Strength Use and Work Engagement: The Importance of Self-Efficacy and Organisational Support

Master Thesis

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Abstract

This study investigates the effect of environmental and personal factors on the positive relationship between strength use and work engagement. In particular, it aims to contribute to this body of research by examining the role that personal and job resources play in this relationship. Based on the job demands-resources (JD-R) model, it was hypothesised that the personal resource self-efficacy mediates the relationship between strength use and work engagement, and that the job resource perceived organisational support for strength use (POSSU) positively moderates this relationship. A survey study was conducted using an online questionnaire among 389 Dutch workers, 58.4% of whom are female. The results indicate that firstly, self-efficacy operates as a partial mediator in the positive relationship between strength use and work engagement. Secondly, the higher the amount of POSSU the employee experiences, the more strength use contributes to a feeling of self-efficacy, and thereby indirectly to engagement at work. The main limitations of this research are the use of a cross-sectional design and of self-reported questionnaires. Despite these limitations, the results support the importance of both the environment and the employee in fuelling engagement at work. They also contribute to the JD-R theory by highlighting the possible incorporation of strength use within the JD-R model. This study asserts that organisations can help employers foster more efficacious and engaged employees by giving them the opportunity to use their strengths.

Keywords: strength use, work engagement, JD-R theory, positive psychology

Public summary

The last two decades, research and organizations have been paying attention to the use of strengths at work. Multiple studies show that using strengths leads to higher levels of energy and motivation (i.e., engagement). However, it is unclear which underlying mechanisms
stimulate this positive relationship. To take a first step in identifying these influential mechanisms, this research investigates the effect of both personal factors and organization support on the positive strength use – work engagement relationship. In particular, this research looks at the effect of self-efficacy (i.e., feeling of competence to deal with prospective situations and to reach goals) and perceived organisational support for strength use. Results show that using strengths at work fosters a feeling of competence to deal with prospective situations and to reach goals. This feeling of competence in turn leads to a higher feeling of engagement at work. Organisational support for strength use seems to facilitate strength use and thereby amplifies the feeling of self-efficacy. The higher the feeling of self-efficacy the higher the feeling of engagement. This study asserts that organisations can help employers foster more efficacious and engaged employees by giving them the opportunity to use their strengths. Therefore, strength interventions become more valuable when focused on both the individual and the organisation providing support.
Strength Use and Work Engagement:

The Importance of Self-Efficacy and Organisational Support

Since the rise of positive psychology at the end of last century, research has paid more attention to the happiness and success of employees (Duckworth, Steen, & Seligman, 2005). One of the main themes of recent years has been the strength-based approach at work, which focusses on using one’s strengths, rather than improving weaknesses, to increase happiness, decrease depression, and increase productivity (Steelman & Rutkowski, 2004; Seligman, Steen, Park & Peterson, 2005; Clifton & Harter, 2003). A strength-based approach differs from a deficit approach in that a person’s strengths, rather than a person’s weaknesses, are considered the greatest area of opportunity (Roberts, Dutton, Spreitzer, Heaphy, & Quinn, 2005; Van Woerkom, Oerlemans & Bakker, 2016). Personal strength refers to a person’s individual characteristics that constitute a repeating pattern of thinking, feeling, and behaving; personal strength allows a person to perform at his or her best and to feel energized (Park, Peterson, & Seligman, 2004; Linley & Harrington, 2006; Wood, Linley, Maltby, Kashdan & Hurling, 2011; Buckingham & Clifton, 2001). To contribute to the existing body of empirical evidence, this study investigates how the use of one’s strengths contributes to positive outcomes within the work context.

Whereas the concept of a strength-based approach has been studied for decades in the context of social work and mental health care, sufficient research in an organisational context is still lacking (Bakker & Van Woerkom, 2018). However, recent research – both cross-sectional and longitudinal – has provided evidence for the positive relationship between strength use and work engagement (e.g., Van Woerkom, Oerlemans, & Bakker, 2016; Botha & Mostert, 2014; Bakker & Van Woerkom, 2018; Van Woerkom, Bakker & Nishii, 2016; Meyers & Van Woerkom, 2017). Work engagement is defined as “a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption” (Schaufeli,
Salanova, Gonzalez-Roma, & Bakker, 2002, p. 74). Engagement is reflected in high levels of energy, enthusiasm at work, and immersion in work activities (Schaufeli et al., 2002).

Although there is ample evidence regarding the positive relationship between strength use and work engagement, it is not yet known how this relationship establishes itself and which constructs are important moderators and mediators (Van Woerkom, Oerlemans, & Bakker, 2016). As such, providing insight into personal and external factors that influence this relationship help in understanding how strength use at work leads to such beneficial outcomes, which in turn helps organisations implement strength-based practices.

Some scholars have taken important first steps in identifying which personal and environmental factors play a role in facilitating the relationship between strength use and work engagement. Multiple researchers (e.g., Bakker & Van Woerkom, 2018; Van Woerkom, Bakker & Nishii, 2016; Botha & Mostert, 2014) hypothesise that strength use could be incorporated into the job demands-resources (JD-R) model, where it would indirectly predict work engagement through job resources (i.e., environmental factors at work that stimulate motivation and that help address stressful situations) and personal resources (i.e., personal factors that stimulate a feeling of competence). To illustrate this idea, Van Woerkom, Oerlemans, and Bakker (2016) affirm that strength use indirectly predicts work engagement through ‘self-efficacy’, a personal resource, while Keenan and Mostert (2013) concur that perceived organisational support for strength use (POSSU), a job resource, is an important predictor of work engagement. The belief that the organisation supports the use of one’s strengths is shown to stimulate goal attainment and personal growth and is known to reduce work demands (Keenan & Mostert, 2013; Demerouti and Bakker, 2011); therefore, it can be considered as a job resource (Keenan & Mostert, 2013). Based on strength use research and the JD-R theory, it is argued that the relationship between strength use and work engagement is influenced by a combination of self-efficacy and POSSU. As such, this study aims (a) to
replicate previous research that shows an indirect effect of strength use on work engagement through self-efficacy, and (b) to investigate the influence of POSSU on this indirect effect using the JD-R theory. This insight may give organisations the right means to stimulate work engagement in their employees.

**Strength Use in Context**

In the field of positive psychology, various strength models have been proposed and examined. Although most scholars agree that strengths are at least partly dependent on genetic factors, and therefore make people ‘naturally’ more capable of performing well in certain domains, they start to recognise that context also influences the use of one’s strengths (Biswas-Diener, Kashdan & Minhas, 2011). Firstly, Oerlemans and Bakker (2014) argue that a strength may only be important when it can actually be used. For example, an individual with a talent for leadership may lead a team to success, only when that person is allowed to take the leadership role. Secondly, Botha and Mostert (2014) assert that the use of one’s strengths and its benefits is dependent on the availability of job resources. However, a comprehensive theoretical framework explaining the underlying mechanisms is still lacking (Oerlemans & Bakker, 2014; Bakker & Van Woerkom, 2018). This research concurs with both the older model of Peterson and Seligman (2004), which specifies strengths as grounded in biology, and the newer model of Wood et al. (2011), which acknowledges that strengths can be refined through experience. It is assumed that strengths are relatively stable, but that the use of strengths depends on the context. Therefore, this research aims to investigate the use of one’s strengths in a work context by investigating the effect of the job resource POSSU on the relationship between strength use and work engagement.

**The Job Demands-Resources Model and Theory**

The JD-R model states that work engagement is a function of two specific components, namely job resources (e.g., POSSU) and job demands (e.g., high workload)
(Demerouti, Bakker, Nachreiner & Schaufeli, 2001). Job resources are defined as the physical, organisational, social, or psychological aspects of one’s job that are known to stimulate personal growth, goal attainment, learning, and development (Bakker & Demerouti, 2007; Bakker, 2011). Whereas job demands are the most important cause of strain, job resources are the most significant determinants of motivation (Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Bakker, Demerouti, De Boer, & Schaufeli, 2003). In addition to the original JD-R model, the later introduced JD-R theory proposes that personal resources (e.g., self-efficacy) can play a similar role as job resources (Bakker & Demerouti, 2017). In this regard, a personal resource is defined as the belief one holds regarding the amount of control one has over one’s environment (Hobfoll, Johnson, Ennis, & Jackson, 2003; Bakker & Demerouti, 2017). High self-efficacy contributes to the idea that good things will happen and that one is capable to handle unforeseen events (Bakker & Demerouti, 2017). Similar to job resources, personal resources contribute directly and positively to work engagement (Bakker & Demerouti, 2017; Bakker & Sanz-Vergel, 2013). Given these points, the current research examines the influence of both job resources and personal resources on the relationship between strength use and work engagement.

**Strength Use and the JD-R Theory**

Since the evolvement of the original JD-R model into the recent JD-R theory, it has been recognised that the work environment influences the employee, and vice versa. This is done, for example, through job crafting (i.e., making proactive changes to the job demands and resources; Bakker & Van Woerkom, 2018; Tims, Bakker & Derks, 2012). Bakker and Van Woerkom (2018) hypothesise that strength use can take a similar role as job crafting: it is both an antecedent and a consequence of high levels of work engagement through the attainment of job resources, and personal resources. Accordingly, “Since people who are engaged in their work are motivated to stay engaged, they not only craft their jobs, but also
use their strengths in order to increase their own levels of self-efficacy, optimism, and self-esteem (i.e., their personal resources)” (Bakker & Van Woerkom, 2018, p. 42). Van Woerkom, Oerlemans, and Bakker (2016) claim that strength use and work engagement have a strong positive correlation \( r = .72 \) and that strength use is indeed a predictor of work engagement. This is supported by the research of Littman-Ovadia, Lavy and Boiman-Meshita (2016) who found a positive correlation \( r = .52 \) between the use of signature strengths and work engagement. It is therefore expected that strength use is positively related to work engagement.

**Hypothesis 1:** There is a positive relationship between strength use and work engagement.

Van Woerkom, Oerlemans, and Bakker (2016) also affirm that strength use is indirectly related to work engagement through the partial mediation of the personal resource self-efficacy. This means that the use of strengths contributes directly to a feeling of engagement at work and fuels a feeling of competence, which in turn fuels work engagement. This is in accordance with the JD-R theory, stating that strength use is indirectly related to work engagement through personal resources (Bakker & Van Woerkom, 2018). Stander and Mostert’s (2013) research among African sport coaches supports this assertion by demonstrating that strength use is indeed positively related to personal resources self-efficacy and self-esteem. Using one’s strength contributes to reaching success, attaining goals, feelings of mastery, and thereby fosters a feeling of competence to attain goals (i.e., self-efficacy; Van Woerkom, Oerlemans & Bakker, 2016; Bakker, 2011; Bandura, 1997). These findings are in line with the proposed position of strength use in the JD-R theory, and it is therefore expected that the personal resource self-efficacy (partially) mediates the relationship between strength use and work engagement.
Hypothesis 2: The positive relationship between strength use and work engagement is partly mediated through the personal resource self-efficacy.

The relationship between strength use and work engagement will, according to the JD-R theory, not only be influenced by personal resources but also by job resources. Indeed, employees who experience more job resources (e.g., POSSU) are more likely to use their strengths and are more engaged (Botha & Mostert, 2014). This is supported by the finding of Keenan and Mostert (2013) that POSSU is an important predictor of work engagement ($\beta = .25$). Evidence points to the mediating role of personal resources in the positive effect of job resources on work engagement (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2009).

However, Demerouti and Bakker (2011) hypothesise that job resources, job demands, and personal resources exhibit a complex three-way interaction in predicting work engagement. To illustrate this, Riolli and Savicki (2003) assert that when work resources are low, personal resources are particularly beneficial. Indeed, it seems plausible that by receiving support when applying one’s strengths, employees can use their strengths to the fullest and feel more efficacious, which in turn make them more engaged in their work. Therefore, it is expected that POSSU moderates the relationship between strength use and self-efficacy, and thereby moderates the indirect effect of strength use on work engagement. It is proposed that POSSU will act as an amplifier in these relationships.

Hypothesis 3: Perceived organisational support for strength use positively moderates (a) the relationship between strength use and self-efficacy, and thereby positively moderates the (b) indirect effect of strength use on work engagement through self-efficacy.
Method

Participants

The population of this study consisted of workers from the Netherlands who (a) are 18 years or older, (b) work 12 hours or more, and (c) speak and read Dutch. The sample was collected using convenience sampling. In total, 390 participants filled out the survey and 389 cases were used for the analyses. One case was excluded because of a high value for the Mahalanobis distance and a deviating score pattern. The participants’ ages ranged from 20 to 75 with an average of 39.58 ($SD = 13.25$). The majority of the sample was female (58.4%, $N = 227$) and highly educated with a bachelor’s degree or higher (79.43%, $N=309$). A minority did not identify themselves as either male or female (0.5%, $N = 2$). The participants worked 12 to 80 hours a week with a mean of 36.29 ($SD= 10.61$) and represented a large variety of work sectors from healthcare (16.2%, $N = 63$), education (13.9%, $N = 54$), economic-financial (11.6%, $N = 45$), government (10.8%, $N = 42$), IT (8%, $N = 31$), retail (7.7%, $N = 18$), industrial (6.2%, $N = 24$), catering (4.9%, $N = 19$), science (4.4%, $N = 17$), logistics
(3.1%, \( N = 12 \)) to culture (1.3%, \( N = 5 \)). A small number of participants (15.2%, \( N = 59 \)) did not know in which sector they worked, worked in multiple sectors, or did not work in any of the sectors mentioned above.

**Research Design, Procedure, and Material**

Participants were contacted asking to participate in the online survey through various media (Facebook, LinkedIn, Twitter, websites, a magazine article, telephone, and personal contact). The message conveyed the aim of the study and provided a link to the online survey supported by Qualtrics. By opening the link, the participant was informed about the confidentiality of the results and the ethical standards that were followed; permission was given by starting the survey. The questionnaire contained 29 questions, the first six of which concerned demographic variables (i.e., age, gender, educational level, sector of employment, working hours, and tenure). After which, the participants were asked to reflect on their strengths by naming three strengths themselves and choosing three strengths from a list of 24 options based on the Value in Action Inventory of Strengths (VIA-IS) developed by Peterson and Seligman (2004). The participants were then presented with the scales described below.

**Strength use.** Strength use was measured with the Dutch version of a six-item scale developed by Van Woerkom, Oerlemans, and Bakker (2016). An example item states: ‘I use my strengths at work’. A seven-point Likert-type scale, ranging from 1 – (almost) never – to 7 – (almost) always – was used. Reliability analysis revealed that the items had a high internal consistency (\( \alpha = .92 \)).

**Work engagement.** Work engagement was measured with the Dutch version of the nine-item Utrecht Work Engagement Scale (UWES-9) developed by Schaufeli, Bakker and Salanova (2006). A seven-point Likert-type scale, ranging from 0 (never) to 6 (always/every day) was used. Vigour was measured by three items (e.g., ‘At my work, I feel bursting with energy’), while dedication was reflected in three items (e.g., ‘I am enthusiastic about my
job’). Similarly, absorption was gauged by three items (e.g., ‘I am immersed in my work’).

Factor analysis indicated that a one factor model is well suited, with strong item loadings and the Cronbach’s alpha ranging from .85 to .92 (Schaufeli, Bakker & Salanova, 2006). Reliability analysis in this research confirmed the internal consistency of the scale (α = .95); therefore, a total score was used.

**Self-efficacy.** Self-efficacy was measured with a three-item scale derived from the 10-item Dutch self-efficacy scale (Teeuw, Schwarzer & Jerusalem, 1994; Scholz, Doña, Sud & Schwarzer, 2002). The scale was shortened to ensure that the questionnaire was not too long. Three items were selected from the self-efficacy scale developed by Teeuw, Schwarzer and Jerusalem (1994), based on the scope of the items and the factor loadings. An example item is: ‘Thanks to my resourcefulness, I can handle unforeseen situations’. A five-point Likert-type scale, ranging from 1 – (almost) never – to 5 – (almost) always – was used. Reliability analysis signified that the items had a sufficient internal consistency (α = .78).

**Perceived organisational support for strength use.** A 7-item scale derived and translated from the 8-item scale proposed by Keenan and Mostert (2013) was used to measure POSSU. An example item is: ‘This organisation uses my strengths’. Notably, one item (i.e., ‘This organisation applies my strong points’) was excluded because it could not be translated into Dutch. A seven-point Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree) was used. Reliability analysis revealed that the items had a high internal consistency (α = .96).

**Control variables.** Studies often found that age is a predictor of engagement. For example, Park and Gursoy (2012) confirmed that age is significantly related to vigour, dedication, and absorption, which means that work engagement is higher among older participants. In line with these findings, this research found that age had a significant effect on work engagement, $b = 0.01$, $t(387) = 3.81$, $SE = 0.004$, $p < .001$. Similarly, earlier research
affirmed that self-efficacy is higher among male participants. For example, D’Lima, Winsler, and Kitsantas (2014) found that gender has a significant effect on self-efficacy, indicating that males display more feelings of self-efficacy than females. Correspondingly, the results of this research demonstrate that gender seem to have a significant effect on self-efficacy, with females showing lower levels of self-efficacy than males, $b = -0.17$, $t(386) = -2.23$, $SE = 0.08$, $p = .026$. Notably, people who do not identify themselves either male or female showed no significant difference in self-efficacy compared to males $b = -0.42$, $t(386) = 0.81$, $SE = 0.52$, $p = .416$ and females $b = -0.25$, $t(386) = 0.49$, $SE = 0.51$, $p = .623$. Therefore, to limit the possibility of spurious effects, analyses concerning work engagement were controlled for the effect of age, and analyses concerning self-efficacy were controlled for the effect of gender.

**Statistical Analyses**

The analyses of the data included three steps. First, the internal consistency of the self-constructed scales was determined. Reliability analysis was conducted for the strength use, work engagement, self-efficacy, and POSSU scales, where an alpha with a score of .70 or higher was considered reliable. Second, it was ascertained whether self-efficacy mediated the relationship between strength use and work engagement. Although the Baron and Kenny (1986) approach to mediation is rather popular, it has been criticised by many on different grounds (e.g., Hayes, 2009). As such, this research concurs with the conclusion of Hayes (2009) that bootstrapping the indirect effect is the best alternative. Therefore, a mediation analysis using model 4 of the PROCESS version 2.16 macro for the Statistical Package for the Social Sciences (SPSS) developed by Hayes (2013), based on 5,000 bootstrapped samples using bias corrected and accelerated 95% confidence interval (CI), was performed. This analysis allowed for the calculation of the direct paths between the variables and the indirect path, which showed the reductions of the strength use-work engagement relationship when
self-efficacy was included in the model. This indirect path was considered significant when the 95% CI did not include zero. All variables were continuous and measured with a 5- or 7-point scale. To make comparisons, all variables were standardised. Third, it was determined whether organisational support for strength use moderated the mediation found in the second step. Accordingly, organisational support for strength use was also continuous and was standardised to make comparisons. Model 7 of the PROCESS version 2.16 macro developed by Hayes (2013) was used to test whether the mediation of self-efficacy exists at specified levels of the moderator, that is POSSU. A $p$-value of .05 or smaller was considered significant. The indirect paths for a specific value of the moderator and the index of moderated mediation were considered significant when the 95% bootstrap CI did not include zero.

**Results**

Table 1 reports the means, standard deviations, and correlations of the study variables strength use, work engagement, self-efficacy, and POSSU ($N = 389$). As expected, strength use is positively related to self-efficacy and work engagement; self-efficacy is positively related to work engagement; and POSSU is positively related to self-efficacy and work engagement.

<table>
<thead>
<tr>
<th>Variable</th>
<th>$M$</th>
<th>$SD$</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Strength Use</td>
<td>5.215</td>
<td>0.997</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Work Engagement</td>
<td>4.647</td>
<td>1.160</td>
<td>0.659**</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Self-efficacy</td>
<td>3.821</td>
<td>0.729</td>
<td>0.459**</td>
<td>0.389**</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. POSSU</td>
<td>5.118</td>
<td>1.208</td>
<td>0.598**</td>
<td>0.718**</td>
<td>0.302**</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Age</td>
<td>39.578</td>
<td>13.247</td>
<td>0.178**</td>
<td>0.190**</td>
<td>0.073</td>
<td>0.132**</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>6. Gender</td>
<td>—</td>
<td>—</td>
<td>-0.085</td>
<td>-0.078</td>
<td>0.103*</td>
<td>-0.089</td>
<td>-0.006</td>
<td>—</td>
</tr>
<tr>
<td>7. Work hours</td>
<td>36.285</td>
<td>10.612</td>
<td>0.123*</td>
<td>0.223**</td>
<td>0.186**</td>
<td>0.195**</td>
<td>0.117*</td>
<td>0.241**</td>
</tr>
</tbody>
</table>

*Note.* $^* p < .05$. $^{**} p < .001$. 
Mediation analysis was conducted to test hypotheses 1 and 2. Hypothesis 1 predicted that strength use would be positively related to work engagement. Figure 2 demonstrates that strength use is positively related to work engagement $b = 0.64$, $SE = 0.04$, $p < .001$, 95% CI [0.57, 0.72], which means that people who use their strengths at work more show higher levels of engagement. The distribution of the standardised residuals revealed no deviation from a normal distribution, and mean values for strength use ($M = 5.22$) and work engagement ($M = 4.65$) indicated similarities with earlier research (e.g., Van Woerkom, Oerlemans & Bakker, 2016). These results, therefore, support hypothesis 1.

Figure 2. Statistical diagram of the total effect and simple mediation model of the effect of strength use on work engagement through self-efficacy

Note. Gender and age are included as control variables. * $p < .05$. ** $p < .001$.

Hypothesis 2 predicted that strength use was positively related to work engagement through self-efficacy. Figure 2 indicates that the indirect effect of strength use on work engagement via self-efficacy is significant, $b = 0.04$, $SE = 0.02$, 95% CI [0.005, 0.09]. Self-efficacy reduced the magnitude of the direct relationship between strength use and work engagement significantly from $b = 0.64$ to $b = 0.6$, $Z = 2.11$, $p = 0.035$, with a completely standardised effect of 0.04, bootstrap CI [0.005, 0.09], which means that self-efficacy
functioned as a mediator in the strength use and work engagement model. Moreover, as shown in Table 2, the direct effect is also significant, $b = 0.6$, $SE = 0.04$, 95% CI [0.51, 0.68], which confirms that self-efficacy partially mediated the relationship between strength use and work engagement. Using one’s strengths, therefore, contributes directly to work engagement and evokes a feeling of self-efficacy, which in turn fuels feelings of engagement at work. The aforementioned results, therefore, support hypothesis 2.

Hypothesis 3a predicted that POSSU positively moderates the positive relationship between strength use and self-efficacy. Meanwhile, hypothesis 3b proposed that POSSU positively moderates the positive indirect relationship between strength use and work engagement through self-efficacy. To test both hypotheses, a mediation analysis with moderation of the indirect effect was performed. As presented in Figure 3 and Table 3 (path XW M with coefficient a3), POSSU significantly moderated the effect of strength use on self-efficacy, $b = 0.09$, $p = .024$, CI [0.01, 0.16], indicating that the effect of strength use on self-efficacy is dependent on POSSU. Figure 4 illustrates that the higher the level of POSSU, the stronger the positive relationship between strength use and self-efficacy is. This means that...
the higher the perceived support, the more strengths can be used, which can lead to higher feelings of self-efficacy. Clearly, hypothesis 3a is supported by these findings.

![Figure 3. Statistical diagram of the moderated mediation model with self-efficacy as mediator and POSSU as moderator.](image)

*Note. Controlled for the effect of gender and age. *p < .05. **p < .001.*

**Table 3**

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>M</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff</td>
<td>SE</td>
</tr>
<tr>
<td>X</td>
<td>a1</td>
<td>0.474**</td>
</tr>
<tr>
<td>M</td>
<td>b1</td>
<td>0.093*</td>
</tr>
<tr>
<td>W</td>
<td>a2</td>
<td>0.070</td>
</tr>
<tr>
<td>XxW</td>
<td>a3</td>
<td>0.087*</td>
</tr>
<tr>
<td>Age</td>
<td>-0.001</td>
<td>0.003</td>
</tr>
<tr>
<td>Gender</td>
<td>0.089</td>
<td>3.393</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.435*</td>
<td>0.191</td>
</tr>
</tbody>
</table>

*Model summary: R² = 0.24 (F(5, 383) = 24.59, p < .001) R² = 0.45 (F(4, 384) = 77.43, p < .001).

*Note. a Model summary information for the model with consequent M and consequent Y. *p < .05. **p < .001.*
The results of the moderated mediation analysis indicate that the indirect effect of strength use on work engagement through self-efficacy is moderated by POSSU, index = 0.01, $SE = 0.01$, bootstrap CI [0, 0.02]. This is true for low ($b = 0.036$, bootstrap CI [0, 0.07]), middle ($b = 0.044$, bootstrap CI [0, 0.09]), and high ($b = 0.052$, bootstrap CI [0.01, 0.10]) levels of POSSU. This means that low, medium, and high levels of POSSU amplify the positive indirect relationship between strength use and work engagement through self-efficacy. The higher the level of POSSU, the stronger the positive effect of strength use on self-efficacy is. In addition, the more organisational support one experiences, the more strengths can be utilised, leading to higher feelings of capability to deal with prospective situations and to achieve goals. Higher levels of self-efficacy, in turn, results in higher levels of work engagement. Given these points, hypothesis 3b is supported.
Discussion

The purpose of the current study is to explore the effect of environmental (POSSU) and personal (self-efficacy) factors on the relationship between strength use and work engagement. Results reveal that strength use is positively related to work engagement, and that this effect is mediated by self-efficacy and amplified by POSSU. This is the first study to include both job resources and personal resources as influential factors in the strength use-work engagement relationship using JD-R theory. Results underscore the importance of focussing on both actual strength use and organisational support for strength use to foster efficacious and engaged employees.

Theoretical Contributions and Implications

Although previous research has supported the idea that strength use contributes to various positive outcomes, such as work engagement (Van Woerkom, Oerlemans & Bakker, 2016), little was known about how this works and which variables influence such positive relationship. The current study is one of the first to reveal the mechanisms through which strength use is related to work engagement. Results support the previous findings of Van Woerkom, Oerlemans, and Bakker (2016) by replicating the partial mediation of the strength use and work engagement relationship through self-efficacy. This means that using one’s strengths contributes directly to a feeling of engagement at work and indirectly through a feeling of competence to deal with prospective situations and to reach goals. Whereas existing strength theories considered zest (e.g., energy and vigour) as a type of character strength (Park, Peterson, & Seligman, 2004), this study reveals that energy and vigour might be consequences of strength use. In this regard, re-evaluation of the definition of strengths, specifically character strengths, seems important. Moreover, the results indicate that POSSU amplifies the positive relationship between strength use and self-efficacy and also amplifies the indirect effect of strength use on work engagement.
Knowing that a combination of job resources and personal resources influence work engagement provides further support for the JD-R theory. This research, therefore, makes an important contribution to this theory since previous research has highlighted the causal relationship, instead of the interaction, between job resources and personal resources (Xanthopoulou et al., 2009) in predicting engagement at work. The results of this study are supported by the findings of Riolli and Savicki (2003) that personal resources interact with job resources and the hypothesis of Demerouti and Bakker (2011) that job resources, personal resources and job demands show a complex three-way interaction in predicting engagement at work. As such, research that aims to further investigate the possible moderating effects of job resources and personal resources in predicting work engagement might be valuable. One could use an experimental design in which one group would get the opportunity to use their strengths and would experience a number of job resources, whereas the other group would not experience job resources. By measuring their levels of strength use, self-efficacy, and work engagement, it is possible to determine whether the groups show different results and whether job resources interact with personal resources.

Results that demonstrate that the relationship between strength use and work engagement is influenced by an interaction between job resources and personal resources provides evidence for the possible inclusion of strength use in the JD-R theory. This is in line with the idea of Bakker and Van Woerkom (2018) who hypothesise that people who are engaged are motivated to stay engaged by using their strengths to increase their levels of self-efficacy. Although causal claims cannot be made due to the cross-sectional design of this study, replication of earlier findings point to the plausibility of the existence of a causal mediation model. Moreover, since earlier research has shown that job resources interact with personal resources (Riolli and Savicki (2003), it seems probable that strength use is indeed
related to work engagement through an interaction of job resources and personal resources. However, further support regarding the causality of the relationships is needed.

In addition, the results of the current study point to the influence of the number of working hours per week on both self-efficacy and work engagement. There is some evidence that the number of working hours per week is related to work engagement (e.g., Schaufeli, Taris & Rhenen, 2008). It is possible that the number of work hours is related to both self-efficacy and work engagement because it can function as an objective measure of job demands. Accordingly, job demands interact with job resources to predict engagement at work (Hakanen, Demerouti, Xanthopoulou & Bakker, 2007), and it is expected that personal resources quantify this interaction (Demerouti & Bakker, 2011). Therefore, it is likely that job demands interact with POSSU and that this interaction shows a moderating effect on the relationship between strength use and self-efficacy. As such, it seems plausible that long working hours can be considered as a challenge, instead of a demand, when a person feels supported. Accordingly, when a person feels supported by their environment, long working hours foster a feeling of competence to deal with prospective situations. This greater feeling of competence, in turn, evokes a higher level of motivation. Future research should, therefore, investigate the effect of work demands on the indirect relationship between strength use and engagement at work.

**Limitations and Future Research**

As in all empirical research, there are limitations associated with the design and execution of this research. First, the use of self-report measures only is a possible limitation. Perceptions are important in understanding what a person thinks, feels, and does (Wood et al., 2011); however, future studies should use more objective measures of strength use and possibly POSSU. Moreover, participant behaviour could be observed to establish whether strengths are actually used, and multiple employees from one organisation should be
questioned to establish a more objective measure of POSSU. Second, the use of a cross-section research design does not allow causal inferences. Although this research replicated the findings of Van Woerkom, Oerlemans, and Bakker (2016) regarding the mediation effect of self-efficacy, the relationships found in this study should be interpreted with caution as regards causality. Future studies should employ an experimental design in which strengths are objectively measured, and participants are asked to use their strengths. By following these participants over time and measuring their levels of self-efficacy and work engagement, support for a causal relation can be established. Third, the generalisability of this study might be limited due to the sample and sampling method. Whereas the sample was rather diverse as regards work sector, the sample consisted largely of highly educated people, with 78% having a bachelor or a higher degree. This might be due to the use of convenience sampling. Although the use of convenience sampling is low cost and time efficient, it might have limited the sample’s representation of the population. Although there are no reasons to believe that the relationship between strength use and work engagement might be different for people with lower education, future research should investigate the possibility. To overcome the possible problems due to the lack of generalisability, future research that aim to replicate these findings should use a sampling technique that selects participants at random. For example, one could use stratified sampling and select two companies in every province of the Netherlands. From every company, one could select 20 participants at random.

Prospective studies could also explore the effect of other variables on the positive relationship between strength use and work engagement. For example, Xanthopoulou et al.’s (2009) research affirmed that job resources foster the attainment of personal resources, and vice versa. One example of a job resource that could be investigated is autonomy. Botha and Mostert’s (2014) study demonstrated that employees who experience more job resources (e.g., autonomy, organisational support for strength use) were more likely to use their strengths and
were more engaged with their work. It is possible that employees who feel that they are supported design their work in such way that they are able to have control over its execution so that they can use their strengths more often. Therefore, future research exploring the effect of other job and personal resources on the relationship can be valuable.

**Practical Implications**

The findings of this study affirm that using strengths at work is advantageous for both the employee and the organisation. Using one’s strengths fosters engagement, which is known to bring about beneficial outcomes, such as proactive behaviour, and indicators of well-being (e.g., Van Woerkom, Oerlemans & Bakker, 2016; Caesens, Stinglhamber, Luypaert, 2014). Moreover, the findings of this research show that an organisation could amplify this relationship by providing strength use support. Therefore, it is expected that strength interventions become less valuable when solely focused on the individual. Furthermore, it seems useful to stimulate the organisation to take steps in showing support and encouraging their employees to use their strengths. One way of achieving this is to base performance appraisal, job design, training, and organisational culture on identifying and using personal strengths. Tools, such as feed-forward interviews (FFI; Bouskila-Yam & Kluger, 2011) are, therefore, helpful. According to Kluger and Nir (2009), an FFI focusses on the positive experiences of the employee. Using five steps, the manager stimulates the employee to recall events that energises and those that trigger a feeling of discrepancy between the desired state and the current state of the employee. This way, a manager can show appreciation of the employee’s strengths and can stimulate the employee to find ways to use these strengths more often. This example regarding the FFI underlines the influence line managers have in creating organisational support for strength use. Managers who are used to working with a deficit approach need to be convinced of the benefits of a strength-based approach. Since managers
play an important role in implementing a strength-based method and supporting their subordinates in identifying and using their strengths, they should be trained in how to do so.

Although the results of this research are promising, empirical evidence supporting the benefits of applying strengths at work is still sparse, which might complicate the implementation of such an approach. To overcome problems of uncertainty and ignorance of the organisation, building a network of organisations and sharing experiences and best practices seem a useful first step. An example of such initiative is the challenge set by the Nederlands Stichting voor Psychotechniek (NSvP), a Dutch foundation that stimulates organisations to bring theory to practice, challenges them to experiment with a strength-based approach, and to share their knowledge so as to build a network of collective awareness and support. Furthermore, discussion regarding the implementation of a strength-based approach should also address how weaknesses are dealt with. Admittedly, weaknesses cannot be ignored and organisations need to find a way to bring these weaknesses to an acceptable level of performance. However, focus should remain on strengths as the main area of development.

In line with the results of this research, it is expected that such a method leads to more efficacious and engaged employees.

**Conclusion**

This study has taken a first step in examining how both environmental and personal factors amplify the positive effect of strength use on engagement at work. Results indicate that a person can influence his or her own levels of engagement by using his or her strengths, which in turn fosters self-efficacy. An organisation can also indirectly amplify this feeling of engagement by showing support when their employees use their strengths. This confirms the important role the organisation can play in motivating their employees. As the results of this study are rather encouraging, it hopefully triggers further research into related topics.
References


Appendix A

Meta Data

Name: Valesca Tobias

Studentnumber: 482861

Title Thesis: Strength Use and Work Engagement: The Importance of Self-Efficacy and Organisational Support

Name Masterprogramme: Positive Organisational Psychology

Key words (max. 6): strength use, work engagement, JD-R theory, positive psychology

Name first supervisor: Hannah Moore

Name second supervisor: Dr. Heleen van Mierlo

Short summary (max. 150 words): This study investigates the effect of personal and job resources on the positive strength use and work engagement relationship, using the job demands-resources (JD-R) theory. In support of the hypotheses, results of this survey study indicate that firstly, self-efficacy operates as a partial mediator in the positive relationship between strength use and work engagement. Secondly, the higher the amount of POSSU the employee experiences, the more strength use contributes to a feeling of self-efficacy, and thereby indirectly to engagement at work. The results support the importance of both the environment and the employee in fuelling engagement at work. They also contribute to the JD-R theory by highlighting the possible incorporation of strength use within the JD-R model. This study asserts that organisations can help employers foster more efficacious and engaged employees by giving them the opportunity to use their strengths.