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**The role of a new strength-based intervention on organisation-based self-esteem and work engagement. A three-wave intervention study.**

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Manuscript ID	JWL-07-2018-0091.R2
Manuscript Type:	Research Paper
Keywords:	Positive Psychology, Work engagement, Organization-Based Self-Esteem, Strengths use, Strengths intervention

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**TITLE**

The role of a new strength-based intervention on organisation-based self-esteem and work engagement. A three-wave intervention study.

Journal of Workplace Learning

## ABSTRACT

The present study investigates the relationship between organisation-based self-esteem (OBSE) and work engagement during a new strength-based intervention over nine months.

A sample of 82 workers composed of 70 sales consultants and 12 area-managers working in an Italian pharmaceutical company received a 1-day training based on the FAMILY approach, three times for nine months, with a three-month lag between each workshop.

Self-reported measures of OBSE and work engagement were collected before and after each workshop.

Results showed that final levels of both OBSE and work engagement were significantly higher compared to baseline. Moreover, results from a multiple mediation analysis showed that the direct and indirect relationships between OBSE and work engagement changed at different time points, which may have been related to the different contents of the workshops.

This study provides initial evidence suggesting that organisations could leverage on medium-term interventions to provide employees active guidance on how to use their strengths at work, likely to boost higher employees' positive perceptions of themselves as organisational members and work engagement.

**Keywords:** *Positive Psychology, Strength-Based Interventions, Work Engagement, Organization-Based Self-Esteem.*

## INTRODUCTION

Organisations are increasingly promoting employee health and wellbeing (Tonkin, Malinen, Näswall, & Kuntz, 2018). This trend is due to evidence showing that happy workers are more productive and cope better with the high demands of the work environment than their dissatisfied counterparts (Zelenski et al., 2008; Lyubomirsky et al., 2005; Pfeffer, 2018). A promising approach to promote wellbeing is the focus on individual strengths at work (Bakker & van Woerkom, 2018; Quinlan et al., 2012; Peterson et al., 2010). However, research on strengths use in organisational contexts is still in its early stages (Bakker & van Woerkom, 2018; Buckingham, 2007), and enabling strengths use might represent an overlooked strategy to boost employee wellbeing. Indeed, organisations may implement strengths interventions, i.e. training processes aiming at the identification, development, and use of the participants' strengths (Quinlan et al., 2012) to boost the benefits of employees' strengths use. Importantly, such an approach to employees' empowerment has been found to consistently enhance general wellbeing while being relatively easy to implement and moderately costly (Quinlan et al., 2012).

While strengths interventions may represent a valuable resource to sustain employees' engagement and wellbeing, there are still considerable gaps in the empirical research on strengths interventions (Bakker & van Woerkom, 2018). First, most of the existing studies on strengths interventions involved samples of children, adolescents, or students rather than adults (Quinlan et al., 2012). Second, most of the studies focus on the use of strengths in daily life, while little research has been conducted in work contexts (Meyers et al., 2013). Third, existing studies have mainly focused on general instead of work-related wellbeing and have not explored the mechanisms through which strengths interventions influence wellbeing (Quinlan et al., 2012).

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In this contribution, we aim at addressing these gaps by presenting results from a field, quasi-experimental study that involved 82 employees who took part in a strengths intervention initiative lasting over nine months. In doing so, we contribute to the literature on strengths interventions and employees' resources and wellbeing in several ways. First, by investigating the effects of a strengths intervention on employees' organisation-based self-esteem (OBSE), we aimed at further deepening the knowledge on how workplace interventions supporting employees' effective use of their strengths build their personal resources. Second, by investigating the relationship between OBSE and employees' engagement during the intervention period, we shed light on the role of strengths interventions to support wellbeing in working contexts. In doing so, we contribute to disentangling the psychological mechanisms through which strengths interventions exert their effects on employees' wellbeing. Third, by addressing the relationship between employees' OBSE and work engagement at three time points over nine months, we provide evidence on the role of such a personal resource originating in the working context to sustain work engagement over time.

### 35 **Sustaining employees' strengths use to unleash personal resources in the workplace**

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Individual strengths have been defined as "*ways of behaving, thinking or feeling that an individual has a natural capacity for, enjoys doing, and which allow the individual to achieve optimal functioning while they pursue valued outcomes*" (Quinlan et al., 2012, p. 3). By using individual strengths, employees feel energised and inspired, able to cope with stressful situations and less prone to experience strain and exhaustion (Bakker & van Woerkom, 2018; Bakker & Demerouti, 2007). That is, individual strengths use is not only beneficial in that it drives high performance, but also because it is intrinsically motivating, enjoyable, engaging, satisfying, and energising (Peterson & Park, 2006; Linley & Harrington, 2006; Peterson & Seligman, 2004). However,

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3 despite such positive outcomes, today's organisations often overlook the potential of organising  
4 work around employee strengths (Peterson & Park, 2006), or of channelling strengths use in an  
5 efficient way (Biswas-Diener et al., 2011). Also, most employees and leaders cannot readily  
6 identify their own strong points (Kaplan & Kaiser, 2010; Buckingham & Clifton, 2001), and report  
7 to not use their strengths very often when at work (Buckingham, 2007).  
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11 To raise awareness for the value of individual strengths and to stimulate an efficient  
12 strengths use, organisations can make use of strengths interventions, which have been defined as:  
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14 *“a process designed to identify and develop strengths in an individual or group. Interventions*  
15 *encourage the individual to develop and use their strengths, whatever they may be. Their goal is*  
16 *to promote wellbeing or other desirable outcomes through this process”* (Quinlan et al. 2012, p.  
17 4). By using their strengths, employees feel true to themselves and their values (Ghielen et al.,  
18 2018), which conveys a sense of leading a meaningful and significant life, eventually fostering  
19 engagement in activities (Schaufeli & Salanova, 2010). Moreover, when employees apply their  
20 strengths, they get the chance to work on or with their strong points (Peterson & Seligman 2004).  
21 By doing so, they are likely to develop positive self-evaluations regarding their adequacy as  
22 organisational members, because they feel they can successfully master work tasks by employing  
23 their assets, which may reflect in high OBSE.  
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27 Organisation-based self-esteem is defined as the degree to which an individual believes  
28 him/herself to be capable, significant, and worthy as an organisational member (Pierce, Gardner,  
29 Cummings, & Dunham, 1989). Elaboration of the construct casts OBSE as a self-evaluation of  
30 one's personal adequacy (competency) as an organisational member. It reflects the self-perceived  
31 value that individuals have of themselves as valuable, competent, and capable within their  
32 employing organisations (Pierce & Gardner, 2004). Employees with high OBSE have the belief  
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3 that “*I count around here*” and have a sense of having satisfied their needs through their  
4 organisational roles (Korman, 1970). Previous studies showed the role of OBSE to buffer the  
5 negative effect of job insecurity on work engagement (De Paola & Charkhabi, 2016). Moreover,  
6 evidence shows that, among different personal resources considered such as optimism and self-  
7 efficacy, OBSE is the best predictor of work engagement (Bakker & Demerouti, 2008). However,  
8 while such findings are key to understand the role of OBSE to enhance wellbeing and reduce stress,  
9 less is known on the role of strengths interventions to sustain OBSE.  
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19 Building on the definition of OBSE reported above, we argue that interventions supporting  
20 employees’ strengths use nurture employees’ OBSE in that employees who get the chance and  
21 learn to work by applying their strong points will feel more competent and valuable to their  
22 organisations.  
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28 *Hypothesis 1:* Participants’ level of OBSE after the intervention will be higher compared  
29 to their level of OBSE before the intervention.  
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### 33 **Employees’ strengths and work-related wellbeing**

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35 Employing strengths is an energising process that renews vigour and counteracts exhaustion  
36 (Ghielen, van Woerkom, & Meyers, 2018; Peterson & Seligman, 2004; Schaufeli et al., 2002).  
37 Indeed, actively putting one’s strengths to work can trigger flow experiences (Csikszentmihalyi,  
38 1990) and employees who apply their strengths may feel good about themselves and invigorated  
39 (Peterson & Seligman 2004). Accordingly, strengths interventions have been proposed as an  
40 effective means to influence and sustain employees’ engagement (Bakker, Hetland, Olsen, &  
41 Espevik, 2018; Schaufeli & Salanova, 2010).  
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51 Work engagement represents a conceptually related aspect of work-related wellbeing that  
52 can be influenced through targeted workplace interventions (van Wingerden, Bakker, & Derks,  
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2016; Schaufeli, 2014; Schaufeli & Salanova, 2010; Le Blanc & Schaufeli, 2008). Specifically, work engagement has been defined as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption (Schaufeli et al., 2002). Employees with high levels of work engagement put much effort and energy in their work, take pride and find inspiration in the work activities they pursue, and immerse themselves fully in their tasks (Schaufeli et al., 2002). However, while literature already showed that when companies give their employees the opportunity to use and develop their talents and strengths, this results in more engaged employees at work (Demerouti & Cropanzano, 2010; Schaufeli et al., 2006; Xanthopoulou et al., 2008), only limited research has been conducted to investigate the role of strengths interventions to sustain work-related wellbeing (Meyers & van Woerkom, 2016). In one of the few studies conducted on the topic, findings showed a positive association between the applicability of one's strengths at work and engagement (Harzer & Ruch, 2013). Based on these findings, we expect that participants taking part in an intervention designed to empower employees' strengths at work will result in an improvement of their work engagement:

*Hypothesis 2:* Participants' level of work engagement after the intervention will be higher compared to their level of work engagement before the intervention.

As previously argued, it is likely that employees participating in a tailored intervention aiming at supporting strengths' use in the workplace may experience a high sense of control and perceptions of mastery (Bakker & van Woerkom, 2018), which will reflect in high OBSE. In turn, such perceptions are likely to help them dealing with the demands of the work environment, resulting in more frequent experiences of work engagement. Previous findings already showed the positive effects of OBSE on work engagement (e.g. Bakker & Demerouti, 2008; Xanthopoulou et al., 2008), but less is known about whether nurturing employees' OBSE through strengths

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3 interventions results in stable, significant relationships between OBSE and work engagement that  
4 replicate over a medium time frame. Such a gap deserves closer attention in that understanding  
5 whether and how the pattern of the mechanism linking OBSE and work engagement remains stable  
6 or changes over time is key to provide evidence-based guidelines to scholars and practitioners  
7 interested in the design of interventions to improve employees' personal resources and wellbeing.  
8 Overall, based on previous literature attesting a positive association between OBSE and work  
9 engagement, we expect that:

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19 *Hypothesis 3:* OBSE and work engagement will be positively related at every time point.

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21 Moreover, consistent with Hypothesis 2, participants involved in a strengths intervention  
22 will feel more engaged and energised, i.e. will report higher work engagement compared to  
23 baseline. In turn, we argue, such a positive state will be linked to higher OBSE because it will  
24 provide employees with the energy to master work tasks by making use of their strengths, a process  
25 that will be supported by means of the strengths intervention.

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33 *Hypothesis 4:* Participants' OBSE will be positively related to participants' work  
34 engagement, which in turn will be positively related to participants' OBSE. Such a  
35 relationship will be recursive throughout the intervention.

## 36 37 38 39 40 **METHOD**

### 41 42 **Participants and procedure**

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44 Participants were 82 employees working in an Italian pharmaceutical company in North Italy.  
45 Among these, 70 were sales consultants and 12 were area-managers. Eighty per cent of participants  
46 were women and ages ranged from 24 to 57 years ( $M = 32.38$ ;  $SD = 7.70$ ). Most of the participants  
47 had a master's (37%) or a bachelor's degree (32%).  
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3 In this study, the intervention was designed for a duration of about nine months and  
4 consisted in a one-day, eight-hour workshop delivered to participants every three months, in  
5 groups of up to twenty participants led by trained research assistants and a facilitator. The first  
6 questionnaire, which included a scale to measure OBSE and socio-demographic information, was  
7 filled in one and a half month before the first workshop. Participants were again asked to fill in the  
8 same questionnaire before the second and the third workshops. At the end of each workshop  
9 participants reported data referred to their work engagement, exception made for the last  
10 questionnaire, which was filled in one and a half month after the last workshop. Figure 1 provides  
11 a graphical representation of the time points of data collection, the contents of the workshops and  
12 participants' assignments between one workshop and the following.  
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INSERT FIGURE 1 ABOUT HERE

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33 The research staff provided participants with the questionnaires and explained the  
34 anonymous nature of data collection. Anonymity was guaranteed through an identification code  
35 formed by the initial three letters of a significant person and objects of the respondent's life, which  
36 together constituted a nine-letter code used to match the questionnaires.  
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42 Our intervention aimed to develop and channel employees' strengths by inspiring  
43 participants on how to positively reframe emotional situations, supporting them in the  
44 identification of possible challenging work situations, and structuring reflection and meaning-  
45 making process to support their awareness of work identity beliefs. Specifically, the structure of  
46 the strengths intervention was based on the six stages of the FAMILY approach (i.e. framing,  
47 attitudes, meaningfulness, identity, leading-self, and yoked together; Costantini et al., 2017;  
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3 Costantini & Sartori, 2018), which integrates the VIA (Values in Action: Peterson & Seligman,  
4 2004) and the PERMA model (Seligman, 2010).  
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8 In the first workshop, participants were introduced to the overall structure of the  
9 intervention and focused on the first two dimensions of the FAMILY approach, i.e. framing and  
10 attitudes. Specifically, framing (F) referred to helping participants focusing on the positive rather  
11 than on the negative aspects of work by using their strengths. This stage started with participants  
12 creating their own list of their personal strengths. Then, after reflecting over past work experiences,  
13 they were supported in reframing their work-related negative experiences by reframing the  
14 meanings attributed to them and leveraging on how their strengths could have been suitable to  
15 differently facing them. Attitudes (A) referred to the second step of the FAMILY approach and  
16 constituted the second focus of the first workshop. Participants were supported in the process of  
17 adopting a positive perspective when facing challenging work tasks and guided in doing so by  
18 leveraging on their self-identified strengths. At the end of the workshop, participants were asked  
19 to take note of their work experiences during the time-lag between the first and the second  
20 workshop, to be shared in the next session, on how applying their strengths at work resulted in a  
21 favourable situation.  
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40 In the second workshop, participants focused on the dimensions of meaningfulness (M)  
41 and identity (I). First, participants were guided to explore their perceptions referred to the meaning  
42 attributed to their work and on how such perceptions were (or not) aligned with the mission of  
43 their organisation. Second, the session focused on the dimension of identity and participants were  
44 facilitated in reflecting over their aspirations within the organisational context and on how such  
45 aspirations matched and were concretely translated in the work environment by means of every-  
46 day tasks. At the end, participants were given an assignment consisting of reflecting and listing,  
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3 during the three months before the next workshop, the working tasks that, in their opinion, allowed  
4 their optimal strengths use.  
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8 Finally, the last workshop focused on the dimensions of leading-self (L) and yoked together  
9 (Y). In the first part, participants were guided in the self-selection of behavioural goals to be carried  
10 out during their work activities in order to face stressful and negative events by making use of  
11 personal strengths. In doing so, participants confronted with their colleagues, who provided  
12 feedback and suggestion on the feasibility of the proposed goals. Each participant identified a  
13 “buddy”, who was in charge of providing social and emotional support to allow goal achievement.  
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22 A booklet was provided to each participant, which was designed to target the contents of  
23 the workshops, including (a) an outline of the overall intervention; (b) a section providing the  
24 definition of all of the FAMILY dimensions and key-points of each workshop; (c) an assignment  
25 and planning sheet, designed to provide tangible space where to list strengths and set goals referred  
26 to the assignments between each workshop, and (d) blank pages for personal/reflection notes, to  
27 be used during the months between one workshop and the following.  
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### 35 **Measures**

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37 All measures were administered in Italian. Scales that were not available in Italian were translated,  
38 using the back-translation method (Behling & Law, 2000).  
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42 *Organisation-based self-esteem.* Ten items from the organisation-based self-esteem scale  
43 (Pierce et al., 1989) measured OBSE. Sample items are “*I am important around here*” and “*I make*  
44 *a difference around here*”. The scoring was performed using a seven-point rating scale ranged  
45 from 1 (strongly disagree) to 7 (strongly agree).  
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51 *Work Engagement.* Work engagement was measured with five items of the Utrecht Work  
52 Engagement Scale (UWES-9; Schaufeli et al. 2006). A sample item is “*At work, I feel bursting*  
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3 *with energy*". Answers were given on a seven-point rating scale from 1 (never) to 7 (always/every  
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5 day).

### 8 **Data analyses**

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10 Repeated measures ANOVAs were conducted to test Hypotheses 1 and 2. Hypothesis 3 was tested  
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12 by inspecting correlations among the study variables at different time points. Finally, to test  
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14 Hypothesis 4, we used the PROCESS macro (Hayes, 2013) and conducted a bootstrapping-based  
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16 analysis.  
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## 19 **RESULTS**

### 21 **Measurement model and descriptive statistics**

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23 To test the factorial validity of our measures, we conducted confirmatory factor analysis using  
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25 Amos 23.0. To report our findings, we followed established recommendations (Hu & Bentler,  
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27 1999; Schumacker & Lomax, 2004). The hypothesised two-factor model supported the  
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29 discriminant validity of our measures at every time point (i.e. at Time 1,  $\chi^2_{(86)} = 145.18, p < .01,$   
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31 CFI = .94, TLI = .92, RMSEA = .08; at Time 2,  $\chi^2_{(86)} = 142.16, p < .01,$  CFI = .93, TLI = .90,  
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33 RMSEA = .08; at Time 3,  $\chi^2_{(83)} = 104.15, p < .01,$  CFI = .98, TLI = .97, RMSEA = .05). Descriptive  
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35 statistics of the research variables including mean, standard deviations, correlations among the  
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37 variables and reliability coefficients (Cronbach's  $\alpha$ ) are reported in Table 1. As can be seen, the  
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39 correlations were all in the expected direction and provided support for Hypothesis 3.  
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### 51 **Hypotheses testing**

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53 Repeated measures ANOVAs were conducted to determine whether the levels of work  
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3 engagement and OBSE significantly differ between time points. For what concerns work  
4 engagement, Mauchly's Test of sphericity indicated that the assumption of sphericity was violated,  
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6  $\chi^2(2) = 9.161, p = .01$ . Repeated measures ANOVA with a Huynh-Feldt correction determined that  
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8 the mean of work engagement significantly differed between time points ( $F(1.794, 105.833) =$   
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10  $4.502, p = .02$ ). Post hoc tests using the Bonferroni correction revealed that the intervention elicited  
11  
12 a slight increment in work engagement from Time 1 to Time 2, which was not statistically  
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14 significant ( $p = .12$ ). However, work engagement at Time 3 increased and was significantly  
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16 different to Time 1 ( $p = .036$ ). Regarding OBSE, Mauchly's Test of sphericity indicated that the  
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18 assumption of sphericity was not violated,  $\chi^2(2) = .08, p = .96$ . Repeated measures ANOVA  
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20 assuming sphericity determined that the mean of OBSE significantly differed between time points  
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22 ( $F(2, 108) = 7.514, p = .001$ ). Post hoc tests using the Bonferroni correction revealed that the  
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24 intervention elicited a slight increment in OBSE from Time 1 to Time 2, which was not statistically  
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26 significant ( $p = .07$ ). However, OBSE at Time 3 significantly increased compared to Time 1 ( $p$   
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28  $= .001$ ). Based on these findings, Hypotheses 1 and 2 are confirmed. That is, the levels of OBSE  
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30 and of work engagement after the intervention were significantly higher compared to participants'  
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32 level of the same constructs before the intervention.

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35 Hypothesis 4 stated that participants' OBSE would have been positively related to  
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37 participants' work engagement, which in turn would have been positively related to participants'  
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39 OBSE. Moreover, it assumed that such a relationship would have been recursive throughout the  
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41 duration of the intervention. To test this Hypothesis, we used bootstrapping following the  
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43 PROCESS procedure recommended by Hayes (2013). Specifically, we run a mediation analysis  
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45 with four mediators. Results are reported in Table 2 and displayed in Figure 1 and 2. As can be  
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47 seen in Figure 2, Hypothesis 4 was not confirmed since the indirect effect of OBSE at Time 1 on  
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3 work engagement at Time 3 was not significant. However, results showed that OBSE at Time 1  
4 was significantly related to OBSE and work engagement at Time 2, which in turn were  
5 significantly related to work engagement at Time 3. Moreover, OBSE at Times 1 was significantly  
6 related to OBSE at Time 2, which in turn was positively related to work engagement at both Time  
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## 35 DISCUSSION

36  
37 This contribution presented a quasi-experimental field study on the role of a strengths intervention  
38 to support employees effective use of their strengths at work and wellbeing. Moreover, by  
39 collecting data before and after three workshops over nine months, we were able to examine the  
40 relationships between OBSE and work engagement across multiple time points, over a medium  
41 time-frame. Findings showed that participants' level of both OBSE and work engagement were  
42 higher at the end of the intervention period, i.e. after nine months from the first time point,  
43 compared to baseline. These results suggest that interventions designed to improve employees'  
44 effective use and awareness of their strengths can be effective to sustain work engagement in the  
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3 medium term when multiple workshops and assignments are provided between one workshop and  
4  
5 the other.  
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8 Results also showed that the pattern of relationships between OBSE and work engagement  
9  
10 changed across time. Such changes may be linked to the different contents of the workshops and  
11  
12 the different assignments during the intervention period (see Figure 1). The first workshop focused  
13  
14 on cognitive (re)framing and attitudes. OBSE measured before such a workshop was not  
15  
16 significantly related to work engagement measured after it, while it was significantly linked to  
17  
18 OBSE measured before the second workshop. This may suggest that the contents of the first  
19  
20 workshop (i.e. reflecting over past work experiences and reframing work-related negative  
21  
22 experiences leveraging on personal strengths) and assignments (i.e. how applying strengths at  
23  
24 work resulted in favourable situations) may have contributed to fuel OBSE after three months  
25  
26 rather than boost work engagement immediately at the end of the workshop. Differently, after the  
27  
28 second workshop, focused on meaningfulness and identity, (i.e. on exploring the links between  
29  
30 personal and organisational meanings related to work and on how personal aspirations were  
31  
32 translated to the work environment), work engagement resulted to be significantly related to OBSE  
33  
34 measured before the third workshop. That is, the second workshop may have helped participants  
35  
36 linking the value of their organisational affiliation to express their aspirations, leading to work  
37  
38 engagement. Finally, in the last workshop, participants were guided in the self-selection of  
39  
40 behavioural goals to be carried out during work to face stressful and adverse events by making use  
41  
42 of their strengths. Also, they identified a co-worker in charge of providing support for the  
43  
44 achievement of their goals. While results showed that OBSE measured before the third workshop  
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46 was unrelated to work engagement one and a half month after it, this session could have  
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3 contributed to building the link between work engagement measured after the second workshop  
4 and the third one (see Figure 2 on the indirect relationships found).  
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8 Overall, in line with previous literature (e.g. Xanthopoulou et al., 2008), results showed  
9 that, at the end of the intervention period, participants' initial levels of OBSE was a significant  
10 predictor of work engagement. This confirms that employees who feel valued and appreciated in  
11 their working contexts feel energetic, dedicated and inspired in their work. Against this  
12 background, this study additionally contributes to previous knowledge by showing how the  
13 mechanisms underlying the link between a personal resource, i.e. OBSE, and work engagement  
14 change over several months and during positive organisational initiative. In doing so, our findings  
15 enrich the literature on the role of positive interventions to reinforce individual strengths and boost  
16 work engagement, contributing to filling an important research gap in strengths literature (Bakker  
17 & van Woerkom, 2018). Indeed, to the best of our knowledge, this is one of the few intervention  
18 studies adopting a 9-month time-lag between the first and the last time point. Organisational  
19 practitioners may rely on these findings to design interventions for improving effective strengths  
20 use and wellbeing at work focusing on different aspects of employees' development and  
21 empowerment. Indeed, in our study OBSE seemed related to work engagement based on the  
22 different contents of the workshops, suggesting that they may have conveyed different value  
23 messages transmitted from the organisation to the employees.  
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#### 44 **Study limitations and future research**

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46 Our study has several limitations that deserve attention for future research. First, in the current  
47 study we could not involve employees in a control group and we were not able to assess the effects  
48 of the intervention in the long run. Thus, it is unclear whether the changes in our variables were  
49 caused by the intervention program or were due to other reasons, such as a natural course. Future  
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3 research could try to replicate our findings using a controlled study design, i.e. comprehending a  
4 control group, and assessing the effects of the intervention in the long term. A second limitation is  
5 that all participants worked for the same pharmaceutical organisation. Socially desirable behaviour  
6 and group pressure are possible risks when participants work in the same team. Participants from  
7 different organisations may be less influenced by other participants and may feel more comfortable  
8 showing their vulnerability because of the anonymity (van Wingerden, Bakker, & Derks, 2017a).  
9  
10 Future research could try to replicate this intervention study involving participants from different  
11 working contexts. Third, all the scales we used were self-reports. Future studies could combine  
12 objective assessments and self-report scales to better understand the effects of our intervention on  
13 employees and organisational outcomes. Lastly, we only used quantitative research methods.  
14  
15 Future research may also use qualitative approaches to shed light on participants' experiences and  
16 reveal how the intervention is useful to them (van Wingerden, Bakker, & Derks, 2017b).  
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### 30 **CONCLUSION**

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33 This study provides initial evidence-based support for scholars and practitioners interested in  
34 promoting employees' wellbeing by empowering their effective strengths use. Our results suggest  
35 that empowering and supporting employees' strengths use may foster work engagement, which is  
36 critical to sustain job performance and creativity (Christian et al., 2011; Kim et al., 2013).  
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42 Organisations could leverage on medium-term interventions to provide employees with active  
43 guidance on how to use their strengths at work, likely to boost higher employees' positive  
44 perceptions of themselves as organisational members and work engagement.  
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### Figure captions

Figure 1. Graphical representation of the study design.

Figure 2. Graphical representation of the significant relationships found.

Note. N = 54. Unstandardized regression coefficients are reported. Only significant direct relationships are reported.

Figure 3. Graphical representation of the significant indirect relationships.

Note. N = 54. OBSE = Organizational based self-esteem.

Indirect effect of X on Y n.1 = OBSE time 1 → Work engagement (WE) time 1 → WE time 2 → WE time 3;

Indirect effect of X on Y n.2 = OBSE time 1 → OBSE time 2 → WE time 2 → WE time 3;

Indirect effect of X on Y n.3 = OBSE time 1 → WE time 2 → WE time 3.

**Table 1: Means, Standard Deviations (SD), and Intercorrelations among the Study Variables. Cronbach's  $\alpha$  are reported in parenthesis on the diagonal.**

	M	SD	1	2	3	4	5	6
Time 1								
1. Work engagement	6.17	.60	(.85)					
2. OBSE	4.38	.48	.262*	(.89)				
Time 2								
3. Work engagement	6.24	.61	.480**	.161	(.86)			
4. OBSE	4.43	.49	.289*	.528**	.570**	(.92)		
Time 3								
5. Work engagement	6.31	.54	.473**	.339**	.653**	.502**	(.82)	
6. OBSE	4.54	.48	.400**	.587**	.335**	.622**	.457**	(.92)

Note. N = 54. \*  $p < .05$  (2-tails). \*\*  $p < .01$  (2-tails). OBSE = Organisational based self-esteem.

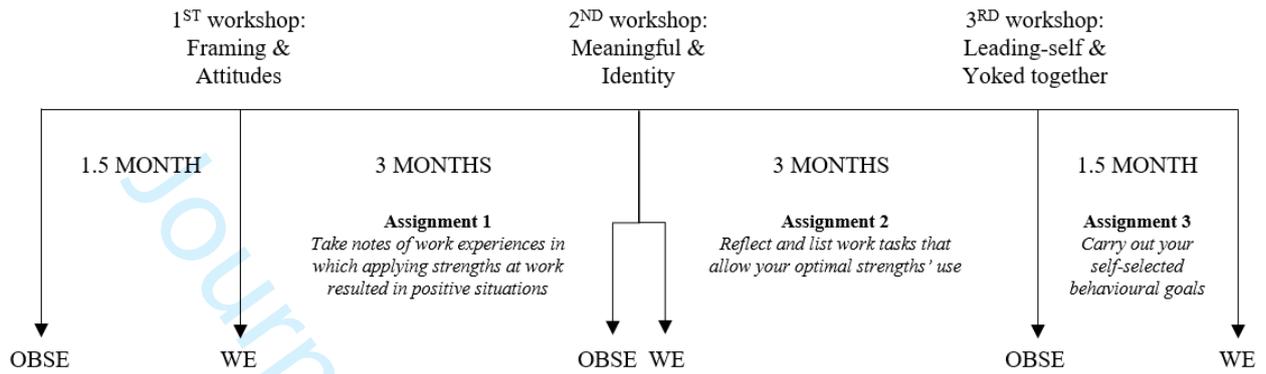
**Table 2: Bootstrapping results from PROCESS procedure, Model 6 – 4 Mediators (N = 54).**

Models	B	SE	t	p	LLCI	ULCI
<i>Outcome: WE T1</i>						
Predictor						
OBSE T1	.333	.168	1.976	.054	-.005	.670
R <sup>2</sup>	.077			.054		
<i>Outcome: OBSE T2</i>						
Predictors						
WE T1	.037	.094	.396	.694	-.151	.226
OBSE T1	.444	.108	4.124	.001	.228	.660
R <sup>2</sup>	.287			.001		
<i>Outcome: WE T2</i>						
Predictors						
WE T1	.421	.129	3.255	.002	.161	.681
OBSE T2	.623	.155	4.006	.001	.311	.935
OBSE T1	-.268	.141	-1.905	.063	-.550	.015
R <sup>2</sup>	.496			.001		
<i>Outcome: OBSE T3</i>						
Predictors						
WE T1	.201	.116	1.738	.089	-.031	.433
OBSE T2	.375	.200	1.870	.067	-.028	.777
WE T2	-.204	.180	-1.136	.261	-.565	.157
OBSE T1	.301	.140	2.158	.036	.021	.580
R <sup>2</sup>	.417			.001		
<i>Outcome: WE T3</i>						
Predictors						
WE T1	.109	.148	.740	.463	-.188	.407
OBSE T2	-.019	.194	-.099	.921	-.409	.370
WE T2	.514	.236	2.181	.034	.040	.987
OBSE T3	.084	.197	.427	.672	-.313	.481
OBSE T1	.156	.176	.892	.377	-.195	.506

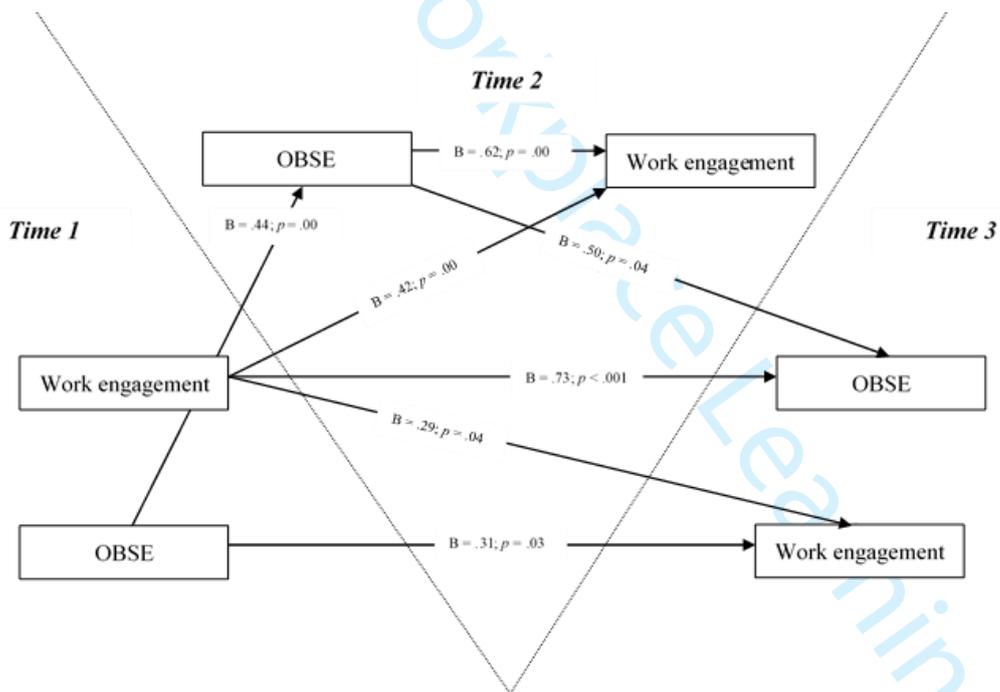
$R^2$	.454			.001		
<i>Outcome: WE T3</i>						
Predictor						
OBSE T1	.306	.140	2.184	.034	.025	.588
$R^2$	.100			.034		

*Note.* B = Unstandardized coefficients from the final step of the models;  $R^2$  = Explanation rate; OBSE = Organizational based self-esteem; WE = Work engagement; T1 = Time 1; T2 = Time 2; T3 = Time 3. Prior to run the matrix procedure, all variables have been mean centered.

**Figure 1.**  
Graphical representation of the study design.

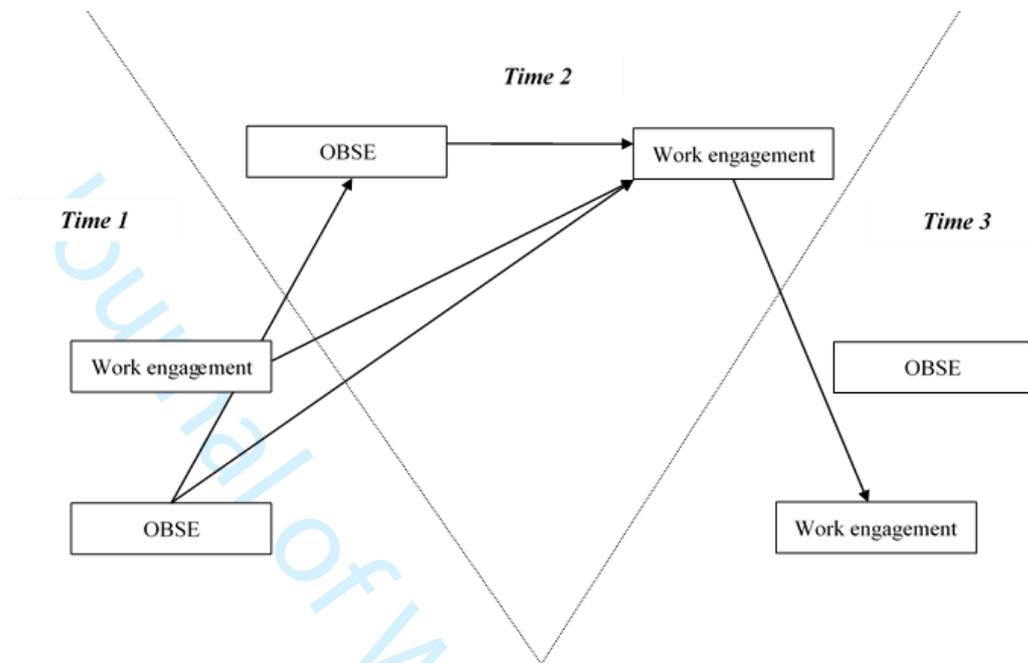


**Figure 2.**  
Graphical representation of the significant relationships found.



Note. N = 54. Unstandardized regression coefficients are reported. Only significant direct relationships are reported.

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Graphical representation of the significant indirect relationships.



Note. N = 54. OBSE = Organisational based self-esteem.

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Indirect effect of X on Y n.2 = OBSE time 1 → OBSE time 2 → WE time 2 → WE time 3;

Indirect effect of X on Y n.3 = OBSE time 1 → WE time 2 → WE time 3.