement, burnout.*

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## **Introduction**

In the past, work in the psychology area was almost exclusively centered on weaknesses and deficiencies of people rather than on their strengths (Maslach, Schaufeli, & Leiter, 2001). This negative perspective on humans has begun to change since 2000 with the appearance of positive psychology (Schaufeli, Leiter, & Maslach, 2009). This represented a shift in attention from weaknesses and deficiencies to strengths and talents of employees (Maslach et al., 2001). Many researchers have been inspired by this shift in thinking. This in turn has led to a rapidly growing interest of research into positive constructs as opposed to negative ones (Schaufeli et al., 2009).

This current study will build further upon work in the positive psychology by introducing strengths oriented behavior. This refers to self-starting behavior of employees that is focused on using their strengths in work activities (Els, Mostert, van Woerkom, Rothmann, & Bakker, in progress). The relationship with both burnout and work engagement will be examined since these two particular constructs perfectly characterize the switch in attention in the literature from a focus on negative psychological states, represented by burnout, to positive states, represented by work engagement. Whereas burnout is characterized by a state of overtiredness experienced by employees (Schaufeli et al., 2009), engaged employees possess over high levels of energy to perform effectively and efficiently (Schaufeli & Bakker, 2003). This study will hypothesize that there is a positive relation between SOB and work engagement via principles and constructs such as feelings of mastery, self-efficacy and self-esteem. In contrast, it will be argued that there is a negative relation with burnout since using strengths will lead to feelings of fulfillment and satisfaction (Linley & Harrington, 2006). Consequently, employees' stress level will reduce and this positive psychological state stands in sharp contrast with burnout.

Furthermore, research stated that employees may also appreciate to actively work on addressing their deficiencies, in this study referred to as deficiency oriented behavior. An assumed motivation for employees to display DOB is that it would increase their attractiveness for their current and possibly future organization (Rothwell & Arnold, 2007). Because it is important for employees to remain employable, it is expected that this will increase their level of work engagement and in comparison, would reduce the chance of experiencing burnout. Moreover, since the expression of both SOB and DOB are assumed to be beneficial for employees for different reasons, it is expected displaying both types of behavior simultaneously would even be more valuable for employees. In other words, it is assumed that employees would

gain from this in terms of even higher levels of work engagement, and lower levels of burnout in comparison to employees who only display either strengths- or deficiency oriented behavior.

Based on these anticipated connections, the following research questions is proposed:  
*What are the effects of strengths oriented behavior and deficiency oriented behavior on burnout and on work engagement and what is the effect of displaying both strengths- and deficiency oriented behavior simultaneously on burnout and work engagement?*

In the following section, the variables that play a central role in this study will be clarified in further detail. Moreover, the relationships between the variables will be explained.

## **Theoretical framework**

### **Strengths oriented behavior**

Positive psychology represents a new view on the human potential and capabilities of people (Seligman & Csikszentmihalyi, 2000). In contrast to the traditionally negative viewpoint on humans, positive psychologists call attention for “what is right with people”, their talents and positive features (Liney & Carter, 2007, p. 31). This new trend with a clear focus on strengths is also being referred to in the literature as the strengths approach (Strümpfer, 2006).

In this current study, the construct of central importance is the expression of strengths oriented behavior by employees. This refers to self-directed behavior of employees that is focused on utilizing their strengths in work activities (Els et al., in progress). This concept stems from work about pro-active behavior. Pro-active behavior refers to self-starting behavior that is initiated by employees in order to transform their current work situation (Bindl & Parker, in press). SOB builds further upon this work by arguing that employees could also pro-actively try to change their situation in order to ensure that they can utilize their strong features. For example, they can search for new and different work activities in which they would be able to use their strengths and talents. However, SOB also has a close connection with literature about job crafting. Job crafting implies that employees can act as pro-active actors, who craft and modify their jobs in order to create a better fit between their job and their selves. Changes can for example be made in terms of the content of the job or the types of work activities one selects and performs (Bakker, 2010). The connection could be illustrated in the following way: if employees value to use their strengths in work activities, they could display self-starting behavior that is focused on shaping, organizing and crafting their job in a way that it would suit with their strong

features and talents. In this way, employees will experience an improved fit. In sum, all the above examples have shown that strengths oriented behavior is not only a form of pro-active behavior and job crafting but also builds further upon this work.

## **Burnout**

In the past, psychologists have been centered on negative psychological states of employees (Schaufeli & Bakker, 2003). One construct that exemplifies this negative approach is burnout. Burnout is characterized by a state of overtiredness and a reduced participation in work related matters (Schaufeli et al., 2009). It consists of three different underlying dimensions: exhaustion, cynicism and reduced accomplishment. Exhaustion means that people do not possess over enough resources to cope with challenging situations (Maslach & Leiter, 2008). As a result, people feel extremely tired and they cannot perform tasks adequately because the development of new resources and energy is blocked (Maslach, 1998). Cynicism implies that people create a detachment between themselves and their work activities (Schaufeli, Taris, & van Rhenen, 2008). The last dimension, reduced accomplishment, refers to the negative personal thoughts and feelings of employees about their performance, capabilities and their efficiency level (Maslach & Leiter, 2008).

## **Work Engagement**

Today, research is much more focused on positive constructs than ever before (Schaufeli et al., 2009). This has also led to the conceptualization of work engagement (Chughtai & Byckley, 2008). Originally, work engagement was developed as a positive, direct opposite of burnout (Maslach et al., 2001). However, current research has indicated that the two concepts should not be seen as direct opposites on the same scale. In contrast, they should be viewed as two different independent factors with different underlying dimensions (Schaufeli & Bakker, 2003).

Work engagement is defined as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption” (González-Roma, Schaufeli, Bakker, & Lloret, 2006, p. 166). Vigor is typified by the fact that employees possess over enough energy to complete their tasks. They are eager to perform excellent even in unknown and complex situations. Dedicated employees are attached workers. They are enthusiastic, motivated and they are up for a challenge (Schaufeli & Bakker, 2004). The last dimension, absorption, means that

employees go fully up in their work to the point that they forget time. Work is satisfying for them and this makes it hard to disconnect themselves from work activities (Maslach et al., 2001). In sum, for engaged employees working is enjoyable, satisfying and fulfilling (Bakker & Demerouti, 2008).

### **The relationship between strengths oriented behavior and work engagement**

“When we use our strengths, we feel good about ourselves, we are better able to achieve things and we are working toward fulfilling our potential” (Linley & Harrington, 2006, p. 41). This citation points precisely to the reasons why a relationship is expected between the constructs. First of all, playing to one’s strengths will feel very pleasant and rewarding to employees because they are involved in activities they excel in. When employees show success in their activities and tasks, feelings of mastery can be acquired (Bradley, 2010). The completion of work-activities will be less energy- and time consuming. As a result, the performance level of employees will increase. Consequently, employees will experience a positive psychological state of satisfaction and fulfilment about their selves and their capabilities (Linley & Harrington, 2006). In other words, through this process of strengths use, feelings of self-efficacy, competence and self-esteem will occur (Proctor, Maltby, & Linley, 2011; Linley & Harrington, 2006) and these feelings will in turn lead to increased levels of work engagement (Bakker, 2010).

The self-determination theory can also be used to explain this relationship under investigation. This theory specifies that all human beings have three important inborn psychological needs that they want to fulfil: a need for relatedness, autonomy and competence (Baard, Deci, & Ryan, 2004). When individuals desire to fulfil a specific need, (e.g. a self-concordant goal), a motivational process starts up that is focused on attaining this goal (Linley, Nielsen, Gillett, & Biswas-Diener, 2010). It can be argued that this theory, and especially the need for competence, is applicable to this study. The need for competence refers to the desire of individuals to complete difficult work activities in order to reach wanted results (Baard et al., 2004). One can assume that in order to fulfil this need, they will have to display strengths oriented behavior. After all, for the completion of difficult tasks, it will be necessary for employees to use their strong features in order to assure success. When this is accomplished, the development of well-being starts up (Ryan & Deci, 2000).

Several empirically tested studies have confirmed this relation. For example, Wood, Linley, Maltby, Kashdan and Hurling (2011) conducted a longitudinal research and found that employees' higher ratings of strengths use in work activities lead to higher levels of well-being over time. In line with the research of Wood et al. (2011), Proctor et al., (2011) also found empirical evidence for a positive relationship between employees' utilization of strengths and subjective well-being. However, one should note that although well-being is not the construct under investigation in this current study, it is very close related to work engagement. For example, work engagement is defined in terms of well-being namely as "a positive, fulfilling, affective-motivational state of work-related well-being" (Bakker, Schaufeli, Leiter, & Taris, 2008, p. 187-188). This definition indicates the connection between the two concepts: if you experience high levels of well-being, your ratings of work engagement are also likely to be high. Because well-being and work engagement are so closely related constructs, it is expected that this relationship between SOB and work engagement will also be found although this relation is not empirically tested in the literature yet. This leads to the following hypothesis.

*Hypothesis 1: Higher ratings of employees' strengths oriented behavior in the workplace are positively related to work engagement.*

### **The relationship between strengths oriented behavior and burnout**

In order to describe the relationship between strengths oriented behavior and burnout, the opposite reasoning can be used as with work engagement. In short, because employees are able to excel in their activities through playing to their strengths, they will show success in their work. Work activities will be easier accomplished and are therefore less energy-consuming (Linley & Harrington, 2006). Moreover, the stress level of employees will likely reduce. As a result of this success, employees will feel fulfilled and satisfied (Linley & Harrington, 2006). This positive psychological state of mind that is illustrated by strong feelings of fulfillment, satisfaction and a reduced stress level stands in sharp contrast with burnout. As a result, it is expected when employees are able to use their strengths in work activities; this will reduce the chance that employees will experience burnout.

The following research studies have provided support for this hypothesized relationship. Wood et al. (2011) found empirical evidence that employees' utilization of strengths is



negatively related to their level of perceived stress over time. Moreover, research has also showed that employees' strong features can block possible upcoming stress (Proctor et al., 2011). This reasoning implies that when employees utilize their strengths, this will in turn reduce the chance that they will experience stress. Although the work of Wood et al., (2011) and Proctor et al. (2011) is about (perceived) stress, it can be argued that the two are closely related to each other: when people are dealing with continuous and long-term stress, this can in the end result in burnout (González-Roma et al., 2006). Because stress and burnout are strongly related construct, it is expected that this negative relationship between SOB and burnout will also be found even though this relationship is not investigated yet in the literature. This leads to the following hypothesis.

*Hypothesis 2: Higher ratings of employees' strengths oriented behavior in the workplace are negatively related to burnout.*

### **Deficiency oriented behavior**

Deficiency oriented behavior refers to self-directed behavior of employees that is focused on addressing their weaknesses and deficiencies in work activities (Els et al., in progress). Some people argue that addressing weaknesses is as important as playing to one's strengths since this will ultimately determine career success. To put in other words, if employees don't fix their deficiencies, the potential beneficial effects that strengths may have in their work activities will likely disappear (Linley & Harrington, 2006).

Both DOB and SOB have the same close connection with literature about pro-active behavior. This relation can be described in the following way: employees could express self-directed behavior that is aimed at changing their work situation in such a way that they would be able to work on their deficiencies. For example, employees can participate in activities to address their weaker areas. Moreover, they could ask for performance feedback about their shortcomings (Els et al., in progress). These examples show that deficiency oriented behavior is in fact a form of pro-active behavior and also builds further upon this work in the same way as this holds true for strengths oriented behavior.

## **The relationship between deficiency oriented behavior and work engagement and burnout**

Various HR theories and practices are in fact concentrated on fixing employees' weaknesses although this is not explicitly mentioned in the literature. The common belief is that weaknesses stand for huge risks and expenses that organizations need to eliminate. Take the example of performance appraisals (Linley & Harrington, 2006). Essentially, this HR practice is exclusively focused on comparing desired pre-established performance and behavior criteria with employees' current performance and behavior. The difference in between represents weak behavior that needs to be improved in order to receive a better appraisal. The same hold true for the commonly applied gap approach in the training and development literature. In order to diminish the gap between the desired and the current abilities of employees, specific training opportunities are provided to employees (Govaerts, Kyndt, Dochy, & Baert, 2011). Based on these related approaches, it is assumed that displaying deficiency oriented behavior can be beneficial for employees. After all, by actively searching for ways to improve their deficiencies, attempts can be made to diminish the gap between current and desired performance. When employees manage to accomplish this, they will receive a better appraisal, and possibly career growth can be achieved.

Another example that illustrates why employees may also appreciate to work on their weak features is represented by the concept of employability. Employability entails that employees are able to remain attractive for their current or possible future organization (Rothwell & Arnold, 2007), for example by participating in training- and development activities. In case an employee would get fired or would decide to leave the organization, the probability that he or she would find a job elsewhere would be enhanced (Baruch, 2001). This point directly to the reason why employees may value to express DOB: by investing in their deficiencies, their employability and marketability are simultaneously increased. This in turn diminishes the chance of being unemployed (Benson, 2006).

In conclusion, it is assumed that employees may also appreciate to work on their deficiencies since this will enhance their career opportunities and career perspective in their current or future organization. Consequently, this will result in a positive state of mind that is characterized by feelings of fulfillment and satisfaction. This in turn will lead to increased levels of work engagement. Moreover, since displaying DOB will reduce employees' uncertainty of being unemployed, their stress level will diminish. Consequently, it is expected that the chance

of experiencing burnout will reduce. Several empirical investigations have found support for these assumed relationships. The study of Kinnunen, Mäkikangas, Mauno, Siponen and Nätti (2001) has showed that employees who perceive themselves as highly employable will report lower scores of job exhaustion and psychological problems such as stress. On basis of these findings, these authors conclude that being employable has important beneficial consequences for employees' level of well-being as well. In line with this work, Berntson and Marklund (2007) conducted a longitudinal research and also found that employees perceived employability is positively related to their level of mental well being over time. Although well-being and stress are not the central constructs in this study, one can argue that they are closely related to both work engagement and burnout. Based on these empirical investigations, the following hypotheses are proposed.

*Hypothesis 3a: Higher ratings of employees' deficiency oriented behavior in the workplace are positively related to work engagement.*

*Hypothesis 3b: Higher ratings of employees' deficiency oriented behavior in the workplace are negatively related to burnout.*

### **The combination of displaying both strengths-and deficiency oriented behavior**

Recently there is also a counterbalance visible in the literature. Some authors have started to argue that one should not be occupied with only strengths or only weakness, but that the combination between the two should receive the focus of attention. In other words, they call for integration (Rust, Diessner, & Reade, 2009). In this way, this new stream combines the traditional more negative viewpoint on humans, with work from the positive psychology that is exclusively centered on employees' strengths. This current study will build further upon this idea. Since the expression of both SOB and DOB are expected to be beneficial for employees for different reasons, it is expected that the expression of both types simultaneously would even be more valuable for employees. To put it in other words, this study assumes that employees who also display deficiency oriented behavior next to playing to their strengths can benefit from it in terms of higher levels of work engagement and lower levels of burnout in comparison to

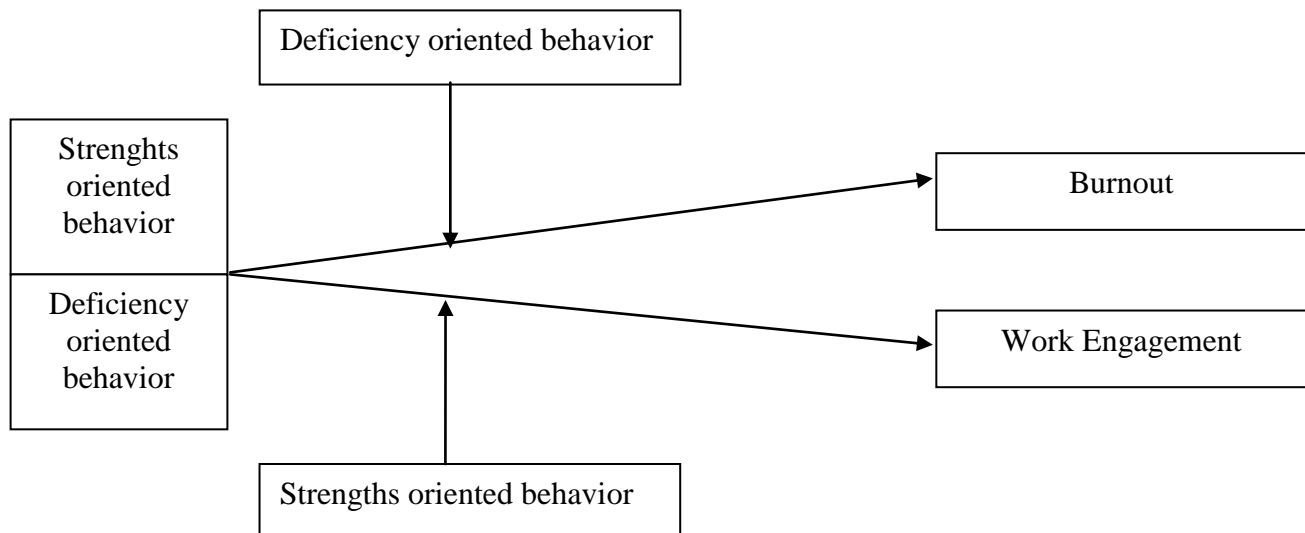
employees who only express strengths oriented behavior or only express deficiency oriented behavior. This leads to the following proposed hypotheses:

*Hypothesis 4a. Deficiency oriented behavior moderates the relationship between strengths oriented behavior and work engagement in such a way that employees who display both types of behavior will report higher levels of work engagement than employees who only display either strengths- or deficiency oriented behavior.*

*Hypothesis 4b. Deficiency oriented behavior moderates the relationship between strengths oriented behavior and burnout in such a way that employees who display both types of behavior will report lower levels of burnout than employees who only display either strengths- or deficiency oriented behavior.*

### Conceptual model

This study has proposed several relationships between strengths- and deficiency oriented behavior, work engagement and burnout. These assumed connections are displayed in figure 1.



**Figure 1.** Conceptual model of the assumed relationships in this study.

## **Method**

### **Research design**

A self-report questionnaire was constructed in order to answer the hypotheses. This self-report questionnaire was based upon an English questionnaire that was validated on a South-African sample (Els et al., in progress). It was distributed to employees from a high-tech company located in the Netherlands via their work-email. The questionnaire could be filled in online. Since the “organizational language” of the participating company is English, it was decided to distribute both English and Dutch questionnaires. Data was collected at one point at a time, which represents a cross-sectional research design.

### **Research population**

The research population consisted of young, highly educated technical employees with an average organizational tenure of only one to four years. They belonged to the starters group of the participating company. The questionnaire was sent to the work-email of 278 employees. Out of these 278 emails, 95 employees responded. This implies a response rate of 34.17%.

From the total of 95 respondents, 67 respondents were men (70.5%) and 28 were women (29.5%). The average age of the respondents was 29 years. The respondents were highly educated because 66 of them (69.5%) had finished a master at the university and additionally 16 respondents (16.8%) also completed their PhD. Because the population consisted of starters, the average organizational tenure was only 1.85 year. The average time that the respondents were employed in their current position, also referred to as the position tenure, was slightly lower with a mean of 1.45 year. 57 respondents (60%) completed the questionnaire in Dutch, compared to 38 (40%) who completed the survey in English.

### **Research instruments**

#### **Strengths- and deficiency oriented behavior**

Since strengths-and deficiency oriented behavior are rather new concepts in today’s literature, no already published work exists about these constructs. However, one exception was found. The research in progress of Els et al. has made a first attempt to measure these two concepts and was therefore used. SOB was measured through nine items. An example is “in my job I make the most of my strong points” and “I draw on my talents in the workplace”. The response categories

consisted of a seven-point Likert scale whereby answers could vary between 0 = never and 6 = almost always. Furthermore, the scale to measure DOB consisted of eight items like “in my job I make an effort to improve my limitations” and “I engage in activities to develop my weak points at work”. For this scale, also a seven-point Likert scale was used with the same answer categories as for SOB.

The collected survey data was subjected to a factor analysis, using a principal components analysis (PCA). This method was found to be suitable because the Kaiser-Meyer-Okin Measure of Sampling Adequacy (KMO) was 0.91, which exceeded the minimum value of 0.6. Additionally, the Bartlett’s test of sphericity showed a statistically significant value (Pallant, 2007). DOB showed a good internal factor structure with an eigenvalue of 6.7, which explained 55.86% of the total variance. Moreover, a Cronbach’s alpha of 0.93 was achieved for this scale. However, different results were obtained for SOB. From the total of nine items that this scale includes, the factor analysis revealed that items loaded on two different components. It was decided to critically analyze all the items. On basis of this critical examination, it was decided to use only four items that clustered together for further analyses. These items were chosen since they represented a better fit with SOB because they all exemplified more “active” items than the other five items. These four ‘active’ items represented a good factor structure with an eigenvalue of 1.57, which explained an additional 13.08 % of the total variance. After performing the factor analysis, a reliability analysis was also conducted which demonstrated a good internal consistency, whereby a Cronbach alpha value of 0.85 was reached. For a complete overview of the factor analysis, see Appendix A.

### **Work engagement**

Work engagement was measured with the UWES (Utrecht Work Engagement Scale) from Schaufeli & Bakker (2003). In total, the UWES consists of 17 items whereby three subcategories are distinguished: vigor, dedication and absorption. Example items are: “when I get up in the morning, I feel like going to work” (vigor), “I find the work that I do full of meaning and purpose” (dedication) and “time flies when I’m working” (absorption). Work engagement is measured with a seven-point Likert scale whereby answer options range from 0 = never to 6 = everyday.

Research has shown that the three-factor model of work engagement would result in a

better fit than any other substitute (Bakker, 2010). The factor analyses revealed that the three-factor structure was also clearly present, whereby most of the items loaded on one of three sub dimensions. However, a few items loaded on a fourth component that is not recognized in the literature. Because the UWES questionnaire has been examined intensively with regard to the most suitable internal structure, it was decided not to delete any items in order to show no deviations with other research. Furthermore, the internal consistency was also good, whereby a Cronbach's alpha of 0.89 was found. The reliability analysis was also performed for the three separate subscales of work engagement, whereby also sufficient values were found of respectively  $\alpha = 0.80$  for the vigor component,  $\alpha = 0.87$  for the dedication subscale and  $\alpha = 0.71$  for the absorption dimension.

## **Burnout**

Burnout is conceptualized with the UBOS (Utrecht Burnout Scale) from Schaufeli and van Dierendonck (2000). It consists of 15 items in total, whereby also three subcategories are distinguished: exhaustion, cynicism and reduced accomplishment. Example items are "working all day is really a strain for me" (exhaustion), "I have become less interested in my work since I started this job" (cynicism) and "I feel I am making an effective contribution to what this organization does" (reduced accomplishment). Burnout is also measured with a seven-point Likert scale, whereby answers vary from 0 = never to 6 = everyday.

A factor analysis revealed that the three-factor structure was clearly supported. However, a minor deviation was found because two items from the reduced accomplishment scale also showed moderately high cross loadings with the cynicism subscale. However, because the UWES has been well validated, no items were deleted in order to show no deviations with other studies using the UWES. Before a reliability analysis could be conducted, five items from the reduced accomplishment scale had to be reversed because the questionnaire consisted of both positive and negatively worded questions. After all the questions were presented in the same direction (e.g. where a high score on the scale represented an increased chance of burnout), a Cronbach's alpha value of 0.85 was found. After performing this reliability analysis on the total burnout scale, reliability was also assessed for the three separate sub dimensions whereby values of respectively  $\alpha = 0.84$  for the exhaustion component,  $\alpha = 0.75$  for the reduced accomplishment subscale and  $\alpha = 0.77$  for the cynicism dimension were revealed.

### **Control variables**

In total, three control variables were added in this study, respectively position tenure, educational level and the language of the questionnaire. Position tenure represents a continuous variable and was therefore calculated in number of years. Educational level consisted of six different options; 1= secondary education, 2= vocational education, 3= bachelor, 4= master, 5= PhD and 6 = other; PDEng. And finally, language of the questionnaire (either Dutch or English) represents a categorical variable.

### **Statistical analysis**

For the statistical analysis, SPSS version 19.0 was used. First, it was tested whether hierarchical multiple regression analyses would be appropriate to test the hypotheses. One condition is that the sample must be large enough. This can be tested by using the following formula:  $N > 50 + 8m$  where  $m$  stands for the number of independent variables (Tabachnick & Fidell, in Pallant, 2007). This current study specifies two independent variables: strengths- and deficiency oriented behavior. This implies that at least 66 questionnaires should be present and valid. This first criterion is met, since the total sample size varies between  $N = 92$  and  $N = 95$ . Second, the issue of multicollinearity was taken into account. Multicollinearity occurs when different independent variables show an extremely high correlation of  $r = 0.9$  or even higher with each other (Pallant, 2007). This issue did not occur in the current sample, since the correlation between strengths- and deficiency oriented behavior reached a value of  $r = 0.58$ .

Standardized residual plots, scatter plots and the casewise diagnostics tables were requested from the analyses in order to check whether they were any outliers present in the total sample. However, no deviations were discovered. Moreover, the residual scatter plots were assessed and analyzed but no violations of normality, linearity and homoscedasticity were found to be present in the sample.



## Results

### Correlations

In order to investigate the relationships between the variables of interest, Pearson product-moment correlation coefficient was calculated. This analysis revealed a strong positive correlation between SOB and DOB ( $r = 0.58^{**}$ ). Moreover, both SOB and DOB showed a positive, moderate relation with engagement ( $r = 0.35^{**}$ ) ( $r = 0.44^{**}$ ) and a negative moderate relation with burnout ( $r = -0.24^*$ ) ( $r = -0.27^{**}$ ). However, in each case, DOB revealed a stronger effect on work engagement and burnout than SOB did. The three subscales of work engagement also showed a positive significant correlation with each other ( $r = 0.76^{**}$ ) ( $r = 0.49^{**}$ ) ( $r = 0.47^{**}$ ). These moderately to high correlations imply that the three subscales show a great amount of overlap. As a result, two options for further analyses occur: the scale of work engagement can either be taken into account as a whole but the subscales can also be separately investigated. It was decided to explore both options in further analyses in order to give a more accurate overview. Furthermore, the three subscales of burnout all showed a positive, significant relationship with each other ( $r = 0.28^{**}$ ) ( $r = 0.54^{**}$ ) ( $r = 0.40^{**}$ ). For further analyses, it was decided to both investigate the total scale of burnout, as well as the three different subscales.

### Hierarchical multiple regression analysis

Hierarchical multiple regression accounts whether the independent variable(s) is able to explain sufficient variance of the dependent variable when all the control variables are taken into account and are controlled for (Pallant, 2007). Before the findings are presented, a note must be made. Preliminary analyses have revealed that when both strengths- and deficiency oriented behavior were included in the same model in order to predict work engagement, the predictive power of SOB largely disappeared. In contrast, when the effects of DOB were not controlled for, SOB was able to reveal a statistically significant effect. This implies that the total variance that strengths oriented behavior was able to explain of work engagement largely depended on the inclusion of deficiency oriented behavior in the same model. In order to test the hypotheses, it was decided to add both SOB and DOB in the same model in order to control for their effects. For a complete overview of this preliminary analysis, see Appendix B.

**Table 2***Pearson product-moment correlation coefficients for the variables of interest*

	<i>N</i>	<i>M</i>	<i>SE</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>
<b>1.SOB</b>	95	5.17	1.02												
<b>2.DOB</b>	95	4.56	1.05	0.58**											
<b>3.Engagement</b>	92	5.42	0.77	0.35**	0.44**										
<b>4.Vigor</b>	92	5.61	0.86	0.31**	0.33**	0.88**									
<b>5.Dedication</b>	92	5.57	1.00	0.31**	0.44**	0.87**	0.76**								
<b>6.Absorption</b>	92	5.11	0.88	0.25*	0.35**	0.78**	0.49**	0.47**							
<b>7. Burnout</b>	92	2.62	0.81	-0.24*	-0.27**	-0.60**	-0.63**	-0.67**	-0.23*						
<b>8.Exhaustion</b>	92	3.00	1.21	-0.04	0.02	-0.25*	-0.36**	-0.33**	0.06	0.82**					
<b>9.Reduced acc.</b>	92	2.50	0.80	-0.38**	-0.43**	-0.76**	-0.74**	-0.71**	-0.47**	0.69**	0.28**				
<b>10. Cynicism</b>	92	2.35	1.18	-0.18	-0.29**	-0.45**	-0.39**	-0.58**	-0.18	0.82**	0.54**	0.40**			
<b>11. Language</b>	95	1.40	0.49	0.01	0.11	-0.18	-0.26*	-0.29**	0.08	0.18	0.17	0.14	0.11		
<b>12. Position Ten.</b>	95	1,45	0.98	-0.15	-0.31**	-0.24*	-0.20	-0.18	-0.21*	0.13	0.02	0.13	0.17	-0.16	
<b>13. Education</b>	95	3.98	0.79	0.05	-0.06	-0.07	-0.12	-0.11	0.03	0.12	0.04	0.15	0.11	0.33**	-0.06

\*p &lt; 0,05 ; \*\*p &lt; 0,01

The first multiple regression analysis was performed in order to test both hypothesis 1 and hypothesis 3a, which stated that expressing strengths oriented behavior and expressing deficiency oriented behavior are positively related to work engagement. The control variables that were entered in block 1, explained 11% of the variance. In block 2, both SOB and DOB were included and together with block 1, this entire model was able to predict 28% of work engagement, whereby the whole model also reached a statistically significant result [ $F(5.86) = 6.73, p < 0.001$ ]. Moreover, SOB and DOB explained an additional 18% of the variance in work engagement, after controlling for language, position tenure and educational level, R squared change = 0.18,  $F$  change (2.86) = 10.51,  $p < 0.001$ . In the first model, both language and position tenure reached a statistically significant value. However, the final block showed that only the language of the questionnaire and DOB made a unique significant contribution to explain work engagement whereby a higher beta value was found for DOB ( $\beta = 0.33, p < 0.01$ ) than for language of the questionnaire ( $\beta = -0.26, p < 0.01$ ). The significant effect of language entails that employees who completed the questionnaire in English (the international employees) reported lower level of work engagement in comparison to employees who completed the questionnaire in Dutch (the Dutch native speakers). Surprisingly, SOB was no unique predictor of work engagement ( $\beta = 0.16, p = 0.16$ ). Based on this analysis, hypothesis 1 could not be confirmed since no significant relationship is found between strengths oriented behavior and work engagement. In contrast, a positive, significant effect is found for deficiency oriented behavior. Therefore, hypothesis 3a is accepted. This entails that expressing deficiency oriented behavior will increase the level of work engagement experienced by employees.

**Table 3**

*Hierarchical multiple regression predicting work engagement from SOB and DOB*

Variable	Model 1			Model 2		
	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<b>Constant</b>	6.28	0.44		4.41	0.57	
<b>Language</b>	-0.34	0.17	-0.22*	-0.41	0.15	-0.26**
<b>Position T.</b>	-0.21	0.08	-0.27**	-0.12	0.08	-0.15
<b>Edu.</b>	-0.02	0.10	-0.02	0.01	0.10	0.01

<b>SOB</b>		0.12	0.09	0.16
<b>DOB</b>		0.24	0.09	0.33**
<b>R<sup>2</sup></b>		0.11		<b>0.28</b>
<b>ΔR<sup>2</sup></b>				<b>0.18</b>
<b>F</b>		3.45*		<b>6.7***</b>
<b>ΔF</b>				<b>10.51***</b>

*Note.* N = 92; b = unstandardized regression coefficients; SE = standard error; Beta = standardized regression coefficient  
 \*p < .05; \*\*p < .01; \*\*\*p < 0.001

In order to give a more complete overview of the relationship between SOB, DOB and work engagement, the subscales of work engagement were also tested. The complete overview is displayed in Appendix C. The analyses revealed that in none of the cases, SOB had a significant and positive influence on the three different subscales. To the contrary, only DOB showed a positive effect on both the dedication and absorption subscale, whereby a higher beta value was demonstrated for the dedication dimension ( $\beta = 0.38, p < 0.001$ ) than for the absorption dimension ( $\beta = 0.27, p < 0.05$ ). However, this effect was not supported for the vigor component. The conclusion on basis of these results is that higher ratings of displaying deficiency oriented behavior will also lead to higher scores on two of the separate subscales of work engagement, respectively dedication and absorption.

Hypothesis 2 and 3b stated that expressing strengths oriented behavior and expressing deficiency oriented behavior are both negatively related to burnout. In the first block, the control variables were entered, followed by SOB and DOB that were both included in block 2. Although SOB and DOB were able to explain an additional 8% variance from the total burnout scale, after controlling for language, position tenure and educational level, R squared change= 0.08, F change (2.86) = 3.87,  $p < 0.05$ ), they both were no unique predictor of burnout since they did not demonstrated a significant beta value ( $\beta = -0.14, p = 0.25$ ) ( $\beta = -0.18, p = 0.16$ ). Therefore, hypothesis 2 and 3b were not confirmed.

**Table 4***Hierarchical multiple regression predicting burnout from SOB and DOB*

<b>Variable</b>	<b>Model 1</b>			<b>Model 2</b>		
	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<b>Constant</b>	1.72	0.47		3.04	0.66	
<b>Language</b>	0.30	0.18	0.19	0.35	0.18	0.21
<b>Position T.</b>	0.13	0.09	0.16	0.07	0.09	0.09
<b>Edu.</b>	0.07	0.11	0.07	0.06	0.11	0.06
<b>SOB</b>				-0.11	0.10	-0.14
<b>DOB</b>				-0.14	0.10	-0.18
<b>R<sup>2</sup></b>			0.06			<b>0.14</b>
<b><math>\Delta R^2</math></b>						<b>0.08</b>
<b>F</b>			1.96			<b>2.80*</b>
<b><math>\Delta F</math></b>						<b>3.87*</b>

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < 0.001$ 

As already explained, burnout consists of three different subscales. The relationship between SOB, DOB and each of the subscales was also tested in order to provide a more complete picture. Both SOB and DOB were no unique predictors of either exhaustion or cynicism. For a complete overview of these relations, see Appendix C. However, for the reduced accomplishment dimension, different results were acquired. The control variables, which were entered in block 1, explained only 6% of the variance of the reduced accomplishment scale. However, with the inclusion of SOB and DOB in model 2, the total variance explained by the model grew to a percentage of 25.4, whereby the whole model was also statistically significant [ $F(5.86 = 5.86, p < 0.001)$ ]. Moreover, SOB and DOB explained an additional 19.6% of the variance in the reduced accomplishment scale after controlling for language, position tenure and educational level, R squared change = 0.20, F change (2.86) = 11.29,  $p < 0.001$ ). Surprisingly, in the final model, only DOB had a significant negative influence on the variable reduced accomplishment ( $\beta = -0.30, p < 0.05$ ). These obtained results imply that expressing DOB has a

negative influence on the subscale reduced accomplishment, but this effect is not supported for either the exhaustion or the cynicism component. More specifically, this means that higher ratings of expressing deficiency oriented behavior will diminish the score on the reduced accomplishment scale.

**Table 5**

*Hierarchical multiple regression analysis predicting reduced accomplishment from SOB and DOB*

Variable	Model 1			Model 2		
	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<b>Constant</b>	1.53	0.47		3.61	0.61	
<b>Language</b>	0.21	0.18	0.13	0.28	0.16	0.17
<b>Position T.</b>	0.13	0.09	0.16	0.04	0.08	0.04
<b>Edu.</b>	0.12	0.11	0.12	0.09	0.10	0.09
<b>SOB</b>				-0.17	0.09	-0.22
<b>DOB</b>				-0.23	0.09	-0.30*
<b>R<sup>2</sup></b>			0.06			<b>0.25</b>
<b><math>\Delta R^2</math></b>						<b>0.20</b>
<b>F</b>			1.82			<b>5.86***</b>
<b><math>\Delta F</math></b>						<b>11.29***</b>

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < 0,001$

Finally, the interaction hypotheses were tested. The first interaction hypothesis stated that displaying both strengths- and deficiency oriented behavior simultaneously would lead to higher levels of work engagement in comparison to employees who only display either SOB or only DOB. The first block of variables comprised of control variables. In the second block, both SOB and DOB were added. The third block contained the interaction variable (SOB\*DOB). From the entire model, only the language of the questionnaire made a unique contribution to explain work engagement ( $\beta = -0.29$ ,  $p < 0.01$ ). This implies that employees who completed the survey in

English reported lower levels of work engagement than employees who completed the survey in Dutch. Moreover, the interaction variable was no unique predictor of work engagement ( $\beta = 0.86, p = 0.11$ ), and was not able to explain any significant additional variance in work engagement, after the effects of language, position tenure and organizational level were controlled for. On basis of this analysis, hypothesis 4a could not be confirmed.

**Table 6**

*Hierarchical multiple regression analysis predicting work engagement from the interaction variable SOB\*DOB*

	<b>Model 1</b>			<b>Model 2</b>			<b>Model 3</b>		
<b>Variable</b>	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<b>Constant</b>	6.28	0.44		4.41	0.57		6.10	1.16	
<b>Language</b>	-0.34	0.17	-0.22*	-0.41	0.15	-0.26**	-0.45	0.15	-0.29**
<b>Pos. T.</b>	-0.21	0.08	-0.27**	-0.12	0.08	-0.15	-0.14	0.08	-0.18
<b>Edu.</b>	-0.02	0.10	-0.02	0.01	0.10	0.01	0.10	0.09	0.01
<b>SOB</b>				0.12	0.09	0.16	-0.19	0.21	-0.26
<b>DOB</b>				0.24	0.09	0.33**	-0.16	0.26	-0.22
<b>SOB*DOB</b>							0.08	0.05	0.86
<b>R<sup>2</sup></b>			0.11			0.28			<b>0.30</b>
<b><math>\Delta R^2</math></b>						0.18			<b>0.02</b>
<b>F</b>			3.45*			6.72***			<b>6.16***</b>
<b><math>\Delta F</math></b>						10.51***			<b>2.69</b>

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < 0,001$

The second interaction hypothesis stated that displaying both strengths- and deficiency oriented behavior would lead to lower levels of burnout in comparison to employees who only display either SOB or only DOB. The first block comprised of control variables, followed by both SOB and DOB. In the last block, the interaction variable was added. Only language of the questionnaire made a unique significant contribution to explain burnout ( $\beta = 0.25, p < 0.05$ ). This

entails that international employees experience an increased chance of burnout in comparison to their Dutch colleagues. Other than this variable, no statistically significant outcomes were found. This implies that the interaction variable was no unique predictor of burnout ( $\beta = -1.04$ ,  $p = 0.07$ ), and was not able to explain any additional variance from the dependent variable burnout after taking the control variables into account. Therefore, hypothesis 4b could not be confirmed as well.

**Table 7**

*Hierarchical multiple regression analysis predicting burnout from the interaction variable SOB\*DOB*

	<b>Model 1</b>			<b>Model 2</b>			<b>Model 3</b>		
<b>Variable</b>	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<b>Constant</b>	1.72	0.47		3.04	0.66		0.92	1.34	
<b>Language</b>	0.30	0.18	0.19	0.35	0.18	0.21	0.41	0.18	0.25*
<b>Pos. T.</b>	0.13	0.09	0.16	0.07	0.09	0.09	0.10	0.09	0.12
<b>Edu.</b>	0.07	0.11	0.07	0.06	0.11	0.06	0.06	0.11	0.06
<b>SOB</b>				-0.11	0.10	-0.14	0.28	0.24	0.36
<b>DOB</b>				-0.14	0.10	-0.18	0.37	0.30	0.48
<b>SOB*DOB</b>							-0.10	0.06	-1.04
<b>R<sup>2</sup></b>			0.06			0.14			<b>0.17</b>
<b><math>\Delta R^2</math></b>						0.08			<b>0.03</b>
<b>F</b>			1.96			2.80*			<b>2.94*</b>
<b><math>\Delta F</math></b>						3.87*			<b>3.29</b>

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < 0,001$ .



## **Conclusion and discussion**

This study investigated whether displaying strengths oriented behavior and displaying deficiency oriented behavior would increase the amount of work engagement experienced by employees, and in contrast, would decrease the chance of experiencing burnout. Moreover, the expression of both types of behavior simultaneously was examined as well. In order to answer the research question, 95 employees from a high-tech organization located in the Netherlands participated in a web-based survey.

The findings revealed that deficiency oriented behavior is positively related to work engagement, and also to two of the three subscales, respectively dedication and absorption. Unexpectedly, strengths oriented behavior was no unique predictor of work engagement. It turned out that the predictive power of SOB largely disappeared when DOB was included in the same model, and was controlled for. Therefore, the hypothesis between strengths oriented behavior and work engagement could not be confirmed. Another explanation for the non-significant relation could be derived from the organizational climate. In the participating organization, entrepreneurship is highly valued. There is a large amount of freedom for employees to come up with new ideas and innovations. This process requires employees to use their strong features and talents. When employees discover better ways of working, they will receive the chance to execute their ideas themselves. This acknowledgement and appreciation from the organization will in turn influence the perceptions of employees that the organization is already centered on their strengths. This particular type of climate can be defined as a strengths based psychological climate. Additional analyses have revealed this climate is also positively related to work engagement. This helps to better explain the found results. Since the organizations supports a strengths based psychological climate, employees feel that they can already use their strong features and talents in work activities. Therefore, they don't have to express self-starting and pro-active behavior themselves in order to be able to use their strengths. This gives some leeway and could in turn inspire them to become also focused on fixing their weaknesses. In this way, for the young, highly educated starters group of the participating organization expressing deficiency oriented behavior is actually more beneficial because it leads to higher levels of work engagement in comparison to expressing strengths oriented behavior. This does not mean that the concept of strengths oriented behavior is not important in its own right, but what it does entail is that it might be less important in organizations where the

organizational focus is already on strengths of employees.

Surprisingly, the language of the questionnaire was also a unique predictor of work engagement. It turned out that Dutch native speakers experience higher levels of work engagement in comparison to their international non-Dutch speaking colleagues. A reason for this found effect could be that international employees experience more problems with adapting to the Dutch culture and the organizational culture. Since a complete adaption takes a considerable amount of time, this will likely affect the energy level of employees whereby they experience lower levels of energy to perform effectively and efficiency. As a result, these employees could report lower level of engagement since they are extremely occupied with the transformation from their home country to the Netherlands.

Unexpectedly, the negative relationships between SOB, DOB and burnout were not confirmed. An explanation for SOB could be derived from literature in the area of the positive psychology. Interventions in this research domain are deliberately aimed at enhancing positive constructs (Sin & Lyumbomirsky, 2009). However, this does not mean that these interventions cannot have an effect on negative constructs, such as burnout, but one should view this as a potential positive cross effect rather than as an intended main effect (Meyers, van Woerkom, & Bakker, in progress). This leads to an explanation why no significant effect is found with burnout; reducing burnout is not the main goal but only a possible and welcome side effect that might occur. Another explanation for the fact that no connection was found between both SOB, DOB and work engagement could be derived from the specific sample that was used for this study. Analyses that were performed indicated that the average score on the burnout scale of this group of employees was already very low, with an average of 2.62 out of 7. This average low score on the burnout scale could have undone the potential positive effects of displaying strengths- or deficiency oriented behavior. After all, when the average is already at the bottom end of the scale, it would be difficult to even further lower this number, since a floor effect might be present (Meyers et al., in progress).

Although no relationship was found between SOB and DOB and the total scale of burnout, the three subscales were also assessed separately. Both exhaustion and cynicism showed no relationship. However, analyses revealed that when employees express deficiency oriented behavior, they will report lower scores on the reduced accomplishment scale e.g. they will experiences less negative thoughts about their performance, capabilities and their efficiency level

(Maslach & Leiter, 2008). This negative connection could arise from the fact that when employees experience some deficiencies in their work performance, this could make them feel insecure. By displaying DOB, weaknesses are addressed, and consequently, their confidence level will rise again. As a result, employees feel better about their capabilities and their work performance and this will result in a lower score on the reduced accomplishment component. Furthermore, since this particular scale was the only subscale that showed this negative effect, it could imply that the reduced accomplishment dimension measures something substantially different than the two other dimensions do. Research supports this proposition since reduced accomplishment arises from a reaction to the absence of resources to cope with different situations. In comparison, both exhaustion and cynicism are the result of an overburden of job related activities, and conflicts at work (Maslach et al., 2001). To summarize, although the three subscales of burnout together represent the most complete picture, the reduced accomplishment component has a different underlying cause than the other two. This helps to explain why it was the only subscale that revealed a negative effect. This also underpins the fact that it could be useful for other research studies to not only assess the total scale of burnout, but to take the separate sub dimensions into account as well.

Unexpectedly, displaying both strengths- and deficiency oriented behavior simultaneously revealed neither an effect for the assumed relationship with work engagement, nor for the relationship with burnout. A reason for this could be that the sample size was substantially small, and consequently, the predictive statistical power of this study could be too low. In the literature, a minimum sample size of at least 150 cases is often mentioned (Pallant, 2007). This study did not fulfill this criteria, since the total amount of cases varied between  $N = 92$  and  $N = 95$ . When the sample size would be substantially larger, one can assume that different results could be acquired since the literature clearly expresses different motives why employees would value to express both strengths- and deficiency oriented behavior.

## **Limitations**

Several limitations that this study is subjected to are noteworthy to mention.

The first issue that should be mentioned is that the sample consisted of a very specific group of employees, whereby data was collected in only one organization. All respondents belonged to the starters group, were young and highly educated. Their average organizational

tenure was only 1.85 year, and their average position tenure was 1.45 year. This entails that there were only minor differences noticeable between the respondents. The sample was therefore very homogeneous. Consequently, it is expected that different results could be obtained with a more heterogeneous sample whereby more differences are observable in terms of age, educational level, type of organization, organizational tenure and position tenure.

A further concern stems from the use of a cross-sectional research design. This particular research design does not allow making causal statements about the relationships in place. It could be the case that the causality of the expected relationships exactly runs the other way around. So even though this study has found that expressing deficiency oriented behavior is positively related work engagement, one can also assume an opposite connection e.g. employees who are very engaged could also be more willing to work on their deficiencies. After all, these employees are very energetic and this energy can be used for ways to addresses their weaknesses. In this way, engaged employees will be able to stimulate their own personal development. Consequently, an avenue for future research is to also explore the use of a longitudinal research design in order to address the issue of causality.

Finally, another issue that might have aroused from this research stems from the use of the newly constructed questionnaire to measure both strengths- and deficiency oriented behavior. For the SOB scale, more than half of the questions (five out of nine) had to be deleted in order to reach a good internal factor structure. This implied that the nine items of the newly constructed scale did not completely corresponded to the theory that was in place. Because the scale is not validated in other research studies yet, it is unclear whether this problem will also arise in different research studies since no guidelines or test manuals are available about the scales yet. Therefore, additional testing will be necessary in further research. For the deficiency oriented behavior scale, no problems arose since no items had to be deleted. This entails that the theory was in line with the factor structure of the items.

Based on the presented limitations, a recommendation for future research is to investigate both strengths and deficiency oriented behavior in further detail. Although they are new developed constructs in the literature that expands and build upon work about pro-active behavior and job crafting, they still represent rather unexplored variables. A guided theory and framework should be developed in order to create a better understanding about its underlying causes, triggers and

relationship to other constructs. Moreover, not only a more thoroughly framework is needed; also the questionnaire to measure strengths and deficiency oriented behavior should receive additional attention. While the scales are already conceptualized, they are not methodically validated yet in other studies. Therefore, caution is needed with interpreting and using the scales without a proper validation and examinations of the item structure beforehand.

### **Practical implications**

Positive psychology advocates that the focus of attention should be on strengths in order to reach valuable outcomes for both individuals and organizations. Surprisingly, this current study has found some interesting results that are not in line with this. Not strengths oriented behavior, but its counterpart, deficiency oriented behavior was positively related to work engagement, and negatively related to one of the subscales of burnout: reduced accomplishment. It is expected that this is the result from the specific sample that was used, as well as from the fact that the participating organization is already focused on using the strengths of their employees. This could inspire the young, ambitious and highly educated employees to also address their weakness. For these types of employees, displaying deficiency oriented behavior is thus actually more beneficial since this leads to higher levels of work engagement in comparison to displaying strengths oriented behavior. This is not only an important implication for individual employees, but for the organization as well. HR managers could use these findings for training- and development purposes. For example, they could coach their employees to develop deficiency oriented behavior in order to increase the level of engagement of these employees. The findings could also be applied to the selection policy that the organization adopts. Selection could become more focused on attracting people who are concentrated on improving their weaknesses if the organization wants to foster the level of work engagement under employees. However, one must keep in mind that more thoroughly investigations are in need before these final conclusions can be made in other organizations and for other types of employees.

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## Appendix A

Factor loadings for the scales of strengths- and deficiency oriented behavior.

<b>NR</b>	<b>Item</b>	<b>Factor I</b>	<b>Factor II</b>
<b>DOB 3</b>	Taken oppakken om zwakke punten te ontwikkelen	<b>0.95</b>	-0.13
<b>DOB 4</b>	Werk in aan mijn tekortkomingen	<b>0.95</b>	-0.80
<b>DOB 2</b>	Verbeteren van de dingen waar ik mee worstel	<b>0.87</b>	0.30
<b>DOB 1</b>	Richt ik me op mijn verbeterpunten	<b>0.84</b>	-0.01
<b>DOB 8</b>	Zoek ik feedback op mijn verbeterpunten	<b>0.74</b>	0.11
<b>DOB 7</b>	Doe ik mijn best om mijn tekortkomingen te verbeteren	<b>0.71</b>	0.22
<b>DOB 5</b>	Trainingsmogelijkheden om zwakke punten	<b>0.66</b>	-0.4
<b>DOB 6</b>	Ik reflecteer op hoe ik dingen kan verbeteren	<b>0.64</b>	0.23
<b>SOB 9</b>	Werk oppakken dat aansluit bij mijn sterke punten	-0.03	<b>0.91</b>
<b>SOB 1</b>	Ik zoek actief naar taken waar ik goed in ben	-0.11	<b>0.83</b>
<b>SOB 4</b>	Organiseer mijn werk zodat het aansluit bij mijn sterke	0.21	<b>0.72</b>
<b>SOB 3</b>	Zoveel mogelijk gebruik maken van mijn talenten	0.23	<b>0.70</b>

## Appendix B

*Hierarchical multiple regression analysis predicting work engagement from only SOB*

Variable	Model 1			Model 2		
	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<b>Constant</b>	6.28	0.44		4.99	0.55	
<b>Language</b>	-0.34	0.17	-0.22*	-0.38	0.16	-0.24*
<b>Position T.</b>	-0.21	0.08	-0.27**	-0.18	0.08	-0.23*
<b>Edu.</b>	-0.02	0.10	-0.02	-0.02	0.10	-0.02
<b>SOB</b>				0.25	0.07	0.34***
<b>R<sup>2</sup></b>			0.11			<b>0.22</b>
<b><math>\Delta R^2</math></b>						<b>0.11</b>
<b>F</b>			3.45			<b>6.00***</b>
<b><math>\Delta F</math></b>						<b>11.29***</b>

\*p < .05; \*\*p < .01; \*\*\*p < 0.001

## Appendix C

**Table 8**

*Hierarchical multiple regression predicting vigor from SOB and DOB*

	<b>Model 1</b>			<b>Model 2</b>		
<b>Variable</b>	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<b>Constant</b>	6.80	0.48		5.10	0.66	
<b>Language</b>	-0.49	0.19	-0.28**	-0.55	0.18	-0.32**
<b>Position T.</b>	-0.22	0.09	-0.25*	-0.15	0.09	-0.17
<b>Edu.</b>	-0.05	0.12	-0.04	-0.03	0.11	-0.03
<b>SOB</b>				0.18	0.10	0.21
<b>DOB</b>				0.15	0.10	0.18
<b>R<sup>2</sup></b>			0.13			<b>0.24</b>
<b><math>\Delta R^2</math></b>						<b>0.12</b>
<b>F</b>			4.35*			<b>5.56***</b>
<b><math>\Delta F</math></b>						<b>6.54**</b>

\*p < .05; \*\*p < .01;

**Table 9***Hierarchical multiple regression predicting dedication from SOB and DOB*

	<b>Model 1</b>			<b>Model 2</b>		
<b>Variable</b>	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<b>Constant</b>	6.92	0.56		4.43	0.72	
<b>Language</b>	-0.66	0.22	-0.33**	-0.75	0.19	-0.37***
<b>Position T.</b>	-0.24	0.10	-0.23*	-0.11	0.10	-0.10
<b>Edu</b>	-0.02	0.13	-0.01	0.03	0.12	0.02
<b>SOB</b>				0.11	0.11	0.12
<b>DOB</b>				0.36	0.11	0.38***
<b>R<sup>2</sup></b>			0.14			<b>0.33</b>
<b><math>\Delta R^2</math></b>						<b>0.19</b>
<b>F</b>			4.72*			<b>8.32***</b>
<b><math>\Delta F</math></b>						<b>11.96***</b>

\*p &lt; .05; \*\*p &lt; .01; \*\*\*p &lt; 0.001

**Table 10***Hierarchical multiple regression predicting absorption from SOB and DOB*

	<b>Model 1</b>			<b>Model 2</b>		
<b>Variable</b>	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<b>Constant</b>	5.23	0.52		3.69	0.72	
<b>Language</b>	0.08	0.20	0.04	0.02	0.19	0.01
<b>Position T.</b>	-0.19	0.10	-0.21	-0.10	0.10	-0.12
<b>Edu</b>	0.01	0.12	0.01	0.04	0.12	0.03
<b>SOB</b>				0.07	0.11	0.08
<b>DOB</b>				0.23	0.11	0.27*
<b>R<sup>2</sup></b>			0.05			<b>0.14</b>
<b><math>\Delta R^2</math></b>						<b>0.09</b>
<b>F</b>			1.46			<b>2.81*</b>
<b><math>\Delta F</math></b>						<b>4.65*</b>

\*p &lt; .05; \*\*p &lt; .01; \*\*\*p &lt; 0.001

**Table 11***Hierarchical multiple regression analysis predicting exhaustion from SOB and DOB*

	<b>Model 1</b>			<b>Model 2</b>		
<b>Variable</b>	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<b>Constant</b>	2.39	0.72		2.53	1.05	
<b>Language</b>	0.44	0.28	0.18	0.44	0.28	0.18
<b>Position T.</b>	0.06	0.13	0.05	0.07	0.14	0.05
<b>Edu</b>	-0.02	0.17	-0.01	-0.01	0.17	-0.01
<b>SOB</b>				-0.10	0.16	-0.09
<b>DOB</b>				0.07	0.16	0.06
<b>R<sup>2</sup></b>			0.03			<b>0.04</b>
<b><math>\Delta R^2</math></b>						<b>0.01</b>
<b>F</b>			0.89			<b>0.62</b>
<b><math>\Delta F</math></b>						<b>0.23</b>

\*p &lt; .05; \*\*p &lt; .01; \*\*\*p &lt; 0.001

**Table 12***Hierarchical multiple regression analysis predicting cynicism from SOB and DOB*

	<b>Model 1</b>			<b>Model 2</b>		
<b>Variable</b>	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<b>Constant</b>	1.15	0.70		2.83	0.98	
<b>Language</b>	0.27	0.27	0.11	0.33	0.26	0.14
<b>Position T.</b>	0.23	0.13	0.19	0.13	0.13	0.11
<b>Edu</b>	0.12	0.17	0.08	0.08	0.16	0.06
<b>SOB</b>				-0.04	0.15	-0.04
<b>DOB</b>				-0.28	0.15	-0.24
<b>R<sup>2</sup></b>			0.05			<b>0.12</b>
<b><math>\Delta R^2</math></b>						<b>0.06</b>
<b>F</b>			1.61			<b>2.26</b>
<b><math>\Delta F</math></b>						<b>3.12*</b>

\*p &lt; .05; \*\*p &lt; .01; \*\*\*p &lt; 0,001



## Appendix D

### Scale to measure strengths oriented behavior

0 = Almost Never <i>Bijna nooit</i>	1 = Rarely <i>Zelden</i>	2 = Occasionally <i>Af en toe</i>	3 = Sometimes <i>Soms</i>	4 = Frequently <i>Vaak</i>	5 = Usually <i>Meestal</i>	6 = Almost always <i>Bijna altijd</i>
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1	I actively look for job tasks I am good at <i>Ik zoek actief naar taken waar ik goed in ben</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	I use my strengths at work <i>Ik gebruik mijn sterke kanten in mijn werk</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	In my job, I try to apply my talents as much as possible <i>In mijn werk probeer ik zoveel mogelijk gebruik te maken van mijn talenten</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	I organise my job to suit my strong points <i>Ik organiseer mijn werk zo dat het aansluit bij mijn sterke punten</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	I draw on my talents in the workplace <i>Ik maak gebruik van mijn talenten op mijn werk</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	At work, I focus on the things I do well <i>Op het werk richt ik mij op de dingen die ik goed doe</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	In my job, I make the most of my strong points <i>In mijn werk probeer ik mijn sterke kanten zoveel mogelijk uit te buiten</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	I capitalise on my strengths at work <i>Op het werk trek ik profijt van mijn sterke kanten</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	I seek opportunities to do my work in a manner that best suits my strong points <i>Ik zoek naar mogelijkheden om mijn werk aan te pakken op een manier die het best bij mijn sterke punten past</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Scale to measure deficiency oriented behavior

10	In my job, I concentrate on my areas of development <i>In mijn werk richt ik me op mijn verbeterpunten</i>	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
11	At work, I focus on developing the things I struggle with <i>Op het werk richt ik me op het verbeteren van de dingen waar ik mee worstel</i>	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
12	I engage in activities to develop my weak points at work <i>Ik pak bewust taken op om mijn zwakke punten te ontwikkelen</i>	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
13	In my job, I work on my shortcomings <i>In mijn baan werk ik aan mijn tekortkomingen</i>	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
14	At work, I seek training opportunities to improve my weaknesses <i>Op het werk ben ik op zoek naar trainingsmogelijkheden om mijn zwakke kanten te verbeteren</i>	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
15	I reflect on how I can improve the things in my job that I am not good at <i>Ik reflecteer op hoe ik de dingen waar ik niet goed in ben kan verbeteren</i>	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
16	In my job, I make an effort to improve my limitations <i>Op mijn werk doe ik mijn best om mijn tekortkomingen te verbeteren</i>	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
17	At work, I seek feedback regarding my areas of development <i>Op het werk zoek ik feedback op mijn verbeterpunten</i>	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6