How personal characteristics can predict strength use at work

Core self-evaluations as an antecedent of strength use at work, mediated by positive emotions and moderated by perceived supervisor support

Name: Daphne Franken

ANR: 553151

Supervisor: Christina Meyers

2th Supervisor: Rob Poell

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Abstract

Purpose – This study examined how core self-evaluations are linked to strength use at work. In order to assess this, the mediating role of positive emotions and the moderating role of perceived supervisor support were examined. To explain the expected relationships, several theoretical assumptions were made based on, amongst others: the self-consistency theory; the broaden-and-build theory of positive emotions; and the job demands resources model.

Methodology – Data from 210 Dutch employees was collected through convenience sampling in a cross sectional design and data was analyzed using Hayes process analyses.

Findings – Results of the analyses revealed that core self-evaluations and strength use at work were related through a full mediation by positive emotions. However, results indicated the expected moderating effect of perceived supervisor support to be non-existing. Additional analysis proved a mediating effect of perceived supervisor support.

Practical implications – Several practical implications are provided, as well as limitations of the present study, and recommendations for future research.

Originality – This study is the first to assess the influence of personality characteristics on strength use, therefore, it contributes to the limited existing research regarding antecedents of strengths use behavior at work.

Keywords: Core self-evaluations, strengths, strength use behavior, positive emotions, perceived supervisor support, positive psychology.

Introduction

Throughout the past decade, considerable attention within the HR field has been placed on positive psychology. After traditionally focusing on rectifying deficits, a shift has occurred towards a more positive approach (Wood, Linley, Maltby, Kashdan, & Hurling, 2011). The positive psychological movement has put more attention on the study of strength use at work (Peterson & Seligman, 2004). Multiple studies have indicated that using individual strengths is a promising strategy to promote employee well-being and performance (Quinlan, Swain, & Vella-Brodrick, 2012; Peterson, Stephens, Park, Lee, & Seligman, 2010; Biswas-Diener, Kashan, & Minhas, 2011; Meyers & van Woerkom, 2016).

Nevertheless, previous research has stated that only a small amount of employees truly use their strengths while at work (Buckingham, 2007). This raises the question why some people are more likely to use their strengths at work than others. However, far too little attention has been paid on examining the (individual) factors promoting the use of an employee's individual strengths at work. The lack of research in the scientific literature regarding the antecedents of strength use might be a result of the deficient foundational framework for theory-building on strengths use at work (Kong & Ho, 2016). The aim of this study is to contribute to the existing theoretical understanding regarding antecedents of strength use in the workplace. To date, few, if any, empirical studies have explored how organizations can support employees' strengths use at work (Kong & Ho, 2016).

Strength use at work refers to the actual use of one's strengths. In which strengths are behaviors an individual excels at and enjoys doing. Based on the research of multiple behavioral scientists, whom for over a decade have studied why people do what they do (Barrick, Mound, & Li, 2012), it is expected that it is one's individual characteristics that make an employee inherently more or less likely to use their strengths. The role of individual characteristics, such as personality, is discussed in almost all research within the field of positive psychology (Barrick et al., 2012). Core self-evaluations in particular were found to be drivers of human behavior (Pervin 1993). Core self-evaluations are the fundamental appraisals we make about our self-worth. This study aims to answer the question whether or not core self-evaluations can indicate which individuals are more likely to use their strengths at work. According to the self-consistency theory, core self-evaluations and strength use are positively related because people behave in ways consistent with their self-image.

In addition to the above, an indirect relationship between core self-evaluations and strength use is expected through the mediating role of positive emotions. Assumedly, individuals with high core self-evaluations feel more secure, competent and in control, and are therefore experiencing more positive emotions. By experiencing positive emotions an individual's thought-action repertoire is expanded, making them more prone to use their strengths (broaden-and-build theory; Frederickson, 2001).

Moreover, in order for a trait related behavior to appear, encouraging circumstances are essential. Supervisor support, in particular, has been argued to play a major role in affecting the relationship between individual characteristics and behaviors (Avolio, Walumbwa, & Weber, 2009). Therefore, an additional moderating role is expected for perceived supervisor support on the relationship between core self-evaluations and strength use.

The aim of this study is to narrow the gap in the literature about antecedents of strength use. Considering all above, the following research questions are presented:
To what extent are core self-evaluations related to strength use at work, and is this relationship mediated by positive emotions? And *How does perceived supervisor support moderate the relationship between core self-evaluations and strength use at work?*

Taking into account the lack of research relating antecedents of strength use, the theoretical relevance of this article lies in the aim to expand that knowledge and add new empirical evidence to the field of positive psychology. As previously mentioned, most attention within this field has been placed on the effect of strength use on employee well-being (e.g. Quinlan et al., 2012; Peterson et al., 2010). Scholars have reasoned that strength use enhances an individual's intrinsic motivation, enjoyment, engagement, satisfaction, and energy (Peterson & Park, 2006; Linley & Harrington, 2006; Peterson & Seligman, 2004). Possibly due to the known positive outcomes of strengths use, professional attention towards the potential of strengths use has grown drastically in the past few years (Biswas-Diener et al., 2011). However, to the author's knowledge, except from one study by Kong and Ho (2016), to date there are no published studies within the scientific literature examining individual or situational characteristics as antecedents of workplace strength use. However, last year several master students in HRS (Tilburg University) have attempted to focus on situational antecedents of strength use (e.g. Evers, 2016). The lack of research on antecedents of strength use could explain the lack of organizational knowledge and success of enhancing strength use.

This study is relevant for practitioners because it creates an understanding of what kind of individual characteristics are most relevant when employees are expected to use their strengths. The results provided in this study could add value to organizations and employees in such way that HR practices could be tailored based on the strengths use approach (e.g. through recruitment). Nonetheless, core self-evaluations were found to be difficult to change (e.g. stable personality characteristic), however not impossible if trained accordingly (Van der Heijden, Van Dam, Xanthopoulou, & De Lange, 2014). Therefore, with the right equipment, organizations are able to invest in ways to enhance employees' core self-evaluations (e.g. managerial and co-worker feedback; Lyubomirski, King, & Diener, 2005).

Theoretical Framework

Individual Strength Use

Within the scientific literature, several definitions of individual strengths are used. For the purpose of this study, strengths are defined as: "Ways of behaving, thinking or feeling that an individual has a natural capacity for, enjoys doing, and which allows the individual to achieve optimal functioning while they pursue valued outcomes" (Quinlan et al., 2012, p.1146). A distinction can be made between strength awareness, and the actual use of the strengths. Within this light, strength awareness refers to knowing and being aware of your own strengths. Whereas, strength use indicates expressing or making use of your strength on a regular basis while at work. "Strength use captures how people do their work and the extent to which their work allows them to pursue their virtues and strengths." (Kong & Ho, 2016, p.18). For the purpose of this study it was decided to focus on strength use instead of strength awareness, based on the limited knowledge available regarding the actual effects of strength awareness on its own. According to Biswas-Diener and colleagues (2011), strength identification without a developing mindset or expected use might even result in adverse effects, whereas developing and using one's strengths has been linked to multiple positive outcomes, such as increased levels of well-being and job satisfaction (e.g. Quinlan et al., 2012; Peterson et al., 2010).

Core Self-Evaluations

This study takes a first step in addressing individual characteristics as antecedents of strength use at work. Amongst scholars, there is a large shared view that "strengths are 'behaviors at which we excel'" (Biswas-Diener et al., 2011, p.5), making strength use a behavioral act. Current studies suggest that work behavior is not only a function of job characteristics or work context, it also partially depends on the employee him or herself (Van der Heijden et al., 2014). Based on this knowledge, it is expected that several individual characteristics make people inherently more or less likely to use their strengths at work.

Due to the scope of this study, the focus is on employees' core self-evaluations as predictor of strength use at work. Core self-evaluations (CSEs) are defined as: "the fundamental appraisals that individuals make about their self-worth, competence and capabilities, thus reflecting a baseline appraisal that is implicit in all other beliefs and evaluations" (Van der Heijden et al., 2014, p.251). CSEs are trait-like characteristics, which are characteristics that are better explained as relatively stable over the course of a lifespan, and difficult to change. The first, and probably most important reason to focus on CSEs in particular would be that they were found to be drivers of human behavior (Pervin, 1993). Furthermore, researchers such as Judge, Locke, Durham, and Kluger (1998) argued that the CSEs construct explains job satisfaction, work motivation, and job performance. Beyond all this, the selection of these characteristics is not surprising when looking at the frequencies on which they have been studied within the organizational behavior research. Three of the four core characteristics in CSEs are

the most widely studied personality characteristics in personality and applied psychology (Judge, Erez, Bono, & Thoresen, 2002). Finally, it should be noted that individuals high in CSEs consistently appraise themselves in a positive manner; they appraise themselves as capable, worthy and in control of their lives (Judge, Van Vianen, & De Pater, 2004).

CSEs is a higher-order construct containing four broad and evaluative characteristics that are "interrelated and share similar relations with various work related outcomes" (Van der Heijden et al., 2014, p.151). Firstly, *self-esteem* represents the overall appraisal of oneself as a person. It is argued to be the most fundamental manifestation on CSEs (Judge, Locke, & Durham, 1997). Secondly, g*eneralized self-efficacy* "comprises an estimate of one's general perception of ability to deal successfully with demanding situations in a broad array of contexts" (Van der Heijden et al., 2014, p.252). In other words, it is about the belief in one's own ability to cope, perform, and be successful in life. Thirdly, *emotional stability*, counterpart of neuroticism, is the ability to be confident, steady, calm, and secure (Eysenck, 1990; Judge et al., 1997). Finally, *locus of control* refers to "the belief that desired effects result from one's own behavior rather than by fate or powerful others" (Van der Heijden et al., 2014, p.252). These four characteristics are strongly correlated and include a common factor, and are therefore considered to display one underlying construct, namely core self-evaluations. Therefore, instead of being studied individually, or seen as competing amplifications of behaviors, this study will solely focus on the overarching term of CSEs (e.g. Judge et al., 1997; Van der Heijden et al., 2004).

Recent studies concluded that CSEs are positively associated with multiple outcomes (Chang, Ferris, Johnson, Rosen, & Tan, 2012), such as job and life satisfaction, organizational and affective commitment, motivation, task performance and organizational citizenship behavior (e.g. Chang et al., 2012; Johnson, Chang, & Yang, 2010; Ferris, Rosen, Johnson, Brown, Risavy, & Heller, 2011). Furthermore, employees with high CSEs set more challenging goals, are more goal committed, and intrinsically motivated. Besides, Van der Heijden, van Dam, Xanthopoulou, and de Lange (2014) proposed that "high CSE employees are more likely to focus on positive aspects of their work environment and are less sensitive to negative aspects of their job"(p.253). Beyond all this, high levels of CSEs have been equated with a positive self-concept. Employees with a high positive self-concept see themselves more positively, make favorable inferences about themselves, and accept their own identity (Judge, Erez, & Bono, 1998).

Critics might argue the existence of an overlap between CSEs and strengths. To exemplify, Kong and Ho (2016) have argued that strengths are akin to personality characteristics. This study argues that this assumed overlap between CSEs and strengths refers to what we might call strength awareness. The definition of CSEs already mentions that it is about an individual's appraisal of self-worth, competences, and capabilities. It can be argued that having positive appraisals about self-worth, competencies, and capabilities, assumes an individual believes to be aware of the own strengths.

However, this awareness does not necessarily indicate that an individual will use his or her strengths at work, it does not indicate a behavioral act. Strength use is about using your competences, doing the things you are good at. Besides, many of the strengths individuals have (e.g. creativity, curiosity, hope, perseverance, and kindness) are not overlapping with self-esteem, generalized self-efficacy, locus of control, or emotional stability in itself. Based on the above, it is argued that CSEs and strength use are two distinct variables that are not overlapping in definition. The question remains 'why do some people use their strengths at work while others do not?' The explanation might be in the context, such as having the autonomy and the freedom to use one's strength (Van Woerkom, Bakker, & Nishii, 2016), but it might also be in the personality of the individual.

Core Self-Evaluations as an Antecedent of Strength Use

Judge, Erez, and Bono (1998) have argued that "when all else is equal, people will enact and be satisfied with those behavioral roles that maximize their sense of cognitive balance or consistency" (p. 173). This is the first and most theoretical argument to explain the expected relationship between CSEs and strength use. This argumentation by Judge et al. (1998) explains the self-consistency theory by Korman (1970), indicating that individuals are motivated to behave in a manner that fits their self-image, and therefore they will enact in jobs or tasks in such a way that allows them to preserve their self-image. Actions of individuals with high CSEs are mostly based on aspirations and the individuals' beliefs in oneself. Therefore, it could be expected that these individuals are more likely to use strengths, as it is consistent with their self-image (Judge, Bono, Erez, & Locke, 2005). The second argument is based on the general assumption that individuals are intrinsically motivated to use their strengths since everyone has a certain drive to do so (Govindji & Linley, 2007). Even though the context could be restricted, individuals who feel secure (emotionally stable), competent (self-efficacy), and in control (locus of control) are more likely to follow their inherent drive to use their strength while being at work. Third, when a challenging job is offered to an individual with high self-esteem, (s)he is likely to review this as a well-deserved opportunity in which (s)he can excel. On the contrary, an individual low in self-esteem might experience this as an undeserved opportunity or an opportunity to fail (Locke, McClear, & Knight, 1996). Perceiving the situation as an opportunity to fail might make people more likely to focus on (or avoid) deficiencies, instead of focusing on what they are good at (e.g. using strengths). Perceiving it as an opportunity to excel gives an individual the confidence to show strengths.

Based on the above, it is expected that employees with high levels of CSEs will be more likely to engage in activities in which they are able to use their strengths at work. Even though there is no existing empirical evidence towards this relationship, based on these theoretical arguments the following hypothesis is stated:

Hypothesis 1: Core self-evaluations are positively related to strength use at work

Positive Emotions, and its Mediating Role in the Link between Core Self-Evaluations and Strength Use.

Previous research has shown that a positive self-concept increases an individual's tendency to enjoy positive experiences, and experience more positive emotions and thoughts about oneself (Wood, Heimpel, Newby-Clark, & Ross, 2005). Positive emotions refer to the "multicomponent response tendencies that unfolds over relatively short time spans" (Fredrickson, 2001, p.218). They serve as indicators of flourishing or optimal well-being. Examples of positive emotions are joy, contentment, love, and interest. Positive emotions indicate that life is going well, that an individual's goals are being accomplished, and that resources are sufficient (Lyubomirski et al., 2005). As mentioned earlier, positive emotions are expected to have a mediating role in the relationship between CSEs and workplace strength use. The explanation of the mediating role is twofold. First, the link between CSEs and positive emotions will be explained based on logical reasoning and existing evidence. Subsequently, the second link between positive emotions and strength use will be elaborated based on the broaden-and-build theory by Fredrickson (2001).

Cognitive appraisals as antecedents of emotions. The expected link between CSEs and positive emotions is based on the assumption that employees showing high CSEs focus more on positive aspects of work, set more challenging goals, and above all, evaluate themselves positively; making positive inferences about themselves and are accepting of their own identity, all of which indicates the exposure to positive emotions (Goetz, Frenzel, Stoeger, & Hall, 2009). This can be explained in more depth with the use of two of the four CSEs-characteristics, namely locus of control and self-efficacy. Additionally, a reason to assume that self-esteem is related to positive emotions is added.

A theory by Goetz and colleagues (2009) highlights that control (locus on control) and value (self-efficacy) are two core antecedents of emotions. The locus of control model indicates that individuals who believe their actions to influence situational outcomes have an internal locus of control, whereas individuals with an external locus of control believe that they have no control over life outcomes (Goetz et al., 2009). Research states that an internal locus of control is associated with positive emotions, while an external locus of control is negatively associated with positive emotions (e.g. Alloy & Clements, 1992). This association could be explained by the reasoning that individuals with an internal locus of control have the feeling that they can guide their lives and life situations, they themselves are the ones that have to make the change to get a more satisfying life. They assume to be in control and are therefore happier. This reasoning was confirmed decades ago by Lefcourt (1983) and Levenson (1973). Additionally, empirical evidence has shown that employees with an internal locus of control are less likely to stay in a dissatisfying job and are more likely to be successful in organizations (Spector, 1982).

High levels of CSEs are also believed to be corresponding with a more positive emotional experience, which was already confirmed for perceived self-efficacy (Goetz et al., 2009). This general assumption is based on the knowledge that our perception of events, rather than the events themselves, influences our emotions. Cognitive appraisals mediate the impact of an event on our emotional experiences. In other words, people do not all experience or react to a certain event in the same manner (Roseman & Smith, 2001). For instance, when two colleagues make a large mistake and are called in by the boss for a lecture, one might experience the event as very unpleasant and a failure, while the other believes mistakes happen and the next time (s)he will do better. After the event, the first colleague might be upset for a long time and might have lost all trust in the own abilities to seal successfully with the situation ever again (lower self-efficacy). The second colleague, however, might have already forgotten the event took place, (s)he feels in control and secure and continues improving. In other words, the emotions people experience depend on how events are appraised. CSEs are seen as cognitive appraisals, since it is about the appraisals people have about their own abilities, control, and ourselves in general. How we experience aspects such as our own abilities or our role in life influence our emotions. Even though the examples explained before only focus on self-efficacy and locus of control, this study assumes that the same applies to self-esteem and emotional stability. Since they all contain the appraisal about one's own abilities and control over emotions, besides all four characteristics were shown to be highly correlated and containing a common factor.

An additional theoretical explanation by Leary and Downs (1995) states that individuals may seek self-esteem basically to experience positive emotions. Besides, they argue that low self-esteem is undoubtedly related to more negative emotions than high self-esteem (Leary & Downs, 1995). Empirical evidence for the explained relationships was found in the literature by Bandura (1977; 1989; 1997) and Goetz et al. (2009), whom noted that cognitive appraisals are antecedents of positive emotions (Goetz et al., 2009). Building on theoretical arguments, the following hypothesis is stated:

Hypothesis 2: Having high core self-evaluations is positively related to experiencing positive emotions

Broaden-and-build theory of positive emotions. This study is not trying to disconfirm early research indicating that strength use enhances positive emotions (e.g. Meyers & Van Woerkom, 2016) since this idea is likely valid to some degree. However, this study intends to highlight important theoretical arguments explaining that the alternative pathway, in which positive emotions (happiness) makes people more likely to use strengths, is equally probable.

The main argument to explain the associations between positive emotions and strength use is based on the broaden-and-build theory of positive emotions (Fredrickson, 2001). Very briefly explained, this theory consists of two parts; the broadening and the building part. On the one hand the broadening part states that positive emotions have a broadening effect on what is called the thought-action repertoire. On the other hand, the building part explains how this thought-action repertoire builds an individual's

personal resources, which functions as a reserve that can be drawn on later in life (Frederickson, 2004). This study will mainly focus on the broadening part of this theory. Fredrickson explains the broadening effect by stating that "positive emotions increase the number of thoughts leading to a greater variety of actions that people could take, consequently broadening their thought-action repertoire" (Keenan & Mostert, 2013, p.3). Hence, Fredrickson (2001) suggests that experiencing positive emotions is broadening one's mindset. Broadening the thought-action repertoire indicates that, as a consequence of experiencing positive emotions, individuals broaden their awareness and create new, diverse, and exploratory thoughts. It expands their collection of thoughts and actions that come to mind, accordingly broadening their thinking (Fredrickson & Branigan, 2005). By broadening one's mind, individuals expand their own perspective upon their surroundings, this in particular is what encourages exploratory behavior and curiosity, which makes employees do their work with enhanced interest and enthusiasm (Meyers & Van Woerkom, 2016). The broadened collection of thoughts and actions coming to mind can be used for new ways to use strengths at work. The broadened mindset makes individuals look for more new, creative, flexible, and unpredictable ways of thinking and behaving (Fredrickson, 2004; Fredrickson & Branigan, 2005). Thus, new, advanced, or creative ways to do the things they excel at and enjoy doing, which is referring to new and enhanced (more creative, innovative or unpredictable) ways to use strengths in their day to day work activities.

In sum, based on this explanation, it is expected that individuals experiencing positive emotions, as a consequence of feeling secure, competent and in control, broaden their thought-action repertoire. This broadened mindset provides an individual with more opportunities to engage in activities they know to be good at (their strengths). Something that gives fulfillment, makes them even prouder or self-confident. Doing something you are good at expectedly further increases positive emotions and self-evaluations. Based on these theoretical arguments and logical reasoning mentioned above, this study hypothesizes the following:

Hypothesis 3: Positive emotions are positively related to strength use at work

Core self-evaluations via positive emotions to strength use. Based on the theories and reasoning above, an additional indirect relationship between core self-evaluations and strength use is expected through positive emotions. To date there is no theoretical model describing how a positive self-view (CSEs) increased strength use through positive emotions. However, according to Goetz et al. (2009) high core self-evaluations indicate an exposure to positive emotions. Experiencing positive emotions, in turn, broadens an individual's thought-action repertoire (Fredrickson, 2001). Consequently, the broadened collection of thoughts and actions coming to mind increase the chances individuals will use their strengths while at work. On the contrary, when an employee has a low core self-evaluation, it is likely that this employee perceives less positive emotions and is therefore less likely to demonstrate

strength use behavior. This highlights the importance of positive emotions in the relationship between core self-evaluations and strength use. Hence, the following hypothesis is stated:

Hypothesis 4: Positive emotions partially mediate the relationship between core self-evaluations and strength use

Perceived Supervisor Support as a Moderating Concept

The role of situational circumstances in limiting or facilitating strength use has been frequently recognized in strength use literature (Harzer & Ruch, 2012; 2013). Situational circumstances at work need to allow an individual to express strengths at work, since behaviors need encouraging circumstances to be demonstrated. In this light, the role of the supervisor is argued to be one of the more critical possible situational determinants in the workplace. Considering that the supervisor has a formal authority in providing individuals with the resources and opportunities they need (Avolio et al., 2009). It is argued that situational circumstance, such as supervisor support, affects the influence of personality characteristics (CSEs) on behaviors (strength use) (Haaland & Christiansen, 2002).

Supervisor support is often defined as the general opinions (of employees) regarding "the degree to which supervisors value their contribution and care about their well-being" (Eisenberger, Stinglhamber, Vanderberghe, Sucharski, & Rhoades, 2002, p.565). For the purpose of this study the focus is on the employee's evaluation or perception of supervisor support (PSS; perceived supervisor support). Within the HR field, it is generally known that employees have universal beliefs concerning the extent to which their supervisors provide support, which can deeply influence work related outcomes (Ng & Sorensen, 2008).

Based on what is known about the importance of supervisor support, it is expected that the perception of the support given by the supervisor could strongly impact the expected positive relationship between CSEs and strength use at work. A few decades ago, several studies have acknowledged the position of situational characteristics as forecasters of trait-based responses (Hochwarter, Witt, Treadway, & Ferris, 2006; Schaufeli & Taris, 2014). This can be explained with the use of two theories. Firstly, the JD-R model notes that human behaviors result from interactions between personal (CSEs) and job (or situational) characteristics (PSS) (Schaufeli & Taris, 2014). Bakker (2009) showed that personal and job resources have a reciprocal relationship, in which one variable influences the other. Therefore, it is argued that CSEs and PSS jointly predict strength use. Secondly, the trait-activation theory (e.g., Haaland & Christiansen, 2002), which was originally a specific model of job performance, explains how PSS activates the individual differences in CSEs. The trait-activation theory points out how individuals express their traits when having access to trait-relevant situational cues. These cues, in this case PSS, might be able to activate an individual's self-confidence or belief in one self.

Based on the knowledge of the possible effects of situational circumstances, this study argues that PSS could, for instance, strengthen the positive relationship between CSEs and strength use. According to this argumentation, individuals high in CSEs would be most likely to use their strengths, since they are self-confident and feel in control. When, additionally, these individuals perceive supervisor support, their self-confidence will get another boost, confirming that they are indeed worthy of the organization. Increasing the chances that they will use their strengths. PSS could however also weaken the existing relationship. Individuals high on CSEs (e.g. believe to be in control, feel secure and competent), might come up with new ways of using their talents at work. However, when their supervisor does not believe in the abilities of the individuals, and demotivates them to try new things. The individuals might not feel any support at all. These individuals could start to question themselves, their abilities, and control to make a difference in the workplace. The above weakens the chances of individuals using their strengths in the future. The reinforcing or weakening role of PSS does not account for individuals with low CSEs. Due to the lack of trust in one's abilities and feeling insecure, individuals low in CSEs are by definition unlikely to use their strengths. In this situation PSS would assumedly not change much about the situation, as there is already no willingness to use the strengths. The expected moderating effect is shown in figure 1.

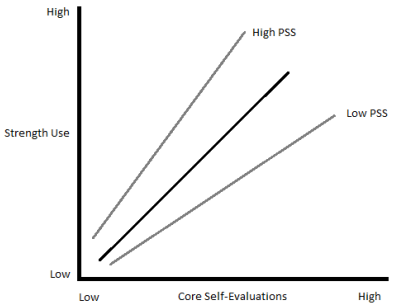

Figure 1: effect of the moderating relationship

In short, when an employee feels in control, competent, and secure to use his or her strengths, however, the employee does not receive support or room to do so, the employee is unlikely to act towards using the strengths at work. While the employee would be even more willing to use his or her strengths when (s)he feels supported by the supervisor. The previous paragraph explains the expected moderation effect of PSS on the relationship between CSEs and strength use at work. Kong and Ho (2016) expected that subordinates receiving supervisor support "will not only be better able to regulate and configure their work behaviors in a way that facilitates their strength use, but also feel more confident and supported in using these strengths" (p.17). Based on the above the following is hypothesized:

Hypothesis 5: PSS moderates the positive relationship between core self-evaluations and strength use, in such way that if perceived supervisor support is higher, the positive relationship between core self-evaluations and strength use will be higher

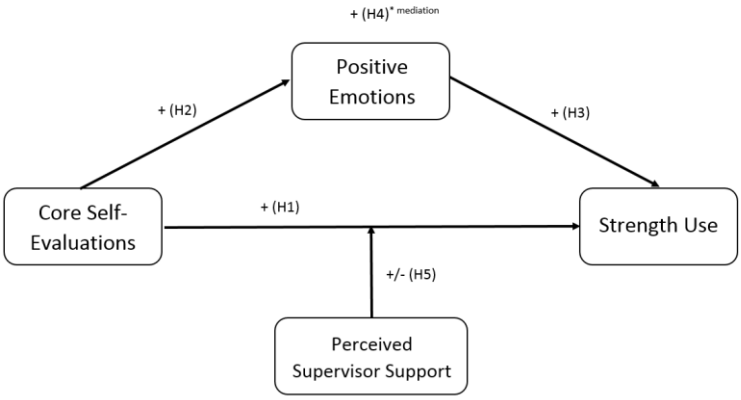

Figure 2: Conceptual model

Method

Research Design

In order to test the hypotheses stated a quantitative study was conducted in which data was collected with the use of a questionnaire. All concepts were measured at one point in time, using a cross-sectional design (Pallant, 2013). The sampling method used is convenience sampling in combination with snowballing. Indicating that respondents used their personal network to spread the questionnaire to other potential respondents.

Population and Sample

The unit of analysis is working individual employees, data was collected among various sectors with a total number of N=258 respondents. For the purpose of this study the population consists of Dutch working individuals (people with an actual job), which is a population of approximately 8.3 million individuals (Centraal Bureau voor de Statistiek [CBS], 2015). For the purpose of this study N=210 respondents were considered in the statistical analysis. Respondent were required to meet two conditions in order to be included in the statistical analysis: First of all, respondents were required to be part of the Dutch working population, and secondly the performed PROCESS analysis deleted cases with missing values (Hayes, 2013).

Regarding the respondents included in the dataset, the majority consisted of females (67.1%). On average respondents were 40 years old, ranging from 16 to 63 (SD = 13.01). The average organizational tenure of the respondents was 11 years (SD = 10.77). Furthermore, the average years of experience among respondents was 20 years (SD = 12.84), ranging from 0 to 53 years. Respondents were working in a great variety of sectors, it should be noted that 32.4% of the respondents were working within the health sector.

Table 1
Demographic characteristics

		N	Mean (%)	Standard Deviation	Range
Total # respondents		210			
Gender	Male	69	32.9%	.47	
	Female	141	67.1%		
Age (years)		210	39.90	13.01	16 – 63
Educational background	Lower education (primary school; MAVO; VMBO)	18	8.6%		
	Average education (HAVO, VWO, MBO)	84	40%		
	Higher education (HBO, WO (bs, ms), PHD)	105	50.8%		
Organizational tenure		210	11.12	10.77	0 - 45
Years of work experience		210	19.60	12.84	0 - 53
Sector	Health	68	32.4%		
	Industry	21	10%		
	Advising, research and specialist financial services	18	8.6%		
	Retail	10	4.8%		
	Other	15	7.1%		

Procedure

In order to measure the study constructs an online questionnaire was used. The participants were contacted by personal conversation, WhatsApp and e-mail. A message was send to all participants, containing a short introduction and a link to the online questionnaire (Qualtrics). The questionnaire was provided in Dutch, in accordance to the language spoken by the respondents. Prior to the questionnaire respondent were provided with an introduction text; informing the respondents about the purpose of the study, and the instructions to the questionnaire. Furthermore anonymity and confidentially were guaranteed to the respondents.

The questionnaire was conducted based on existing literature, using multiple existing scales. After the data collection, data was analyzed using IBM SPSS Statistics 22 software. First, the data was screened for missing values, errors and outliers. When required data was missing, respondents were excluded from the analysis, therefore, data was analyzed excluding cases listwise (Pallant, 2010). Furthermore unemployed respondents and respondents younger than 16 and older than 67 were excluded, as they do not belong to the Dutch working population. For the variables core self-evaluations and perceived supervisor support a number of items needed to be reversed. For each scale construct validity was checked by performing a principal component analysis (PCA). The factor analysis was assessed based on the correlation matrix, the KMO-value (> .6) and the Bartlett's test of sphericity (p

< .05) (Pallant, 2010). The total number of components was evaluated based on Kaiser's criterion (eigenvalue > 1) and the scree plot. Furthermore, reliability of the scales was tested using Cronbach's alpha (α > .7) and examining the value of Cronbach's alpha if item deleted (< α) (Pallant, 2010). For scales with more than ten items, a minimum value of corrected item-total correlation of .20 was included. For scales including less than 10 item, .30 was used (Pallant, 2010). However, this study made use of existing scales, therefore deleting items might change the explanation of the scale. In order to look for overlap between variables, Person's correlations was examined.

Core self-evaluations. CSEs was measured using the core self-evaluations scale (CSES), a 12-item scale developed by Judge, Erez, Bono, and Thoresen (2003). The CSES consists of three items covering for each of the four characteristics within CSEs. Example items of all four characteristics are; 'Overall, I am satisfied with myself' (self-esteem); 'When I try, I generally succeed' (generalized self-efficacy); 'Sometimes, I do not feel in control of my work' (locus of control); and 'Sometimes when I fail I feel worthless' (emotional stability). The response scale was a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). Items 2, 4, 6, 8, 10 and 12 needed to be reversed. The CSES was created to measure the underlying construct and not necessarily the distinct concepts. Results by Judge and colleagues (2003) showed the scale to be a useful means of assessing CSEs. The principal component analysis (PCA) was conducted. The correlation matrix showed all coefficients to be above .3, the KMO-value was .804 and Barlett's test of sphericity was significant (p=.000). The Kaiser criterion and the scree plot showed the existence of three components (explain 53.159% of the variance). Based on the theory four components were expected. The pattern matrix did not show any logical division of items over the components. Therefore it was chosen to use one component (Eigen value = 3.757, variance 31.309%). Judge and colleagues (2003) claim that the CSES is a better predictor of CSEs than the individual core traits, it measures the CSEs construct more directly, since 'CSES measures the commonality among the core traits, rather than the specific-factor variance attributable to the core traits themselves' (Judge et al., 2003, p.26). The purpose of this study is to draw conclusions about CSEs as an overarching construct. The component matrix showed that most items load quite strongly (between .346 and .714) on one component, therefore it is assumed that the one factor solution is appropriate. Furthermore, it should be noted that the scree plot shows one component to be substantially higher than the others. Reliability of the whole scale showed a Cronbach's alpha of α=.784. Chronbach if item deleted did not indicate that items should be deleted. Moreover, the overall scale of CSES showed a good internal consistency (α=.784). For these reasons, it was decided to use the one-factor solution in the analyses. For the purpose of this study the Dutch translation (NSCSES) by de Pater, Schinkel, and Nijstad (2007) was used.

Positive emotions. Positive emotions was measured with the positive affect items (10) of the PANAS scale by Watson, Clarke, and Tellegen (1988). Within this questionnaire several positive affective states were mentioned, for instance 'Enthusiast' and 'Inspired'. Respondents were asked to

indicate how often this affective state is perceived based on a 5-point Likert scale, ranging from 'very slightly or not at all' (1) to 'extremely' (5). For the purpose of this study the Flemish translation by van Engelen, de Peuter, Victoir, Diest, and van den Bergh (2006) was used. Factor analysis showed a KMO of .901 and a significant Barlett's sphericity test (p=.000). Items only loaded on one component (Eigen value 4.563, explaining 45.627% of the variance). Furthermore, results showed a Chronbach's Alpha of .862. If items were deleted Chronbach's Alpha would not increase.

Strength use. Strength use was measured using a 6-item scale developed by Van Woerkom et al. (2016). A sample item is 'I use my strengths at work'. The response scale was a 7-point Likert scale ranging from 'never' (1) to 'daily' (7). The original Dutch version by Van Woerkom et al. (2016) was used. Factor analysis showed a KMO of .873, with a significant Barlett's sphericity test of .000. Items only loaded on one component (eigen value 4.268, explaining 71.132% of variance). Internal consistency of the scale was considered great, as Chronbach's Alpha was .910. Chronbach if item deleted did not indicate that items should be deleted.

Perceived supervisor support. In concordance with earlier research (e.g. Eisenberger et al., 2002; Shanock & Eisenberger, 2006) PSS was measured with the use of six items from the short version of the Survey of Perceived Organizational Support (items 1, 4, 9, 20, 23, and 27). The six items were selected based on their high loadings on the SPOS (factor loadings from .71 to .84), and their focus upon the supervisor's positive evaluation of the employee's contribution and well-being (Rhoades, Eisenberger, & Armeli, 2001). As in earlier research all items are modified by replacing the word organization with the word supervisor. An example item is "my supervisor strongly considers my goals and values". The response scale is a 7-point Likert-scale ranging from strongly disagree (1) to strongly agree (7). Factor analysis showed a KMO of .917 and a Barlett's test of sphericity of .000. PCA revealed the existence of only one component (eigen value 4.177, 69.615% of variance). With a Cronbach's alpha of α=.907, the reliability of the scale was considered great. Chronbach if item deleted indicated that one item should be deleted. However, the difference in Chronbach Alpha was negligible. Moreover, the scale only consists of six items, removing one of them was not preferred.

Control variables. In order to control for spuriousness, control variables were included. Following previous research (e.g. Ho & Kong, 2016; Tsui & O'reilly, 1989) gender and organizational tenure (in years) were added as control variables. Gender was measured using a dummy (1=male; 0=female). A study by Park, Peterson, and Seligman (2004) found gender to be related to character strengths. Age and organization tenure were taken into account since years of experience might influence an individual's willingness or ability to use strengths.

Measures / Statistical Analysis

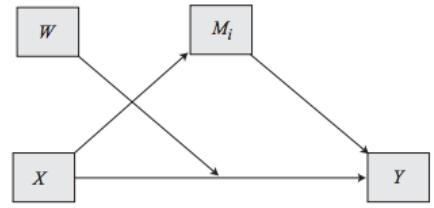

Figure 3: Statistical Diagram

The Process procedure of Hayes (2013) was used in order to test the expected relationships. The Hayes process analysis integrates the whole conceptual model, including control variables, in one analysis (Hayes, 2013). The added value of this particular model lies in the fact that it presents the total and indirect effect of CSEs on strength use (Hayes, 2013). An analysis was performed using Hayes' (2013) template five (figure 3). Applied in this study, conditional process analysis focuses on the estimation and interpretation of the condition PSS, the indirect effect via positive emotions and the direct effect of CSEs on strength use. Figure 3 represents the statistical model in path diagram form, which can be translated in three equations; the indirect effect of X on Y through Mi, the direct effect of X on Y and the moderating effect (W) on the direct effect. The control variables age, gender, and organizational tenure were also included in the model.

In order to test whether the mediation and moderation effects were significant the procedure bootstrap was performed, since the shape of the sampling distribution is unknown. Bootstrap is a procedure in which the sample data is treated as a population from which (bootstraps) samples are taken. The statistics of interest (e.g. mean or b coefficient) are calculated from each sample, by taking multiple samples the sampling distribution can be estimated. A confidence interval of 95 percent and a sample of 1000 were used. If the statistic is significant, then the 95 percent confidence interval will not contain zero. Bootstrap confidence also takes into account irregularity of the sampling and distribution of the indirect effects (Hayes, 2013). If the moderation effect was found to be significant, a line graph needed to be plotted with the use of the graph builder in SPSS, in order to interpret the moderation effect.

Results

Descriptive Statistics and Correlations

Table 2 represents the mean scores, standard deviations and Pearson's correlations of all variables included in this study, including the control variables. As can be derived from table 2 CSEs, SU, PE and PSS all correlate with one another. These correlations were all significant and in the expected direction. In addition to the hypothesized correlations, positive correlations were also found between SU and PSS (r=.247, p=.000), between PE and PSS (r=.256, p=.000), and between CSEs and PSS (r=.207, p=.000). Moreover, the control variables age and organizational tenure appeared to be positively correlating with strength use.

Table 2

Descriptive Statistics: Means, Standard Deviations and correlations

		Mean	S.D.	1	2	3	4	5	6	7
1.	CSEs	3.798	0.422	--						
2.	SU	6.107	1.030	0.151*	--					
3.	PE	3.702	0.511	0.467**	0.375**	--				
4.	PSS	5.275	1.205	0.207**	0.247**	0.256**	--			
5.	Age (in years)	39.90	13.006	0.125	0.280**	0.065	-0.023	--		
6.	Gender	1.67	0.471	-0.032	-0.060	0.005	0.058	-0.180**	--	
7.	Organizational tenure	11.124	10.769	0.053	-0.151*	0.113	0.117	-0.654**	0.128	--

Note. ** $p < .01$ two-tailed. * $p < .05$ two-tailed

Hypotheses Testing

In order to assess whether the hypotheses stated were confirmed, a conditional process analysis by Hayes (2013) was performed. The results of this analysis showed the existence of a positive significant effect between core self-evaluations and positive emotions (β =.537, p = .000; LLCI = .387, ULCI = .686), as stated in hypothesis 2. These results indicate that high levels of core self-evaluations are positively related to experiencing positive emotions. In addition, hypothesis 3, stating the effect between positive emotions and strength use, was confirmed (β = .725, p = .000; LLCI = .445, ULCI = 1.006). This indicates that positive emotions are positively related to strength use at work. Concerning the direct effect between CSEs and SU (hypothesis 1) results showed a non-significant effect, when controlling for positive emotions, perceived supervisor support and the control variables (age; gender; organizational tenure) (β =.-.172, p = .315; LLCI = -.510, ULCI = .165). Moreover, in order to test whether CSEs and SU were related through a mediating effect of positive emotions, as stated in hypothesis 4, the indirect effect was measured. The indirect effect of CSEs on SU through PE was found to be significant (β =.389, LLCI = .190, ULCI = .646). Therefore, also hypothesis 1, concerning a positive link between CSEs and SU, is still supported, even though the link is not direct. The direct correlation between CSEs and SU (r = .151) was abandoned by implementing the mediating variable positive emotions. Subsequently, these results indicate that positive emotions are fully (not partially) mediating the effect between CSEs and SU. Therefore, hypothesis 4 is only partially supported, since positive emotions were expected to partially instead of fully mediate the relationship. To test hypothesis 5, regarding the moderating effects of PSS on the relationship between CSEs and strength use, it was investigated whether or not PSS could strengthen or weaken the relationship between CSEs and strength use. This interaction effect of the moderator was not found to be significant (β =.185, p = .111; LLCI = -.043, ULCI = .413). Therefore, the conditional direct effect of X on Y at values of the moderator was

not significant, which lead to a rejection of hypothesis 5. Results related to hypotheses 1 through 5 are shown in Table 3.

Table 3
Results analysis (controlled for age, gender, organizational tenure)

	β	t	P	LLCI	ULCI
Positive Emotions					
Core self-evaluations	.537*	7.074	.000	.387	.686
F (4;205) = 15.630, R^2 = .234					
Strength Use					
Positive Emotions	.725*	5.101	.000	.445	1.006
Core self-evaluations	-.172	-1.007	.315	-.510	.165
Perceived supervisor support	.162*	2.970	.003	.054	.269
Interaction_1 (moderation of PSS)	.185	1.601	.111	-.043	.413
F (7;202) = 9.713, R^2 = .252					
Indirect effect (mediation)					
Mediation positive emotions	.389*			.190	.646

Note: β = Beta, p = * < .05 (2-tailed), LLCI = Lower limit confidence interval, ULCI = Upper limit confidence interval. Number of bootstrap samples for bias corrected bootsstrap confidence intervals: 1.000

Additional Analyses

In addition to the results presented above, the results also showed a direct effect between perceived supervisor support (PSS) and strength use (SU), which was not hypothesized prior to data collection (β =.162, p = .003; LLCI = .054, ULCI = .269). Based on this result and the rejection of hypothesis 5, it was decided to run additional analyses. One of the additional analyses implemented PSS as a mediator instead of as a moderator between CSEs and SU.

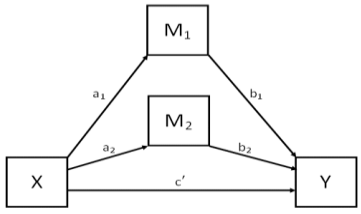

Figure 4: Statistical Diagram

In order to assess whether PSS serves a mediating role in this relationship, a mediation analyses using Hayes' template four (parallel multiple mediator) was performed (figure 4). Within this analysis, both PSS and PE operated parallel as a mediator in which CSEs influences strength use. The PROCESS analysis takes into account the (possible) mutual relationship between both mediators within the statistical diagram.

Results of the additional analysis showed that the indirect effect through PE remained significant. Furthermore, results showed a significant positive effect between CSEs and PSS (β =.558, p = .005; LLCI = .168, ULCI = .949), and between PSS and strength use (β = .159, p = .004; LLCI = .051, ULCI .267). Therefore, the indirect effect through PSS is significant (β = .089, LLCI = .025, ULCI .204). Indicating that PSS, like PE, serves a mediating role in the relationship between CSEs and

strength use. The total indirect effect of CSEs on strength use (using both PE and PSS as mediators) shows a beta of .474 (LLCI = .276, ULCI .739). The total effect of CSEs on strength use is not significant, due to the non-significant direct effect between these variables. Results of the additional analysis are presented in the overview below.

Table 4
Results additional analysis (controlled for age, gender, organizational tenure)

	β	t	P	LLCI	ULCI
Positive Emotions					
Core self-evaluations	.537*	7.074	.000	.387	.686
F (4;205) = 15.630, R^2 = .234					
Perceived Supervisor Support					
Core self-evaluations	.558*	2.819	.005	.168	.949
F (4;205) = 3.153, R^2 = .058					
Strength Use					
Positive Emotions	.719*	5.037	.000	.438	1.003
Core self-evaluations	-.197	-1.150	.251	-.534	.141
Perceived supervisor support	.159*	2.907	.004	.051	.267
F (6;203)=10.822, R^2 = .242					
Indirect effect (mediation)					
Mediation positive emotions	.386*			.198	.635
Mediation perceived supervisor support	.089*			.025	.204

Note: β = Beta, p = * < .05 (2-tailed), LLCI = Lower limit confidence interval, ULCI = Upper limit confidence interval. Number of bootstrap samples for bias corrected bootsstrap confidence intervals: 1.000

Discussion

This study investigated the following research question: *To what extent are core self-evaluations related to strength use at work, and is this relationship mediated by positive emotions?* And *How does perceived supervisor support moderate this relationship between core self-evaluations and strength use at work?* Evidence showed that the relationship between core self-evaluations and strength use at work is fully mediated by positive emotions. Perceived supervisor support was expected to have a strengthening effect on the relationship between core self-evaluations and strength use. However, results provided in this study did not confirm the expected moderating effect, rather, perceived supervisor support seems to function as an additional mediator within the link between core self-evaluations and strength use.

Firstly, in support of hypothesis 1, core self-evaluations was found to be positively related to strength use at work. This is in line with the self-consistency theory (Korman, 1970); the inherent drive to use strengths of individuals who feel secure, competent and in control (Govindji & Linley, 2007); and the opportunity to excel (Locke et al., 1996). However, results did not show a direct effect between the two variables, indicating that the relationship is fully mediated by positive emotions, as will be further elaborated on below. Hence, core self-evaluations are related to strength use at work through positive emotions.

Secondly, hypothesis 2 concerned the relationship between core self-evaluations and positive emotions. Results showed that core self-evaluations are a positive predictor of positive emotions. This is in line with the assumption that emotions experienced are depending on the appraisal of an event. Employees high on CSEs appraise themselves positively, and are therefore assumed to experience more positive emotions (Goetz et al., 2009; Roseman & Smith, 2001). Besides, employees showing high core self-evaluations focus more upon positive aspects of work, set more challenging goals, and evaluate themselves positively; which all indicates the exposure to positive emotions (Goetz et al., 2009).

Thirdly, the expected positive relationship between positive emotions and strength use at work, stated in hypothesis 3, was supported. This is in line with the broaden-and-build theory of positive emotions (Fredrickson, 2001) which states that experiencing positive emotions expands an individual's thought-action repertoire, making them more prone to use their strength while at work (Fredrickson, 2001). As a consequence of experiencing more positive emotions, individuals broaden their awareness and create new, diverse, and more exploratory thoughts. Expanding their collection of thoughts and actions; and subsequently expanding their perspective upon their surroundings (Meyers & Van Woerkom, 2016). These broadened mindsets make individuals likely to look for new, advanced, and creative ways to do the things they excel at and enjoy doing (i.e. new ways to use their strength at work (Fredrickson, 2004; Fredrickson & Branigan, 2005).

Fourthly, the expected mediation effect of positive emotions in the relationship between core self-evaluations and strength use, stated in hypothesis 4, was partially supported. Based on the reasoning of both the relationship between CSEs and positive emotions, and the link between positive emotions and strength use, positive emotions was expected to partially influence the relationship between CSEs and strength use. Results however showed a non-significant direct effect between CSEs and strength use. Therefore, positive emotions fully mediate this relationship.

Lastly, the expected moderating effect of perceived supervisor support on the positive link between core self-evaluations and strength use, stated in hypothesis 5, was not supported. Based on previous academic research it was argued that supervisor support in particular has a major role in affecting the relationship between an individual's characteristics (CSEs) and behavior (SU)

(Hochwarter et al., 2006; Shaufeli & Taris, 2014), based on both the JD-R model (Schaufeli & Taris, 2014) and the trait-activation theory (Haaland & Christiansen, 2002). The lack of moderation within this model means that perceived supervisor support has no impact on the strength of the relationship between core self-evaluations and strength use. Moreover, results showed that CSEs and strength use were not directly related within this model.

If CSEs and strength use were directly related, the lack of moderation could have implicated that individuals high in CSEs are personally resourceful enough to always be able to use strengths at work. However, based on the results on this study it is argued that the relationship between CSEs and strength use is not strong enough. Previous research by Harzer and Ruch (2012; 2013) argued the important role of situational circumstances in limiting or facilitating strength use. Situational circumstances are the factors that allow or disallow an individual to express strength use at work, employees need encouraging circumstances to do so. Therefore, the existence of other factors moderating this relationship is most likely. This indicates that the effect only exists for a certain group of individuals; only for those who meet a certain criteria. The question remains which additional factors individuals need in order for them to use their strengths while at work. It is beyond the scope of this article to investigate the effect of other possible moderators. However, based on logical reasoning and information provided within this article it is suggested that possible moderators could be supervisor support for strength use; age; organizational tenure; or one of the other job resources mentioned in the JD-R model.

Nonetheless, what is known based on this specific research is that the results failed to show a moderation effect for perceived supervisor support. One explanation for this result could be that PSS does not serve a moderating effect, but another effect on the relationship between core self-evaluations and strength use. Results of the additional analyses revealed that PSS serves as a mediator in the indirect link between CSEs and strength use. Which can be explained with the use of three arguments.

Firstly, it can be reasoned that employees high on core self-evaluations demand more time and support from their supervisor. Besides, based on the self-consistency theory explained before, it can be stated that individuals who feel more secure, competent, and in control perceive more support. This does not imply that these individuals receive more support. However, they might perceive it more often, as it is in line with their self-image. They could, for instance, experience more support as opposed to insecure individuals (e.g. they might not take a compliment as a supportive sign). This argument is in line with findings by Chang and colleagues (2012), emphasizing the role of core self-evaluations for an individual's perception of the work situation.

Secondly, strength use literature by Harzer and Ruch (2012; 2013) has recognized the role of situational circumstances in limiting or facilitating strength use. It can be argued that the role of the supervisor is one of the most critical situation determents in the workplace since the supervisor has a

formal authority in providing individuals with the resources and opportunities they need (Avolio et al., 2009).

Thirdly, the mediating effect can be explained with the use of the JD-R model. The model that was, in the first place, used to explain the moderating effect of PSS. Shaufeli and Taris (2014) explain that there is not one single JD-R model and that there are still important unresolved issues regarding the JD-R model. Since the initial JD-R model by Demerouti, Bakker, Nachreiner, and Schaufeli (2001) was presented, research on the JD-R model has immensely improved. This resulted in multiple revisions that are widely used in academic literature. The revision of the original JD-R model including personal resources was integrated in this study to explain the moderating effect of PSS; which stated that an individual's behavior results from the interaction between personal (CSEs) and job (or situational) characteristics (PSS) (Shaufeli & Taris, 2014). Because of this reasoning, an interaction effect was expected in the first place. Shaufeli and Taris (2014) further claim that instead of testing the model, many researchers have used it as an inspiration to create their own revision. Based upon the information and results provided in this and previous research, it might be argued that personal resources could also serve another role as opposed to what is expected based on the previously used JD-R model. However, much is unknown regarding this aspect. Bakker (2009) already reported that employees with a higher self-concept reported more access to job resources (i.e. supervisor support). A reciprocal effect between CSEs and supervisor support is expected, in which employees with high CSEs (personal resource) perceive more supervisor support (job resource). This perceived supervisor support on the other hand provides employees with the confidence to use their strength's a work. Furthermore, according to Clifton and Harter (2003) a supervisor's behavior is likely to affect subordinates' strengths use at work.

Limitations and Directions for Future Research

The sample, research model, and research design of this study are subject to limitations, which should be taken into account when interpreting the results. Firstly, convenience sampling and snowball sampling were used in order to recruit respondents, which might have resulted in a selection bias. A selection bias occurs when there is no proper representation of the population to be analyzed, which could lead to a distortion of the data or statistical analysis (Bethlehem, 2010). A plausible reason for selection biases to occur is the use of self-selected respondents through convenience sampling. By using self-selected respondents, the representativeness of the sample is unknown prior to data collection, over- or underrepresentation might occur (Bethlehem, 2010). Therefore, it must be noted that one of the disadvantages of convenience sampling is the fact that it does not consider whether the sample is a solid representation of the entire population (Farrokhi & Mahmoudi-Hamidabad; 2012). The current study includes employees from a great variety of sectors, educational backgrounds and ages. For instance, the average age of respondents was 40, where the average Dutch working population is 41 years old (CBS, 2015). However, gender distribution is somewhat skewed and the healthcare sector is overly represented.

Using convenience sampling might also explain why 67 percent of the respondents were female; since males and females are drawn to different topics (e.g. women are more drawn toward social or interpersonal topics than man; Knobloch-Westerwick, Brück, & Hastall, 2006). Therefore, it can be assumed that the attention of women was more drawn to the study, and therefore more women participated in the questionnaire. Based on the above, we cannot say with certainty that the sample is a good representation of the entire Dutch working population. Consequently, the generalization of the results should be done with caution. Future research is needed to assess whether the results are applicable to, amongst others, specific group or sectors. Moreover, it is recommended for future research to include a larger sample, making use of random stratified sampling in multiple organization throughout the entire country. Other biases could have occurred due to fake or social desirable answers. This possible bias was, however, partially tackled by guaranteeing anonymity.

Secondly, this study made use of a cross-section design; data was measured at one specific point in time. Therefore, causal inferences are inhibited, even though the expected direction of the relationships was based on previous academic research and theories (Singleton & Straits, 2010). No actual statements can be made about the direction of the effects. For instance, regarding the effect of positive emotions and strength use. The current study suggests that positive emotions are an antecedent of strength use. On the contrary, previous studies in strength use literature have indicated strength use to be a predictor of positive emotions (e.g. Meyers & van Woerkom, 2016). Due to the cross-sectional design of the current study, no verdict about the direction of the relationships can be made. To overcome this limitation, it is highly recommended for future research to include measurements at multiple occasions in time, making estimations about causality possible (Pallant, 2010). The above is especially important when using variables that are easily fluctuating over time, such as positive emotions.

Thirdly, reliability of the core self-evaluation scale showed some inconsistency on the number of components within the scale. For the purpose of this study it was decided to use one component, including all items. It would be recommended and interesting for future research to look into the effects of the four distinct variables included in CSEs separately. The findings and theories provided in this study do not give suggestions about explanations regarding which component of CSEs might be more or less important for strength use.

Moreover, based on the study results it is recommended to further look into the additional analyses performed. It could for instance be interesting to include strength awareness into the model. Based on the limited existing literature on antecedents of strength use it is recommended to also investigate the effects of multiple HR practices on the likelihood of strength use at work. The same accounts for investigating several possible moderators. Furthermore, it could be interesting to look into the model used in this study in more depth, investigating the link between core self-evaluations and

strength use by having interviews to gain more insight into the underlying mechanisms that make some people inherently more or less likely to use strengths at work. The descriptive statistics of this study showed a positive correlation between age and strength use, and between organizational tenure and strength use. Future research should invest more time and effort in finding possible effect for these relationships.

Practical Implications

Despite the limitations, and in addition to contributing to theory, the abovementioned findings bring a practical contribution for organizations and practitioners. The results provided in this study are especially relevant for organizations that are willing to promote and increase the strength use of their employees. As mentioned multiple times, although it is now commonly known that strength use is related to multiple positive outcomes (e.g. well-being and performance), little is still known about the antecedents of strength use at work (e.g. Biswas-Diener et al., 2011; Meyers & van Woerkom, 2016). Based on the findings within this study organizations are provided with implications to promote and increase the strength use behavior of their employees. However, the implications provided below should be interpreted with caution, since the direction of the effects has not been confirmed due to the cross-sectional nature of this study. Practices such as recruitment and selection can be used to select individuals that are most likely to utilize and exploit their strength. In this case organizations could select upon core self-evaluations, something that can be established through assessments and interviews. Additionally, organization might be able to influence strength use by investing time and effort in stimulating it through supervisor support. Therefore, training supervisors in coaching and support techniques might be interesting.

Moreover, core self-evaluations are difficult, however not impossible to change (Van der Heijden et al., 2014). With the use of the proper training interventions, core self-evaluations of employees are increasable. Research by Gist and Mitchell (1992), for instance, implied the existence of training methods to enhance self-efficacy. According to van der Wouw (2008) the degree of self-efficacy is, amongst others, a result of the own experience with a task. In order to change an employee's self-efficacy, it is important to change one's beliefs about their own abilities and motivation (Gist & Mitchell, 1992). In 1975, Bandura already created a scheme to increase self-efficacy and self-esteem (Bandura, 1977), which could help employers and employees to develop enhanced self-efficacy. Another example of organizational interventions that could probably increase the self-concept of employees is by focusing not only on the deficiencies of employees, but especially on the things they excel at (e.g. positive aspects of their behavior or skills at work; van der Wouw, 2008). This encourages them to invest more time and effort in demonstrating that particular strength while at work. By doing so, employees create a positive expectation of their own abilities. Moreover, individuals themselves can use affirmations in order to increase the own self-concept. Affirmations are positive sentences or self-

suggestions an individual repeatedly tells him- or herself. An example of such sentence could be: "I am full of self-confidence; I have practiced multiple times; I am certain I can do this!" In short, this study provides organizations with knowledge regarding strength use at work and provides them with implications that might be able to increase the degree of core self-evaluations and strength use behavior of their employees. All above also serve advantages for the employees themselves, whom go to work with enhanced positive emotions, motivation, joy, satisfaction, energy and well-being (e.g. Peterson & Park, 2006; Linley & Harrington, 2006; Peterson & Seligman, 2004), which is likely to also have a positive effect on the employee's life outside of work.

Conclusion

In conclusion, this study adds value to academic literature by presenting that core self-evaluations are related to strength use at work. Results showed that this relationship is fully mediated by positive emotions and perceived supervisor support. Interest in strength use has grown tremendously over the last couple of years, as previous research has shown that strength use at work increases individual well-being and performance. Nevertheless, this study is unique by being one of the first to look into antecedents of strength use at work. More research is necessary and highly recommended to further investigate whether individual and organizational characteristics (e.g. HR practices) act as antecedents of strength use.

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Appendices

Appendix I: Questionnaire

Beste deelnemer,

Bedankt voor uw tijd en deelname aan dit onderzoek naar het gebruik van ‘sterke punten’ op het werk. Dit onderzoek wordt afgenomen in het kader van mijn Master Thesis voor de opleiding Human Resource Studies (Universiteit van Tilburg).

Aangezien dataverzameling van essentieel belang is om het onderzoek goed te kunnen uitvoeren, is er een vragenlijst ontwikkeld. De enige voorwaarde om deel te kunnen nemen aan het onderzoek is dat u momenteel een baan hebt in Nederland.

Ik zou u graag willen vragen om deel te nemen aan het onderzoek en deze vragenlijst volledig in te vullen. Wanneer u de vragenlijst verder wilt verspreiden onder kennissen en collega's zou ik dat waarderen.

Lees onderstaande instructies voorafgaand aan dit onderzoek door:

1) Het invullen van de vragenlijst zal ongeveer 5 minuten in beslag nemen;
2) Deze vragenlijst vraagt naar uw mening. U kunt dus nooit een fout antwoord geven;
3) Met de resultaten van het onderzoek wordt vertrouwelijk omgegaan. De gegevens zijn niet te herleiden naar individueel niveau en er zullen geen bedrijfs- en persoonsgegevens worden gerapporteerd. Er zal te allen tijde vertrouwelijk en anoniem met de informatie worden omgegaan;
4) Uw deelname aan dit onderzoek is geheel vrijwillig;
5) U kunt te allen tijde stoppen met het invullen van de vragenlijst zonder verdere consequenties. Uw antwoorden zullen dan niet worden meegenomen in het onderzoek;
6) Uw antwoorden zijn erg belangrijk en waardevol voor ons onderzoek. Daarom vragen wij uw volle aandacht voor deze vragenlijst;
7) Hebt u vragen met betrekking tot deze vragenlijst dan kunt u deze stellen aan Daphne Franken

Bij voorbaat dank voor je medewerking!

Demografische gegevens: Beantwoord a.u.b. de onderstaande vragen. Mochten er meerdere opties zijn, kies dan de optie die het meeste op u van toepassing is.

1. Hebt u op dit moment een baan (in Nederland) 1. [ ] Ja 2. [ ] Nee

Wanneer nee is geselecteerd; ga naar het einde van de vragenlijst

2. Wat is uw leeftijd in jaren (bijvoorbeeld: 30) _____

3. Wat is uw geslacht? 1. [ ] Ja 2. [ ] Nee

4. Wat is de hoogste opleiding die u heeft voltooid?

1. [ ] Basisschool
2. [ ] Mavo
3. [ ] VMBO
4. [ ] MAVO
5. [ ] VWO
6. [ ] Middelbaar beroepsonderwijs (MBO)
7. [ ] Hoger beroepsonderwijs (HBO)
8. [ ] Wetenschappelijk onderwijs: Bachelor
9. [ ] Wetenschappelijk onderwijs: Master
10. [ ] Master Wetenschappelijk onderwijs: PhD/Doctor
11. [ ] Anders, namelijk _____

5. Tot welke sector kan de onderneming waarin u werkt worden gerekend?

1. [ ] Administratieve en ondersteunende dienstverlening
2. [ ] Landbouw, bosbouw en visserij
3. [ ] Cultuur & recreatie
4. [ ] Bouwnijverheid
5. [ ] Onderwijs
6. [ ] Financiële instelling, verzekering en pensioenfondsen
7. [ ] Gezondheids- en welzijnszorg
8. [ ] Logies-, maaltijd- en drankverstrekking
9. [ ] Informatie en communicatie
10. [ ] Bestuur van bedrijven en ondernemingen
11. [ ] Industrie
12. [ ] Mijnbouw, Steenhouwerij, Winning van delfstoffen, aardolie en aardgas
13. [ ] Advisering, onderzoek en overige specialistische zakelijke dienstverlening
14. [ ] Openbaar bestuur van overheidsdiensten
15. [ ] Verhuur van en handel in onroerend goed
16. [ ] Detailhandel
17. [ ] Vervoer en opslag
18. [ ] Elektriciteits-, gas- en drinkwatervoorziening
19. [ ] Afval- en afvalwaterbeheer en sanering
20. [ ] Groothandel
21. [ ] Overheid
22. [ ] Anders, namelijk _____

6. Sinds wanneer werkt u al voor uw huidige organisatie? (noem een jaartal, bv: 2002) _____

7. Wat is uw totale werkverleden in jaren? (bijvoorbeeld: 14) _____

Lees de onderstaande vragen en instructies a.u.b. zorgvuldig door. Kies het antwoord dat het meest op u van toepassing is. U kunt nooit een fout antwoord geven. In de onderstaande selecties wordt u gevraagd om aan te geven in hoeverre u het eens bent met een aantal uitspraken. Neem a.u.b. kennis van de onderstaande antwoordcategorieën en geef aan in hoeverre u het eens bent met de uitspraken op deze pagina.

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8. Geef bij onderstaande stellingen aan in welke mate u het eens of oneens bent met de stelling

Antwoordcategorieën

1 = sterk oneens2 = oneens 3 = neutraal 4 = eens 5 = sterk eens

1. Ik heb er vertrouwen in dat ik in mijn leven het succes zal behalen dat ik verdien	**1**	**2**	**3**	**4**	**5**
2. Soms voel ik me depressief	**1**	**2**	**3**	**4**	**5**
3. Als ik mijn best doe, lukken de dingen die ik probeer te doen meestal	**1**	**2**	**3**	**4**	**5**
4. Soms voel ik me waardeloos als iets mislukt	**1**	**2**	**3**	**4**	**5**
5. Ik breng de dingen die ik doe tot een goed einde	**1**	**2**	**3**	**4**	**5**
6. Soms heb ik het gevoel dat ik geen controle heb over mijn werk/studie	**1**	**2**	**3**	**4**	**5**
7. Alles bij elkaar genomen ben ik tevreden met mezelf	**1**	**2**	**3**	**4**	**5**
8. Ik ben vol twijfel over mijn capaciteiten	**1**	**2**	**3**	**4**	**5**
9. Ik bepaal wat er gebeurd in mijn leven	**1**	**2**	**3**	**4**	**5**
10. Ik heb het gevoel dat ik geen controle heb over het succes in mijn werk / studie	**1**	**2**	**3**	**4**	**5**
11. Ik ben in staat om goed om te gaan met de meeste problemen	**1**	**2**	**3**	**4**	**5**
12. Er zijn momenten waarop de dingen mij nogal grauw en hopeloos lijken	**1**	**2**	**3**	**4**	**5**

De onderstaande vragen gaan over het bewustzijn van de eigen sterke punten. Neem a.u.b. kennis van de onderstaande antwoordcategorieën en kies het antwoord dat het meest op u van toepassing is.

Antwoordcategorieën

1 = helemaal mee oneens 2 = oneens 3 = een beetje mee oneens 4 = neutraal
5 = een beetje mee eens 6 = eens 7 = helemaal mee eens

1. Ik weet waar ik goed in ben	**1 2 3 4 5 6 7**
2. Ik ben mij bewust van mijn sterke kanten	**1 2 3 4 5 6 7**
3. Ik weet wanneer ik op mijn best ben	**1 2 3 4 5 6 7**
4. ik weet welke taken mij goed liggen	**1 2 3 4 5 6 7**
5. ik weet welke taken mij energie geven	**1 2 3 4 5 6 7**

De onderstaande vragen gaan over het gebruik van uw sterke punten op het werk. Neem a.u.b. kennis van de onderstaande antwoordcategorieën en kies het antwoord dat het meest op u van toepassing is.

Antwoordcategorieën

1 = nooit 2 = een paar keer per jaar 3 = eens per maand of minder 4 = een paar keer per maand 5 = eens per week 6 = een paar keer per week 7 = dagelijks

1. Ik gebruik mijn sterke punten in mijn werk	**1 2 3 4 5 6 7**
2. In mijn werk probeer ik zoveel mogelijk gebruik te maken van mijn talenten	**1 2 3 4 5 6 7**
3. Ik organiseer mijn werk zo dat het aansluit bij mijn sterke punten	**1 2 3 4 5 6 7**
4. In mijn werk probeer ik mijn sterke punten zoveel mogelijk uit te buiten	**1 2 3 4 5 6 7**
5. Op het werk heb ik profijt van mijn sterke kanten	**1 2 3 4 5 6 7**
6. Ik zoek naar mogelijkheden om mijn werk aan te pakken op een manier die het beste bij mijn sterke punten past	**1 2 3 4 5 6 7**

De hierna volgende vragen bestaan uit een aantal woorden die verschillende gevoelens en emoties beschrijven. Duid bij elk woord aan in welke mate u zich zo voelde in de afgelopen week.

Antwoordcategorieën

1 = heel weinig/helemaal niet 2 = een beetje 3 = matig 4 = veel 5 = heel veel

1. Geïnteresseerd	**1**	**2**	**3**	**4**	**5**
2. Bedroefd	**1**	**2**	**3**	**4**	**5**
3. Opgewekt	**1**	**2**	**3**	**4**	**5**
4. Terneergeslagen	**1**	**2**	**3**	**4**	**5**
5. Sterk	**1**	**2**	**3**	**4**	**5**
6. Schuldig	**1**	**2**	**3**	**4**	**5**
7. Angstig	**1**	**2**	**3**	**4**	**5**
8. Vijandig	**1**	**2**	**3**	**4**	**5**
9. Enthousiast	**1**	**2**	**3**	**4**	**5**
10. Zelfverzekerd	**1**	**2**	**3**	**4**	**5**
11. Vlug geïrriteerd	**1**	**2**	**3**	**4**	**5**
12. Alert	**1**	**2**	**3**	**4**	**5**
13. Beschaamd	**1**	**2**	**3**	**4**	**5**
14. Vol inspiratie	**1**	**2**	**3**	**4**	**5**
15. Gespannen	**1**	**2**	**3**	**4**	**5**
16. Vastberaden	**1**	**2**	**3**	**4**	**5**
17. Aandachtig	**1**	**2**	**3**	**4**	**5**
18. Zenuwachtig	**1**	**2**	**3**	**4**	**5**
19. Energiek	**1**	**2**	**3**	**4**	**5**
20. Bang	**1**	**2**	**3**	**4**	**5**

Onderstaand vragen gaan over de mate waarin u support ontvangt van uw leidinggevende. Geef bij onderstaande stellingen aan in welke mate u het eens of oneens bent

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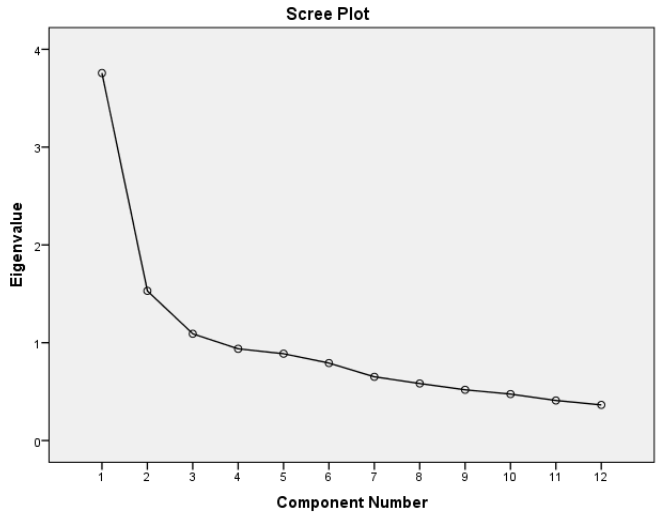
Antwoordcategorieën

1 = helemaal mee oneens 2 = oneens 3 = een beetje mee oneens 4 = neutraal 5 = een beetje mee eens 6 = eens 7 = helemaal mee eens

1. Mijn leidinggevende waardeert mijn bijdrage aan het welzijn van de organisatie	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2. Mijn leidinggevende houdt sterk rekening met mijn doelen en waarden	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3. Mijn leidinggevende geeft werkelijk om mijn welzijn	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. Mijn leidinggevende is bereid mij te helpen als ik een speciaal verzoek heb	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5. Mijn leidinggevende toont zeer weinig aandacht voor mij	**1**	**2**	**3**	**4**	**5**	**6**	**7**
6. Mijn leidinggevende is trots op de prestaties die ik lever	**1**	**2**	**3**	**4**	**5**	**6**	**7**

Debriefing: Met het huidige onderzoek willen we de onderzoeken wat voorspellers zijn van het gebruik van sterke punten op het werk. We respecteren uw rechten als deelnemer, de resultaten zullen volledig anoniem worden verwerkt. De resultaten van dit onderzoek zullen niet worden gekoppeld aan uw naam; in plaats daarvan worden uw antwoorden samengevoegd met de antwoorden van andere deelnemers en gepresenteerd als groepsgemiddelden. Ik zou het zeer op prijs stellen als u de vragenlijst verder zou willen verspreiden binnen uw eigen netwerk! Bedankt voor uw deelname!

Appendix II: Factor Analysis Core Self-Evaluations



Pattern Matrix

	Factor Loadings		
Er zijn momenten waarop de dingen mij nogal grauw en hopeloos lijken*	,828		
Soms voel ik me depressief*	,812		
Soms voel ik me waardeloos als iets mislukt*	,702		
Soms heb ik het gevoel dat ik geen controle heb over mijn werk/studie*	,604		
Ik ben vol twijfel over mijn capaciteiten*	,405		
Ik breng de dingen die ik doe tot een goed einde		,767	
Ik ben in staat om goed om te gaan met de meeste problemen		,698	
Als ik mijn best doe, lukken de dingen die ik probeer te doen meestal		,601	,300
Ik bepaal wat er gebeurd in mijn leven		,403	,349
Ik heb er vertrouwen in dat ik in mijn leven het succes zal behalen dat ik verdien			,852
Ik heb het gevoel dat ik geen controle heb over het succes in mijn werk/studie*			,509
Alles bij elkaar genomen ben ik tevreden met mezelf	,317	,333	,426

KMO	,804
Bartlett's Test significance	,000
Eigen Value	3,757
Percentage of Variance explained	31,309

Extraction Method: Principal Component Analysis, Rotation Method: Oblimin with Kaiser Normalization

* items needed to be reversed

Appendix III: Factor Analysis Strength Use

	Factor Loadings
Op het werk heb ik profijt van mijn sterke kanten	,875
In mijn werk probeer ik zoveel mogelijk gebruik te maken van mijn talenten	,873
Ik gebruik mijn sterke punten in mijn werk	,864
Ik organiseer mijn werk zo dat het aansluit bij mijn sterke punten	,844
Ik zoek naar mogelijkheden om mijn werk aan te pakken op een manier die het beste bij mijn sterke punten past	,806
In mijn werk probeer ik mijn sterke punten zoveel mogelijk uit te buiten	,795
KMO	,873
Bartlett's Test significance	,000
Eigen Value	4,268
Percentage of Variance explained	71,132

Appendix VI: Factor Analysis Positive Emotions

	Factor Loadings
Enthousiast	,767
Sterk	,764
Aandachtig	,733
Energiek	,709
Opgewerkt	,678
Vol inspiratie	,659
Zelfverzekerd	,650
Vastberaden	,628
Geïnteresseerd	,577
Alert	,555
KMO	,901
Bartlett's Test significance	,000
Eigen Value	4,563
Percentage of Variance explained	45,627

Appendix V. Factor Analysis Perceived Supervisor Support

	Factor Loadings
Mijn leidinggevende geeft werkelijk om mijn welzijn	,878
Mijn leidinggevende waardeert mijn bijdrage aan het welzijn van de organisatie	,871
Mijn leidinggevende houdt sterk rekening met mijn doelen en waarden	,858
Mijn leidinggevende is trots op de prestaties die ik lever	,845
Mijn leidinggevende is bereid mij te helpen als ik een speciaal verzoek heb	,815
Mijn leidinggevende toont zeer weinig aandacht voor mij*	,729
KMO	,917
Bartlett's Test significance	,000
Eigen Value	4,177
Percentage of Variance explained	69,615

* items needed to be reversed