The added value of the positive: A literature review of positive psychology interventions in organizations

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The added value of the positive: A literature review of positive psychology interventions in organizations

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This paper systematically reviews research investigating the effects of positive psychology interventions applied in the organizational context. We characterize a positive psychology intervention as any intentional activity or method that is based on (a) the cultivation of positive subjective experiences, (b) the building of positive individual traits, or (c) the building of civic virtue and positive institutions. A systematic literature search identified 15 studies that examined the effects of such an intervention in organizational contexts. Subsequent analyses of those studies revealed that positive psychology interventions seem to be a promising tool for enhancing employee well-being and performance. As a side-effect, positive psychology interventions also tend to diminish stress and burnout and to a lesser extent depression and anxiety. Implications of those findings for theory and praxis and recommendations for future research on positive psychology interventions in organizations are discussed.

Keywords: Performance; Positive psychology; Positive psychology intervention; Review; Well-being.

Whereas psychology in the second half of the 20th century was mainly about repairing damage and curing diseases, we nowadays find a considerable number of studies on human flourishing and developing positive qualities. This shift in psychologists' interest from repairing what is broken to nurturing what is best appeared around the turn of the century after the inaugural speech of Martin Seligman as president of the American Psychologist Association in 1998 and the publication of a highly cited article by Seligman and Csikszentmihalyi (2000). In this article, the authors characterized positive psychology as a "science of positive subjective experience, positive individual traits, and positive institutions" (Seligman & Csikszentmihalyi, 2000, p. 5). Since then the positive psychology movement has gained momentum and has also influenced the work of organizational and occupational psychologists. Most notably, two broader empirical research streams emerged parallel to positive psychology that both aim at producing positive individual and organizational outcomes: positive organizational behavior (Luthans, 2002) and positive organizational scholarship (Cameron, Dutton, & Quinn, 2003).

Positive organizational behavior has been defined as "the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace" (Luthans, 2002, p. 698). It has a strong focus on individual factors such as hope, optimism, resilience, and self-efficacy (psychological capital; Luthans, Youssef, & Avolio, 2007b) and their contribution to individual flourishing. Positive organizational scholarship "is the study of that which is positive, flourishing, and life-giving in organizations" (Cameron & Caza, 2004, p. 731). It puts emphasis on generative dynamics that make organizations, organizational units, and organizational members flourish and thrive.

A construct that shares its core ideas with positive psychology and especially positive organizational scholarship is appreciative inquiry (Cooperrider & Srivastva, 1987), which has originally been developed

as an organizational change instrument. "Appreciative inquiry is a constructive inquiry process that searches for everything that 'gives life' to organizations, communities, and larger human systems when they are most alive, effective, creative and healthy in their interconnected ecology of relationships" (Cooperrider & Avital, 2004, p. xii). Even though appreciative inquiry was introduced about a decade earlier, it experienced an extensive boost parallel to the growing interest in positive psychology starting from the year 2000 onwards (Cooperrider & Whitney, 2005).

About a decade after the emergence of positive psychology, this paper aims at providing a first review of intervention studies in the field of positive organizational scholarship, positive organizational behavior, and appreciative inquiry, thereby offering important contributions to theory and praxis. It seeks to shed light on the theoretical links between positive psychology at the workplace and individual and organizational outcomes proposed by positive organizational scholarship, positive organizational behavior, and appreciative inquiry scholars. In other words, we strive to find out whether positive psychology adds value to organizations and businesses. Furthermore, this paper indicates avenues for future research and offers insights for practitioners by outlining the effects of positive psychology interventions in today's working environment. In the following section we will further illustrate the research question of this article.

SCOPE OF THE REVIEW

A common characteristic of appreciative inquiry, positive organizational scholarship, and positive organizational behavior is the assumption that positive psychology applied to the workplace leads to highly valued outcomes for both the individual and the organization: The overall aim is individual and organizational flourishing (Cameron & Caza, 2004). According to this belief, organizations might gain a lot from acting on positive psychology principles in the management of their personnel. Unfortunately, empirical evidence supporting the supposed beneficial effects for employees and organizations is still sparse, which inhibits practitioners from implementing positive psychology practices (Cameron, Mora, Leutscher, & Calarco, 2011).

Support for the proposition of individual flourishing due to positive psychology interventions can be derived from a range of studies carried out with student and clinical samples. In the most extensive review to date, Sin and Lyubomirsky (2009) summarized results from 51 studies that investigated the effects of positive psychology interventions on well-being and depression of diverse samples (depressed

and/or non-depressed individuals, students, adults, elderly, etc.). Results of their meta-analysis revealed that positive psychology interventions have a favourable effect on well-being and a mitigating effect on depression. The favourable effect of positive psychology interventions on well-being was also supported by three reviews that focused exclusively on very specific interventions: Wood, Froh, and Geraghty (2010) reviewed 12 studies investigating the effects of gratitude interventions on well-being; Mitchell, Vella-Brodrick, and Klein (2010) summarized five studies on the effects of positive psychology interventions, which were administered online, on well-being and illness; and Mazzucchelli, Kane, and Rees (2010) conducted a meta-analysis on 20 studies that investigated the effects of behavioral activation interventions on well-being. None of those reviews made specific demands regarding the study samples leading to the inclusion of studies with depressed or non-depressed children, adolescents, adults, and elderly people.

To the best of our knowledge, there is, however, no existent literature review that focuses on positive psychology interventions in organizational settings only and analyses outcomes other than well-being or mental illness (depression, anxiety, stress, etc.). Therefore, we present a systematic literature review that summarizes the findings of empirical studies examining the effects of positive psychology interventions in organizations. We considered it useful to review studies that are carried out with organizational samples only because we expect them to differ from clinical as well as from student samples for the following reasons.

On the one hand, organizational samples are expected to score significantly lower on measures of psychopathology and mental illness than clinical samples. Because it has been found that depressed people seem to benefit more from positive psychology interventions (Sin & Lyubomirsky, 2009), it might be that positive psychology interventions achieve weaker or even no effects in organizational settings. On the other hand, a second order meta-analysis comparing social science research data for college students and nonstudents (adults) has shown that responses of students differ from those of non-students, yet not in a systematic way (Peterson, 2001). In addition, another meta-analysis has shown that there are significant age differences regarding the effectiveness of several psychotherapeutic interventions (Barak, Hen, Boniel-Nissim, & Shapira, 2008).

For these reasons, we felt the need to provide a clear overview of what positive psychology has to offer for organizations and working adults, so that practitioners and organizational researchers who deal with questions concerning employees do not draw wrong conclusions out of research that is directed at

different populations. Furthermore, we expand the work of Sin and Lyubomirsky (2009), Wood et al. (2010), Mitchell et al. (2010), and Mazzucchelli et al. (2010), who focused on well-being only (Mazzucchelli et al., 2010; Wood et al., 2010), on well-being and depression (Sin & Lyubomirsky, 2009), or on well-being and illness (Mitchell et al., 2010) as the only outcome measures, by taking account of every possible outcome that has been measured in positive psychology intervention studies. This is important because outcomes such as performance, work/job satisfaction, leadership skills, and work–life balance might be of particular interest to organizations. We also expanded the work of Wood et al. (2010), Mitchell et al. (2010), and Mazzucchelli et al. (2010) in that we did not limit the review to one distinct form of intervention, but included all forms of positive psychology interventions that have been applied to the organizational context.

In summary, we aimed at creating a general overview of interventions that are applicable in organizations and the diverse outcomes they produce. In other words, the overall aim of this study was to find out whether there is such a thing as the added value of the positive in its widest sense in organizational contexts. Hence, the following research question emerged: *What are the benefits of positive psychology interventions when applied to organizations and through what mechanisms do those interventions operate?*

POSITIVE PSYCHOLOGY AND INTERVENTIONS

Seligman and Csikszentmihalyi (2000, p. 5) described positive psychology as follows:

The field of positive psychology at the subjective level is about valued subjective experiences: well-being, contentment, and satisfaction (in the past); hope and optimism (for the future); and flow and happiness (in the present). At the individual level, it is about positive individual traits: the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, spirituality, high talent, and wisdom. At the group level, it is about the civic virtues and the institutions that move individuals toward better citizenship: responsibility, nurturance, altruism, civility, moderation, tolerance, and work ethic.

In line with this definition, a positive psychology intervention may be understood as any intentional activity or method (training, coaching, etc.) based on (a) the cultivation of valued subjective experiences, (b) the building of positive individual traits, or (c) the building of civic virtue and positive institutions.

Under part (a) of the definition falls any intervention that understands positive subjective experiences as part of the intervention method (e.g., remembering sacred moments) and not just as a by-product that happens to appear in consequence of the intervention. Part (b) of the definition encompasses interventions that aim at identifying, developing, broadening, and/or using valued individual traits or trait-like constructs (e.g. character strengths) and, finally, part (c) encompasses any intervention that aims at identifying, developing, broadening, and/or putting to practice valued characteristics of organizations or organizational subgroups.

Specific positive psychology interventions

In the recent literature, researchers report on a wide range of positive psychology interventions that have mainly been tested in clinical or in student samples. In a meta-analysis of 51 positive psychology interventions, meant to enhance well-being and mitigate depression, one can find gratitude interventions, positive writing, and mindfulness interventions among the most occurring (Sin & Lyubomirsky, 2009). All three types can be seen as interventions aiming at the amplification of positive emotions and would therefore belong to part (a) of our definition.

Participants in gratitude interventions, for example, are asked to write down things they feel grateful for on a daily or weekly basis in order to increase experiences of state gratitude directly (Emmons & McCullough, 2003). Gratitude, in turn, has been assumed to counteract the hedonic adaptation to positive events and hence to prolong the positive feelings associated with them (Lyubomirsky, Sheldon, & Schkade, 2005; Watkins, 2004). The broaden-and-build theory (Fredrickson, 1998, 2001) explains why those feelings are worth multiplying by suggesting that positive emotions lead to broadened arrows of thoughts and actions that facilitate the building of important personal resources (social, physiological, and cognitive resources). It has furthermore been proposed that facilitating positive emotions can trigger positive upward spirals, in which the created personal resources lead to the experience of positive emotions, which, in turn, will produce even more personal resources, and so on (Fredrickson, 2003).

Interventions to increase positive psychological capital (Luthans & Youssef, 2004), which is state-like per definition, but more stable than fluctuating affective states, also fall under the first point of the abovementioned definition of positive psychology interventions. Psychological capital consists of the four constructs of self-efficacy, optimism, hope, and resilience (Luthans et al., 2007b), which taken together are assumed to produce synergy effects leading to highest efficiency. Psychological capital makes

individuals put extra effort in the task they have to accomplish, motivates them to do so by letting them expect positive results, enables them to generate various solutions if problems occur, and makes individuals cope well in case of eventual setbacks (Luthans, Avey, Avolio, & Peterson, 2010).

Part (b) of the positive psychology intervention definition comprises interventions that identify, develop, broaden, or use positive individual traits or trait-like characteristics. Interventions that focus on individual strengths fall under this part of the definition; e.g., reflecting on times when a person was at his/her best and the strengths he/she used then, identifying signature strengths, or a combination of identifying and using strengths in a new way (Seligman, Steen, Park, & Peterson, 2005). Another example is the reflected best self exercise that helps people learn more about their unique strengths and talents by asking people in their surroundings to provide examples of moments when they were at their best (Roberts, Dutton, Spreitzer, Heaphy, & Quinn, 2005). It has been argued that working with one's strengths is fulfilling and engaging, and induces a feeling of acting in an authentic manner and being true to oneself (Peterson & Seligman, 2004). For those reasons, using strengths should contribute to enhanced well-being. As the positive link between well-being/happiness and performance is well established (for a meta-analysis see Kaplan, Bradley, Luchman, & Haynes, 2009), one may also expect performance gains through interventions focusing on strengths.

An intervention that is not clearly classifiable as belonging to the first or the second part of the definition is solution-focused coaching (Grant, 2003). This form of coaching focuses on strengths development and solution generation instead of on problem analysis (Grant, 2003), and would therefore be categorized as belonging to part (b) of the definition. At the same time, the coaching process makes use of elements that are similar to psychological capital interventions: It comprises goal setting, which is a method to develop hope (Luthans & Youssef, 2004), and motivates people through increasing self-efficacy (Grant, Curtayne, & Burton, 2009).

Interventions that capitalize on the identification, development, broadening, and use of valued organizational characteristics fall under part (c) of our definition. An example is the appreciative inquiry approach that identifies an organization's life-giving forces and core strengths and uses them in a goal-directed manner. In more detail, the appreciative inquiry approach focuses attention on the positive change core of an organization by collecting stories of organizational successes, developing ideas for a positive future, designing an organization that makes optimal use of the strengths at hand, and setting up

action plans for becoming such an organization (Cooperrider & Whitney, 2005). Thereby, it differentiates itself from more diagnostic or problem-oriented change initiatives where processes of negation, mutual criticism, and spiraling problem diagnosis are run through (Cooperrider & Whitney, 2005), and creates high motivation, high spirit, and cooperation among organizational members as well as a positive and appreciative climate (Whitney & Cooperrider, 1998).

For this literature review, we systematically searched for studies in organizational settings investigating one of the interventions mentioned within this paragraph or similar interventions fitting our definition. Moreover, we were interested in any kind of outcome variables measured in those studies. We hypothesize that positive psychology interventions lead to a variety of valued outcome variables, such as enhanced well-being at the individual level and enhanced performance at the organizational level.

METHOD

Selection criteria

As research on positive psychology interventions in organizations is still in its infancy, we did not want to focus on one specific intervention only. Rather, we want to provide an overall picture of empirical studies investigating the effectiveness of any form of organizational intervention that is based on positive psychology. Nonetheless, the abovementioned research question dictates some criteria for inclusion in our research. Studies were included if they provided (1) an experimental or quasi-experimental investigation of a positive psychology intervention tested in a working context. Furthermore, studies were included only if they reported pre- and post-intervention measures of (2a) individual, (2b) team-level, or (2c) organizational outcomes. Taken together, criteria 1 and 2 were applied to make sure that the studies can draw valid conclusions about cause and effect relationships. Third, studies to be included had to use samples that (3) either were drawn from an organizational context or used convenience samples of working adults that did not show above-average levels of clinical symptoms. This criterion is necessary for the purpose of our study, because we aim to gain insight into processes triggered by positive psychology in one particular context: the working context.

Fourth, studies to be included had to be published during the time span from 2000 until 2011, as positive psychology only gained momentum from the year 2000 onwards. We do acknowledge that there are studies falling under our definition of positive psychology interventions that have been published before this date, but since those studies cannot refer

to positive psychology or related movements in any way, a widening of the time frame would result in a diffuse and very broad search. We felt that by loosening this criterion we would run the risk of not doing justice to the requirement of providing a thorough and complete overview of literature falling under the selection criteria. Finally, we limited the search to articles written in English that appeared in peer-reviewed journals, serving as a minimum quality standard.

Search strategy

In order to select adequate search terms, we scanned our own endnote database for articles meeting our selection criteria in a first step. We then inspected the selected articles and gathered recurring key terms. Based on a list of those key terms, the final search terms were developed in a second step. Those comprised the stand-alone terms "positive organizational behavior", "positive organizational scholarship", "appreciative inquiry", "strengths coaching", "solution-focused coaching", "strengths approach", "strengths-based approach", and "strengths use". We used combinations of "positive psychology" or "strengths-based" as first search term, and "intervention", "organization", "workplace", "coaching", or "employee" as second search term.

In the next step, those search terms were entered into three electronic databases: PsycINFO, ISI Web of Science, and ABI/Inform. Search in those electronic databases was limited by application of several advanced search criteria if possible, such as limiting the time span to 2000–2011, and searching for articles containing empirical work, written in English, and published in peer-reviewed journals only. This initial search resulted in 713 hits in PsycINFO, 436 hits in Web of Science, and 290 hits in ABI/Inform (total of 1439 hits). Subsequently, the abstracts of the extracted articles were scanned by the authors. Under application of the selection criteria mentioned above, 1322 articles were excluded due to misfit. The two main reasons for exclusion were that studies did not present experimental or quasi-experimental research, or used a sample that was not adequate for the purpose of our review, with the bulk of research conducted with adolescent, student, or clinical samples. Concerning studies on appreciative inquiry it was noticeable, moreover, that the majority of published articles describe one or several case studies. This procedure led to 117 remaining articles that were examined in greater detail by reading the full-text version. Finally, a total of 13 articles remained that met all the selection criteria.

In order to make sure that no important articles on the subject were omitted, references of the final articles were checked in a last step and a call for possible important papers was placed on a well-known positive organizational scholarship website. This yielded an additional two studies that met our selection criteria and increased the total number of included studies to 15. One of these studies (Avey et al., 2011) could not be found with our search terms because it had not been published yet, and the other (Abbott, Klein, Hamilton, & Rosenthal, 2009) because it does not refer to positive psychology, positive organizational behavior, or positive organizational scholarship.

Analysis strategy

The research question of this article consists of two parts asking about (i) outcomes of positive psychology interventions and (ii) mechanisms through which they work. Therefore, we initially created a list of all outcome measures that were used in the studies and noted how many of the studies used them and how many and which studies found a significant effect of the intervention on the outcome (i). Thereafter, outcome measures were categorized into broader categories and findings were summarized across all studies. In order to answer the second part of the research questions (ii), we examined whether studies tested for mediating or moderating variables and, if so, what the findings were.

ANALYSIS AND SYNTHESIS

The search resulted in 15 articles with a total number of 1540 participants (sample sizes ranging from $N = 30$ to $N = 364$). An overview of the articles structured according to our three-part definition of positive psychology interventions can be found in Table 1.

Research has been conducted in a variety of organizations, operating in the education, healthcare, IT, resources, manufacturing, and government sectors. Two studies used convenient samples of working adults or managers from different organizations and different sectors. The included studies covered a broad range of interventions. Two successional studies examined the effects of loving-kindness meditation (Cohn & Fredrickson, 2010; Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008), three studies focused on programs to enhance resilience (Abbott et al., 2009; Liossis, Shochet, Millear, & Biggs, 2009; Millear, Liossis, Shochet, Biggs, & Donald, 2008), three studies tested interventions to enhance positive psychological capital (Demerouti, van Eeuwijk, Snelder, & Wild, 2011; Luthans, Avey, & Patera, 2008; Luthans et al., 2010), one study tested a gratitude intervention (Chan, 2010), and another two studies experimentally examined the effects of solution-focused coaching (Grant et al., 2009; Grant, Green, & Rynsaardt, 2010). Finally, three studies

TABLE 1
Relevant studies on positive psychology interventions in organizations

Study	Sample	Intervention	Control conditions	Assessment	Measures	Outcomes
(a) Fredrickson et al. (2008)	IT company	Loving-Kindness Meditation 9 weeks	Waitlist control group	Pre, post, and daily emotion measures	mDES	Positive emotions (+), negative emotions (ns)
					Cognitive, physical, psychological and social resources	9 out of 18 resources (+)
					SWLS	(+)
					Center for Epidemiological Studies—Depression Measure	(−)
					DRM	Positive emotions (+)
(a) Cohn & Fredrickson (2010)—follow-up of previous study	IT company	Loving-Kindness Meditation 9 weeks	Waitlist control group	15 month follow-up	Cognitive, physical, psychological, and social resources (nine resources)	Initial gains in resources were maintained
					mDES	Positive emotions (+), if meditation was continued
(a) Abbott et al. (2009)	Australian sales managers	Resilience Online Program (ROL)	Waitlist control group	Pre, post	AHI	(+) but no difference between ROL and control group
					WHOQOL-BREF	(ns)
					DASS-21	(ns)
					Performance	(ns)
(a) Millear et al. (2008)	Resource sector company	Promoting Adult Resilience Program 11 weeks	Non-intervention comparison group of university alumni	Pre, post, 9 months	DASS-21	Depression (−), anxiety (−), stress (−)
					SWLS	(ns)
					Ryff's Scales of PWB	(ns)
					Work–life balance	(ns)
					Work–life fit	(+)
					Job satisfaction	(ns)
					CSE	(+)
					Social Skills Scale	(ns)
(a) Liossis et al. (2009)	Government organization	Promoting Adult Resilience Program 7 weeks	Non-intervention comparison group of university alumni	Pre, post, 5 months	DASS-21	Depression (ns), anxiety (ns) stress (−)
					Emotional exhaustion (MBI-GS)	(−)
					Ryff's Scales of PWB	(as)

(continued overleaf)

TABLE 1
(*Continued*)

Study	Sample	Intervention	Control conditions	Assessment	Measures	Outcomes
					Work vigor (UWES)	(+)
					Work satisfaction	(+)
					Family satisfaction	(+)
					Work–life balance	(+)
					Work–life fit	(+)
					CSE	(+)
					LOT-R	Optimism (+)
					Work–family spillover scale	Negative spillover (−), positive spillover (ns)
(a) Luthans et al. (2008)	Working adults, diverse sectors	Web-based intervention to develop positive psychological capital 2 × 45 min	Decision-making intervention	Pre, post	PCQ	Psychological capital (+)
(a) Luthans et al. (2010)	Managers, diverse sectors	Intervention to increase positive psychological capital 2 h	None	Pre, post	PsyCap; Performance (self-rated); Performance (supervisor-rated)	(+); (+); (+)
(a) Demerouti et al. (2010)	Working adults	Personal effectiveness training	None	Pre, post	Assertiveness (self-rated); PsyCap (self-rated); Assertiveness (other-rated); PsyCap (other-rated)	(+); (+); (+); (+)
(a) Chan (2010)	Chinese teachers	Gratitude Intervention (Count your blessings) 8 weeks	No control group, intervention group split into high and low trait gratitude	Pre, post	GAC (state); SWLS; PANAS	(+) only for low gratitude group; (+) only for low gratitude group; PA (+), NA (ns)
(a) (b) Grant et al. (2009)	Executives, public health agency	Cognitive-behavioral, solution-focused coaching	Waitlist control group	Pre, post	GAS; CHS (Resilience); DASS-21; WWBI	(+); (+); Depression(−), anxiety (ns), stress(ns); (+)
(a) (b) Grant et al. (2010)	High school teachers	Cognitive-behavioral, solution-focused coaching 20 weeks	Waitlist control group	Pre, post	GAS (work); GAS (personal); CHS; WWBI; DASS-21	(+); (+); Resilience(+); (+); Depression (ns)

TABLE 1
(Continued)

Study	Sample	Intervention	Control conditions	Assessment	Measures	Outcomes
					LSI – self-rated	anxiety (ns), Stress (-) Constructive leadership (+), passive/defensive (-), aggressive/defensive (-)
(c) Avey et al. (2011)	Engineers, aerospace firm	High conveyed leader positivity concerning problem solving (hope, optimism, confidence, resilience)	Low conveyed leader positivity	Post	LSI – other-rated PCQ Performance—quantity of solutions Performance—quality of solutions	(ns) (+) (+) mediated by PCQ (+) mediated by PCQ
(c) Ruhe et al. (2011)	Primary care practices (practice level)	AI as a quality improvement tool	Waitlist control group	Baseline, 18 months (3 scores from 6 month intervals combined)	Preventive service delivery rates Screening Counselling Immunization	(ns) (ns) (ns)
(c) Peelle (2006)	6 cross-funct. teams, manufacturing organization	AI as approach to perform a team task	Creative problem solving	Pre, mid, posttest	Group potency (post) Group identification (midtest)	(+) (+)
(c) Sekerka et al. (2006)	Government-administered medical centre	Discovery phase of AI/self-focus	Discovery phase of AI/other focus;Problem identification/self focus;Problem identification/other focus	post	PANAS Self-concept Task involvement Attitude towards organization Empathy Empowerment Creativity Collaboration Long-term strategic orientation	PA (+), NA (ns) Positive self-view (+), negative self-view (-) (+) only for men (ns) (ns) (ns) (ns) (+) for men, (-) for women (ns)

(a), (b), and (c) refer to the kind of positive psychology intervention according to the definition we gave. (+) = significant increase, (-) = significant decrease, (ns) = not significant, (as) = approaches significance. AHI = Authentic Happiness Inventory; CHS = Cognitive Hardiness Scale; CSE = Coping Self-Efficacy; DASS-21 = Depression Anxiety Stress Scale; DRM = Day Reconstruction Method; GAC = Gratitude Adjectives Checklist; GAS = Goal Attainment Scaling; GQ-6 = Gratitude Questionnaire; LOT-R = Life Orientation Test – Revised; LSI = Human Synergistics Life Styles Inventory; MBI-GS = Maslach Burnout Inventory; mDES = Modified Differential Emotions Scale; OHS = Orientation to Happiness Questionnaire; PANAS = Positive Affect Negative Affect Schedule; PCQ = PsyCap Questionnaire; PsyCap = Positive Psychological Capital; PWB = Psychological Well-Being; SWLS = Satisfaction with Life Scale; UWES = Utrecht Work Engagement Scale; WHOQOL-BREF = World Health Organization Quality of Life; WWBI = Workplace Well-Being Index.

used an experimental approach to determine the impact of appreciative inquiry approaches (Peelle, 2006; Ruhe et al., 2011; Sekerka, Brumbaugh, Rosa, & Cooperrider, 2006) and one study experimentally investigated the effects of leader positive psychological capital (Avey et al., 2011).[1] Three of these 15 studies evaluated the effect of web-based interventions (Abbott et al., 2009; Chan, 2010; Luthans et al., 2008).

The added value of the positive

In order to establish whether positive psychology interventions provide added value for organizations, we focused on the outcome measures that were examined in the reviewed studies, and summarized results for categories of outcomes if possible. In a second step, we then examined operating mechanisms that were investigated by the reviewed studies.

The most consistent finding throughout the 15 studies under examination was the positive impact of a variety of interventions on well-being. It is striking that 13 out of 15 (87%) studies reported effects on at least one well-being variable. More specifically, within those 13 studies, we found 29 statistical tests to analyse the effects of the respective intervention on some measure of well-being (e.g., positive emotions, optimism, resilience, psychological capital, satisfaction). Of those 29 tests, then, 25 found a significant positive impact of the intervention on the respective well-being measure.

When taking a closer look at the different well-being measures, it appears that the interventions advance positive subjective states that are directed at the future or at the present without exception (cf. definition of positive psychology). Every study that included one of the variables happiness, positive mood, positive emotions, vigour, positive self-view (present-oriented), or hope, optimism, self-efficacy, or resilience (future-oriented), found increases due to positive psychology interventions. Hope, optimism, self-efficacy, resilience, and assertiveness were even found to be increased when rated by a second person (Demerouti et al., 2011).

Only for variables with a past orientation some non-significant results were found. Out of two studies investigating psychological well-being and work satisfaction in rather small samples (Liossis et al., 2009; Millear et al., 2008), only the former found an effect that approached significance for well-being and a significant, positive effect for work satisfaction. Similarly, of three studies measuring satisfaction with

life, two found increased levels due to the intervention (Chan, 2010; Fredrickson et al., 2008), whereas one failed to report significant results (Millear et al., 2008).

Results were more ambiguous for negative emotions and negative emotional states. All four tests that were run to examine whether positive psychology interventions decrease levels of negative emotions failed to report significant impacts (Chan, 2010; Cohn & Fredrickson, 2010; Fredrickson et al., 2008; Sekerka et al., 2006). Of five studies that included the Depression Anxiety Stress Scale (DASS-21) (Abbott et al., 2009; Grant et al., 2009, 2010; Liossis et al., 2009; Millear et al., 2008), three studies found significant decreases in stress, two found significant decreases in depression, and one study found a significant decrease in anxiety; thus, only six of 15 empirical tests were supportive of a mitigating effect. In contrast, Fredrickson and colleagues (2008) found decreases in depression measured by the Center for Epidemiological Studies – Depression Scale. Similarly, decreases in the burnout component exhaustion were confirmed in the study by Liossis et al. (2009), and decreases in a negative self-view were found by Sekerka et al. (2006).

Only four out of 15 studies investigated changes in performance levels due to participation in a positive intervention (Abbott et al., 2009; Avey et al., 2011; Luthans et al., 2010; Ruhe et al., 2011). However, no significant increases were found for the gross margin and the volume of sold products (both as percentage of targets set) of sales managers (Abbott et al., 2009) and the service delivery rate of primary care practices (Ruhe et al., 2011). In contrast, the study of Luthans et al. (2010) reported significant increases in self- and supervisor-rated performance after a psychological capital intervention. Likewise, the study of Avey et al. (2011) found that leader positivity significantly enhanced the quantity and quality of solutions to a problem that employees generated; this link was found to be mediated by increases in employee positivity (measured as psychological capital).

Other issues that were investigated concerned effects of positive interventions on work–life and work–family topics (Liossis et al., 2009; Millear et al., 2008). Both studies investigating the effects of the Promoting Adult Resilience programme found a positive influence on work–life fit, but only the more recent study (Liossis et al., 2009) could detect increases in work–life balance. It was also shown that negative work–family and family–work spillover was reduced, whereas positive spillover between the two life domains appeared to be unaffected. Another variable concerned with the social context, social skills, was also not significantly altered by the Promoting Adult Resilience programme (Millear et al., 2008). In contrast to this finding, Fredrickson

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[1]Although this study does not satisfy the criterion of using pre- and post intervention measures, it was included in the review because the specific design of the study did not allow for the measurement of the outcome variables quantity and quality of solutions prior to the intervention.

et al. (2008) and Cohn and Fredrickson (2010) found significant gains in social, cognitive, psychological, and physiological resources that were even maintained 15 months after the initial intervention.

Grant et al. (2010) were the only scholars who investigated effects on leadership skills. In their study, solution-focused coaching led to significant improvements in self-rated leadership skills of teachers, whereas other-rated leadership skills remained unaffected. Solution-focused coaching also proved to be useful to enhance goal attainment, no matter whether goals concerned personal or working life (Grant et al., 2009, 2010).

Furthermore, Sekerka et al. (2006) rated essays, which participants wrote after participating in a diagnostic or an appreciative inquiry intervention, on the dimensions attitude towards organization, empowerment, empathy, collaboration, task involvement, creativity, and long-term strategic orientation. They found out that appreciative inquiry triggered men to show greater task involvement and creativity. Women, however, were found to be less creative in the appreciative inquiry condition than in the diagnostic condition. Finally, the only study that investigated outcomes at the group level (Peelle, 2006) found increases in group identification and estimates of group potency when using an appreciative approach to perform a team-task.

Operating mechanisms

One of three studies explicitly testing operating mechanisms was the study on the effects of loving-kindness meditation conducted by Fredrickson et al. (2008) in an IT company. In this study the experimental condition (loving-kindness meditation vs. waitlist control group) and the time spent meditating predicted increases in daily positive emotions over the nine week intervention period which, in turn, significantly related to increases in nine out of 18 personal resources (cognitive, psychological, and physiological) at the post-test. Increases in resources, finally, predicted enhancements in life satisfaction also measured at the post-test. The authors interpreted these findings as support of the build hypothesis, which "holds that positive emotions set people on trajectories of growth that, over time, build consequential personal resources" (Fredrickson et al., 2008, p. 1046). The build hypothesis is one significant component of the broaden-and-build theory of positive emotions (Fredrickson, 1998, 2000).

In the second study, Avey et al. (2011) concluded that the relationship between leader positivity (leader psychological capital) and employee performance was mediated by increases in employee psychological capital. This means that positivity of a leader can rub

off on his or her employees, causing them to perform better.

The third study focused on moderating mechanisms (Sekerka et al., 2006) and made use of a 2 × 2 × 2 × 2 design in order to test the effectiveness of different change initiatives when working in pairs. The authors manipulated the orientation of the intervention (appreciative inquiry vs. diagnostic/problem-focused approach) as well as the responsible agent to enact the change (self as change agent—typical of appreciative inquiry—vs. other people as change agent). Furthermore, they assessed the gender of participants (male vs. female) and whether the participants collaborated with a person of the same or of the opposite sex (dyad: same vs. mixed) in order to test the moderating effects of gender and dyad.

Sekerka et al. (2006) revealed that applying an appreciative inquiry approach led to more positive emotions for people in mixed gender dyads. Moreover, subject gender was found to moderate the effects of appreciative inquiry on task involvement and creativity. Whereas women were eagerly involved under both the appreciative inquiry and diagnostic conditions, men were more involved when engaging in an appreciative inquiry task. In terms of creativity, men proved to be most creative in the appreciative inquiry condition, whereas women were least creative in this condition.

Although not explicitly testing for moderation, another study found hints for lack of positive disposition as a possible moderator of the relation between an intervention aimed at cultivating gratitude and outcome variables (Chan, 2010). When splitting up the sample in two parts—individuals with a high and a low disposition to experience gratitude—it appeared that positive impacts on state gratitude and life satisfaction could only be found for the group scoring low on this positive trait variable.

DISCUSSION

To our knowledge, this paper presents the first systematic review that summarizes findings of positive psychology intervention studies in organizational contexts. It aimed at drawing a clear picture of the added value of positive psychology interventions in organizations, and sought to uncover mechanisms through which those interventions might work within this context.

The main finding of the review is that positive psychology interventions in the working context consistently enhance employee well-being, which is a crucial finding for organizations by reason of the diverse favorable effects of happiness. Happy employees are, for instance, less likely to leave the organization (Griffeth, Hom, & Gaertner, 2000). Furthermore, research on the broaden-and-build

theory of positive emotions has found that happiness enhances creativity (Fredrickson, 2003) and facilitates the building of cognitive, physical, and social resources (Cohn & Fredrickson, 2010; Fredrickson et al., 2008). Finally, a meta-analysis testing the happy–productive worker thesis (Cropanzano & Wright, 2001) has shown that happy employees are also more likely to be productive employees (Kaplan et al., 2009), which might be especially evident within research that conceptualizes happiness as psychological well-being or the absence of negative and the presence of positive affect (Wright & Cropanzano, 2004).

A second and more ambiguous finding, we want to emphasize here, regards the relationship between positive psychology interventions and performance. This link has been investigated by four studies, of which only two found confirming evidence for the favourable effect of positive psychology interventions. Avey et al. (2011) discovered that positive leadership leads to better performance through a process of enhancing employee positivity, and Luthans et al. (2010) detected that even very short interventions of two hours, which were directed at enhancing positive psychological capital, could lead to significant improvements in self- and supervisor-rated individual performance. These findings are in line with a theoretical model by Cameron et al. (2011) assuming that positive practices at work are linked to positive affect of workers, which influences positive individual behavior and finally organizational effectiveness.

By contrast, no performance improvements were detected in one study on an appreciative inquiry intervention (Ruhe et al., 2011), and in another testing an intervention that fosters resilience (Abbott et al., 2009). One reason for not finding an effect might be the limited sample sizes in both studies undermining the statistical power to detect an effect might there be one. Moreover, in the case of the appreciative inquiry study, results could have been flawed by the pressure to include the interventions into busy working days which resulted in shortenings of important appreciative inquiry circle elements. In case of the resilience study, one might presume that increases in resilience as one element of psychological capital alone fall short of producing the synergy effects that occur when hope, optimism, self-efficacy, and resilience interact and that are believed to cause high individual effectivity (Luthans, Avolio, Avey, & Norman, 2007a).

A final set of outcomes we want to consider in this discussion section are negatively tuned emotional states and state-like variables such as anxiety, burnout, depression, and stress. Results regarding those variables are ambiguous, but should not be overemphasized for two important reasons. First, it must be kept in mind that positive psychology interventions are not explicitly designed to treat mental illness or deficiencies; they are designed to build positive qualities (Sin & Lyubomirsky, 2009). Therefore, whatever effect they might achieve on the former should rather be seen as a positive side-effect of initiatives that aim at something else, or as something they offer above their positive effects on happiness and well-being. Second, one might assume that employee populations score rather low on measures of mental deficiencies or pathology, and that those measures are meant to detect deviations from normal or average conditions in one direction only (the direction of pathology). In mentally healthy people, it is therefore possible that a statistical floor effect will prevent small changes from being detected.

To summarize, the evidence available so far points out that positive psychology interventions are a promising tool for enhancing well-being and probably also for enhancing performance. Although only two out of four studies could corroborate the positive effect of positive psychology interventions on performance, the existence of this link is likely not least because of the favourable influence of those interventions on well-being and the available evidence on the happy–productive worker thesis (Cropanzano & Wright, 2001). As a positive side-effect, positive psychology interventions might alleviate stress, depression, burnout, and anxiety of employees.

When contemplating the second part of the research question asking for possible mediating or moderating mechanisms, we found hints that fluctuating states such as emotions or state-like constructs such as psychological capital act as possible mediators in the relationship between positive psychology interventions and diverse outcomes (Avey et al., 2011; Cohn & Fredrickson, 2010; Fredrickson et al., 2008), whereas more stable trait-like constructs seem to moderate the relationship. Within the present review we found evidence suggesting that rather negative emotional traits moderate the effects of positive psychology interventions (Chan, 2010). This suggested effect is in accordance with studies on positive psychology interventions in other contexts (Froh, Kashdan, Ozimkowski, & Miller, 2009; Mongrain, Chin, & Shapira, 2010; Sin & Lyubomirsky, 2009). Rather unhappy people—scoring higher on depression or anxious attachment, or lower on positive affectivity or gratitude—seem to benefit more from positive psychology interventions. This would qualify those interventions as a useful tool to make organizational "problem children" catch up with their happier peers.

The findings we present here are at first glance similar to findings of earlier reviews of the outcomes of positive psychology interventions; the most extensive of these has been the meta-analysis by Sin and

Lyubomirsky (2009) in which the results of 51 studies investigating the effects of positive psychology interventions on individual well-being and depression were statistically summarized. Similar to the results of our review, the authors found support for the hypothesized favorable effect on well-being as well as for the mitigating effect on depression. Due to their limitation to those two outcome variables, Sin and Lyubomirsky (2009) do not provide us with any information about effects on performance or other outcome measures. We considered it essential to expand on their work and provide a more complete review of all investigated outcome measures because a wide range of outcomes are of interest to organizations. More specifically, the Sin and Lyubomirsky (2009) review focuses on individual level outcomes only, while the multi-level nature of organizations would require the investigation of outcomes at the individual, team, department, and organization level (Rousseau, 1985).

Nonetheless, although we had the ambition to cover outcomes at multiple levels, we could only report the findings of one study that investigated changes in the service delivery rate of primary care practices as an organizational level variable (Ruhe et al., 2011). The study concluded that the service delivery rate had not significantly improved after an appreciative inquiry intervention, which might be explained in the light of the multidimensional conceptual framework by Cameron et al. (2011). This framework reasons that positive practices influence individual positive affect, which influences positive individual behavior, which eventually translates into changes in organizational effectiveness. Considering its position at the end of a chain of effects, it might be argued that enhancing organizational effectiveness is harder than enhancing positive individual behavior, or might simply take longer. Besides, we noted that two more studies made use of an intervention consisting of a team task (Peelle, 2006) or a task for two people (Sekerka et al., 2006), but did not report group-level findings. In summary, we can therefore conclude that the available literature on positive psychology interventions in organizations almost exclusively investigated individual-level dependent variables, which represents an important shortcoming of the literature to date.

Another critical difference between the review that we carried out and the meta-analysis by Sin and Lyubomirsky (2009) concerned the samples that the included studies used and their respective consequences for the sort of intervention carried out. Sin and Lyubomirsky (2009) summarized studies that have been conducted with diverse samples, including children, adolescents, young adults or students, adults, and older adults (Sin & Lyubomirsky, 2009). The samples furthermore include depressed as well as non-depressed individuals. The present review, in contrast, is limited to adult samples of individuals without apparent mental illness, because interventions in the working context are subject to very specific requirements that are different from requirements of, for instance, clinical-level interventions.

In the widest sense, interventions in organizations are designed to benefit two parties, the individual and the organization, whereas the primary beneficiary of clinical interventions is the individual. Organizations will often consider the return on investment (ROI) or other financial measures before deciding whether to invest resources in HR practices (eg. Avolio, Avey, & Quisenberry, 2010). Consequently, cost-efficiency is an important requirement for organizational interventions. Moreover, the study by Ruhe et al. (2011) taught us that time is another crucial factor, because interventions have to be integrated into busy working days.

Bearing in mind that organizational interventions have to meet certain premises, some interventions included in the Sin and Lyubomirsky (2009) meta-analysis appear inadequate for organizational samples. Individual therapy, for example, which is an intervention technique that was mainly used in samples of depressed individuals, seems to be depending on high investments of both time and money. Organizations might opt for individual coaching as applied by Grant and his colleagues (2009, 2010), but compared to an extensive individual therapy, there was a limited number of four individual coaching sessions in this study which were extended by a half-day's group training. Generally speaking, coaching also appears to be an intervention that is preserved for employees of strategic importance only (e.g., leaders, high potentials), and is not applied to the whole workforce due to its rather costly nature.

The meta-analysis by Sin and Lyubomirsky (2009) also includes a number of rather lengthy studies, with some even longer than 12 weeks and many others lasting between five and 12 weeks. For organizations, those interventions might be unattractive, because long interventions will most likely also heighten costs. Interventions that might be particularly attractive are short interventions, online interventions, and interventions that can easily be combined with work schedules or even with specific tasks. Therefore, the remainder of the discussion will dwell on some particularly interesting interventions for organizations.

First, when focusing on short interventions the two studies on psychological capital interventions by Fred Luthans and his colleagues stand out. One study investigated the effect of a two × 45 minutes online intervention (Luthans et al., 2008) and the other the effect of a two hour group training (Luthans et al.,

2010). In both cases, highly desirable results were achieved.

Second, there were three studies explicitly testing online interventions. The study just mentioned on the short psychological capital intervention (Luthans et al., 2008) and Abbott et al.'s (2010) study on the Resilience Online Program were two of them. Whereas the former study found significant enhancements in psychological capital, results of the latter study were ambiguous. It might again be suspected that psychological capital is a construct that is especially powerful due to synergistic effects of its subcomponents, implying that the enhancement of only one component might not be sufficient to entail other beneficial effects. Furthermore, participants in the intervention by Chan (2010) used an online application to keep log of three things they were grateful for in a specific week during an eight week period. This intervention might also easily be transferable to a smartphone application, which would increase user-friendliness and accessibility even further. On a related note, the successful loving-kindness meditation programme by Fredrickson et al. (2008) could build on one of the many existing meditation applications for smartphones, so that meditation sessions would not have to be administered during lunch breaks.

Finally, there were two interventions that exemplified how positive psychology interventions could be narrowly aligned with work tasks. Avey et al. (2011) demonstrated how simple changes in task assignments that underline the positive attitude of the leader can result in significant enhancements of follower positivity (measured as psychological capital) and performance. This finding is striking, as conveying positivity when defining a task does not have to cost anything. Similarly, Peelle (2006) let cross-functional teams work on a project to advance the work environment, the value for owners, and the benefits for customers. Thus, even if such an intervention would not result in the envisioned individual gains in happiness or similar variables, the group might still generate useful ideas and innovations for the organization.

In summary, we can conclude that there are some very promising, cost-effective, and short interventions that are especially suited for application in organizations. Particularly, the convenient interventions increasing psychological capital might be of interest to organizations because their favourable effect on performance could be corroborated.

Limitations and future research

A major limitation of this review is the small number of included studies. Conclusions might be preliminary because more research is needed to validate and extend the studies that have been done so far.

Nonetheless, this review adequately estimates the state of the art of the research concerning positive psychology interventions in organizations so far. A related limitation of this study is that the answers to the second part of the research question about operating mechanisms that link positive psychology interventions to specific outcomes are tentative, and conclusions in this regard strongly rely on available theory.

Those limitations, however, only allude to the fact that there is still much more work to be done when it comes to testing the effectiveness of organizational interventions that act on the principles of positive psychology. In general, more studies are needed that test the effects of different interventions with suitable research designs (randomized, controlled) and adequate sample sizes yielding sufficient power of statistical tests.

Of specific interest for organizations are studies that examine effects of positive psychology interventions on objective performance measures. As long as this link is not empirically corroborated, practitioners will hesitate to implement positive approaches (Cameron et al., 2011). Based on the theoretical model by Cameron et al. (2011), researchers should also consider including diverse positive affective states (e.g., job satisfaction) and positive individual behaviors (e.g., engagement) as possible mediators in their research models.

Furthermore, our analysis revealed a predominance of interventions that focus on the enhancement of positive subjective experiences. It is striking that none of the interventions listed here explicitly focused on positive traits or trait-like constructs such as employee strengths, leading to an underrepresentation of intervention studies falling under part (b) of our definition of positive psychology interventions. We therefore call for studies that test the effects of organizational interventions that identify, develop, and use positive individual traits or trait-like constructs such as employee talents and strengths.

Similarly, more studies are needed that focus on part (c) of our definition; that is, the investigation of positive institutions or positive psychology interventions at the organizational or organizational unit level. The only studies that did so focused on appreciative inquiry processes at the organizational level. Possibly other interesting interventions could aim at enhancing organizational virtuousness (Cameron, Bright, & Caza, 2004) or an organization's productive energy (Cole, Bruch, & Vogel, 2012). Both constructs have been found to be related to overall firm performance and might therefore be of high organizational relevance.

A related issue concerns the almost exclusive investigation of dependent variables that are measured at the individual level. Given the multidimensional nature of organizations, an important avenue for future research is the examination of outcome

measures at the departmental, team, or organizational level.

A final criticism of this study might concern the strict definition of positive psychology interventions and the resulting possible exclusion of other interventions that might have potential benefits on well-being or other valuable constructs. Nevertheless, it has been the declared aim of this study to investigate what organizations can gain from applying principles of positive psychology to the management of their workforce. We therefore considered it necessary to draw a strict line between genuine positive psychology interventions and other interventions that might have favourable outcomes. It might, however, be beneficial to compare effects of positive psychology interventions and alternative approaches in future research.

From what we do know so far, we can conclude that positive psychology interventions seem to be a useful tool for organizations which adds value especially in terms of enhanced employee well-being. Furthermore, we revealed that increases in positive state-like variables are likely to be the key to improving organizational performance with positive psychology interventions.

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