

Emerald Insight



Journal of Organizational Effectiveness: People and Performance

Development and implementation of a multifaceted well-being intervention Maura J Mills Clive J Fullagar Satoris S Culbertson

Article information:

To cite this document: Maura J Mills Clive J Fullagar Satoris S Culbertson , (2016),"Development and implementation of a multifaceted well-being intervention", Journal of Organizational Effectiveness: People and Performance, Vol. 3 Iss 4 pp. -Permanent link to this document: <u>http://dx.doi.org/10.1108/JOEPP-02-2016-0013</u>

Downloaded on: 11 November 2016, At: 01:51 (PT) References: this document contains references to 0 other documents. To copy this document: permissions@emeraldinsight.com The fulltext of this document has been downloaded 3 times since 2016*

Users who downloaded this article also downloaded:

(2016),"Well-being and performance interventions: a call for more theory-based 'black box' designs.", Journal of Organizational Effectiveness: People and Performance, Vol. 3 lss 4 pp. -

Access to this document was granted through an Emerald subscription provided by emerald-srm: 563821 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

Development and implementation of a multifaceted well-being intervention

In recent years there has been increased interest in positive organizational behavior and various constructs within that realm. Core amongst these is well-being, comprised of hedonic and eudaimonic components (Ryan and Deci, 2001). *Hedonic* well-being (HWB) is often conceptualized as simple happiness, whereas *eudaimonic* well-being (EWB) is the feeling of working toward life goals, striving toward self-fulfillment, and living up to one's potential. Well-being scholars have predominantly focused on HWB, with extant research often overlooking the eudaimonic component (Deci and Ryan, 2008; for exceptions see Huta and Ryan, 2010; Straume and Vittersø, 2012), particularly in intervention development, or more recently suggesting that it may be redundant with HWB (Disabato *et al.*, 2015). This is unfortunate considering the crucial role that the multidimensionality of EWB plays in the context of work given its uniquely developmental focus. Indeed, Ryff (1989; Ryff and Keyes, 1995) argued that using HWB as the sole measure of well-being is insufficient in that it fails to account for individuals' future-oriented outlooks and their associated desires to strive for something greater.

We evaluate existing well-being interventions and incorporate the most empirically robust aspects of each to inform the development of a new, integrated intervention that addresses both hedonic and multidimensional eudaimonic well-being. This aligns with the tenets of positive organizational behavior, which promotes a focus on flourishing and development, and with self-determination theory (see Ryan and Deci, 2001), which suggests that the truest measure of well-being is one that captures an individual's needs for competence, autonomy, and relatedness, as does EWB. With recent research (McMahan and Estes, 2011) emphasizing the extent to which EWB has been neglected in existing well-being interventions, the importance of incorporating it – particularly as assessed multidimensionally – is clear.

The Great Debate: Is Well-Being Static?

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

According to hedonic treadmill theory (Brickman and Campbell, 1971) and dynamic equilibrium theory (Headey, 2006), HWB cannot be meaningfully altered. These theories stand in opposition to the development of interventions aimed at improving well-being. However, the utility of such interventions is supported by Diener *et al.*'s (2006) revision to hedonic treadmill theory, in which he suggested that individuals may have multiple happiness set points (Lent and Brown, 2008; Norrish and Vella-Brodrick, 2008), and that set points are amenable to lasting change. Even Headey (2006) found that correlations of within-individual HWB indices decreased over time, indicating change. Furthermore, Fujita and Diener (2005) tracked participants' well-being over a 17-year period, finding that although well-being remained stable for most participants, for others it changed significantly. More recently, Mäkikangas *et al.*'s (2016) systematic review of well-being studies likewise suggests that well-being fluctuations are typical.

However, Waterman (2007) suggested that changes in eudaimonia may be more sustainable than changes in HWB, but criticized that research has historically failed to distinguish between hedonism and eudaimonia. Waterman suggested that the reason well-being changes differentially for different individuals may be that Diener *et al.*'s (2006) measure collapses hedonia and eudaimonia into composite well-being, and that such changes might be best understood if Diener *et al.* (2006) and others examined HWB and EWB separately. The importance of including EWB is further evidenced by McMahan and Estes (2011), who found that EWB was more predictive of overall well-being than was HWB, and that the latter accounted for no unique variance beyond the former – thereby evidencing both the unique and comparative importance of EWB. Similarly, Huta and Ryan (2010) found that HWB and EWB

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

are overlapping yet distinct, with evidence that a combination of the two yields the greatest impact on overall well-being.

Broaden and Build Theory

The utility of interventions is supported by Fredrickson's (1998, 2001) broaden and build theory, which proposes that positive emotions are evolutionarily adaptive and malleable. Fredrickson noted that negative emotions narrow thoughts and actions to a specific outcome (e.g., fight or flight), whereas positive emotions expand thought, widening the array of possible actions (Fredrickson and Branigan, 2005). Stemming from this, the results of negative emotions can be realized almost immediately, whereas the benefits of positive emotions often emerge over time, being stored as resources (Fredrickson *et al.*, 2005). As such, positive emotions impact health and well-being not only in the moment (Diener, 2000), but also in the long-term (Ariely, 2010; Fredrickson, 2001). This, Fredrickson (1998) argued, is because positive emotions build long-term personal resources on which we can draw in future situations as the need arises. These resources include the obvious, such as social support (we make more friends if we are nice), and the less obvious, such as knowledge about one's environment (e.g., negativity stifles adaptive exploration; Fazio *et al.*, 2004).

A related tenet of broaden and build theory is that positive emotions undo lingering effects of negative emotions (Fredrickson *et al.*, 2000). Specifically, the enduring nature of positive emotions surpasses the comparably fleeting nature of negative emotions, enabling individuals to view their lives in a broader, more positive context. Lastly, the final tenet suggests that positive emotions trigger further positive emotions in *upward spirals* (Fredrickson, 2000). Therefore, broaden and build theory facilitates understanding of the mechanisms by which

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

positive emotions are beneficial and how they enhance individuals' lives both momentarily and on a long-term basis, thereby justifying the benefit of well-being interventions.

Well-Being Interventions

Fordyce (1977) designed a well-being program out of three pilot interventions. The insight program focused on educating participants about happiness, and required reading and note-taking in addition to requiring participants to list 'things that happy people do,' and do at least three of them each day. In the *fundamentals program*, participants were given information about happiness, including the 'nifty nine' - nine research-derived activities that participants could do daily to increase happiness (e.g., spending time socializing, becoming active, valuing happiness). Fordyce provided instruction to participants on implementing each in their daily lives. Finally, the activities program was less instructional, with participants given no formal education regarding happiness. However, they were assigned activities that encouraged them to think about their happiness, after which they were asked to compile a list of activities that made them happy, including at least three of which they could do daily. Fordyce found that the fundamentals and activities programs produced significant gains in happiness. He then combined the most impactful aspects of these pilots (focusing primarily on the fundamentals program) into a single program called the "14 fundamentals". These 14 attitudinal and behavioral fundamentals included the 'nifty nine' along with five additional activities. As in the previous programs, participants were asked to use each strategy and record their success. This combined program produced greater gains in happiness than the pilots, aligning with Sheldon and Lyubomirsky's (2006) finding that HWB is most sustainably improved via changes in activities, as opposed to changes in circumstances, which are generally less self-directed.

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

Seligman *et al.* (2005) found similar results in their one-week internet-based intervention comprising five groups: 1) participants wrote and delivered letters of gratitude, 2) participants listed three things that went well each day and their perceived causes, 3) participants wrote about a time when they were 'at their best,' identified personal strengths manifest in that situation, and reflected on those strengths daily, 4) participants completed an inventory of character strengths and received feedback regarding their strengths, which they were asked to employ in new ways daily, and 5) participants took the aforementioned inventory and were told their strengths, but were simply told to use them more often (an abridged version of #4). Participants in the second and fourth interventions increased in happiness over six months, while the gratitude group increased happiness over one month. Similar research has found that positive affect can be increased via gratitude and optimism in the short-term as well as across multiple weeks (Boehm *et al.*, 2011; Layous *et al.*, 2013; Lyubomirsky *et al.*, 2011).

From a more action-oriented perspective, Sheldon and Lyubomirsky (2004) found that increases in HWB can be facilitated by changes in daily activities, particularly when such changes incorporate performing random acts of kindness. Other research found that the frequency (Lyubomirsky *et al.*, 2005) and variety (Sheldon *et al.*, 2012) of the kind acts are key in facilitating the degree to which they improve well-being. Happiness is more likely to be enduringly changed when the catalyst for the change is intentional on the part of the individual. Lyubomirsky *et al.* (2005) went further, proposing a formula comprised of a happiness set point (50%), personal circumstances (10%), and voluntary factors under the individual's control (40%). By addressing the latter of these, we can meaningfully increase an individual's happiness. Norrish and Vella-Brodrick (2008) supported this contention, as did Seligman (2002), who recommended optimizing this likelihood by spacing out rewards and enjoyable moments,

[©] Emerald Group Publishing Limited

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

reflecting on positive experiences, and using personal strengths to invest in worthwhile causes. Chancellor *et al.* (2015) supported the efficacy of the positive experiences recollection strategy within the workplace, with participants writing weekly about three positive work-related events, yielding a beneficial impact on HWB for up to ten weeks.

Finally, Huta and Ryan (2010) created an intervention with college students in which students either added hedonic or eudaimonic activities to their lives for ten days. The researchers found that an additional 90 minutes of such activities per day yielded increased well-being in the short term (i.e., three days into the intervention) and the long term (i.e., three months postintervention). Furthermore, it appeared that the hedonic element was most impactful immediately, whereas the eudaimonic activities yielded the most lasting changes. Thus, a combination of the two may be optimally beneficial overall.

With some exceptions, existing well-being interventions have predominantly focused on HWB, an unfortunate oversight considering research emphasizing the importance of EWB (e.g., Huta and Ryan, 2010; McMahan and Estes, 2011). In light of EWB's nature, its development may require more action in addition to cognition. This aligns with Lent and Brown's (2008) emphasis on the importance of the social cognitive model in interventions, insofar as empowering individuals with a sense of agency may be a fruitful avenue toward multi-faceted well-being development. As evidence of this, one of the few interventions including EWB was that of Staudinger and Kuhbandner (2004), finding that participating in volunteer activities, social activities, and cognitive self-reflection all contributed to increased EWB, as did openness to new experiences.

The present intervention (outlined below) builds on past research by developing and implementing an intervention targeting both hedonic and eudaimonic well-being, and expanding

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

such interventions beyond the clinical realm. A key goal in designing this intervention was to make the program not an event in and of itself (which may increase the likelihood of regression to baseline), but rather a mechanism through which individuals learn positive strategies (both cognitive and action-oriented) thereby improving the potential for more meaningful impact.

Hypothesis 1: Intervention participants will evidence significant increases in hedonic well-being over the course of the intervention.

Hypothesis 2: Intervention participants will evidence significant increases in the dimensions of eudaimonic well-being over the course of the intervention.

While some aforementioned recent attempts have been made to enhance both hedonic and eudaimonic well-being via interventions (e.g., Huta & Ryan, 2010; Straume & Vittersø, 2012), the latter are more scarce and are still in their relative infancy as compared to hedonicallyfocused interventions. They also often lack application with employees (versus students) and a facet-level analysis of the multidimensionality of EWB in order to pinpoint the precise nature of the change. The current intervention addresses both of these considerations, in addition to being parsimonious with regard to organizational resources, with the in-person component accomplished in under two hours and supplemented by subsequent e-mail contact. In this way it could also be expanded or contracted as necessary, enhancing its feasibility within organizations.

Method

Participants

Participants were recruited from organizations in the Midwest United States with which the authors had pre-established research relationships. In exchange for access to participants, a brief report of aggregated findings was presented to the organizations after data collection concluded. Twenty-three participants self-selected into the intervention, and 17 completed both

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

pre-intervention and post-intervention surveys in addition to attending the intervention sessions. Therefore, theirs are the responses analyzed. Of these, nine were undergraduate students, four were city employees, and four were county extension agents.¹² Such multiple samples were necessitated by low participation rates, likely due to the time-intensive nature of the intervention, substantial travel for some participants, and lack of incentive. Just over half of participants were female, and 94% were Caucasian. Ages ranged from 17 to 62 (M = 33.06, SD = 15.41). Participants employed as extension agents and city workers worked an average of 43.75 hours per week (SD = 4.43), and had been employed by their organization for between 3.3 and 23 years (M = 10.26, SD = 7.24).

A control group (n = 53) not participating in the intervention (nor receiving e-mails) was similarly comprised of city employees (n = 23), extension agents (n = 19), and undergraduates (n = 11) similarly recruited from the same sample sources as the intervention group. Of these, 64.2% (n = 34) were female, and 94% (n = 50) were Caucasian. Ages ranged from 18 to 63 (M = 39.42, SD = 14.34). Similarly to the intervention group, control participants employed as extension agents and city workers worked an average of 44.21 hours per week (SD = 7.19), and had been employed by their organization for between three months and 38.5 years (M = 12.39, SD = 11.09).

Procedure: Intervention Design

The present intervention is informed by prior well-being programs, with important differences that improve on past interventions' limitations. One of these is the in-person nature

¹ While ideally subsample groups could have been analyzed separately or t-tests would have been conducted between groups prior to combining them, such a step was impractical here given small subsample sizes. Therefore, the groups were combined, however sample source was controlled for in analyses.

² Extension agents are county employees who work in service to their community by facilitating initiatives in domains such as youth/4-H and farming

[©] Emerald Group Publishing Limited

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

of the intervention. While some past interventions (e.g., Fordyce, 1977; Luthans, Avey, *et al.*, 2006) were conducted in-person, others (e.g., Luthans *et al.*, 2008; Seligman *et al.*, 2005) were conducted solely over the internet or through some combination of the two (e.g., Huta and Ryan, 2010). Nevertheless, practical restrictions put in place by the organizations in addition to workloads and availabilities of participants limited the in-person component of the present intervention to a one-time intensive meeting. However, the design builds on previous interventions (e.g., Luthans, Avey, *et al.*, 2006) that utilized a one-time-only approach in that the in-person component was supplemented with two weeks of electronic follow-up to extend participants' focus on and availability of well-being development exercises, reminders, recommendations, and resources.

The intervention, targeted at both HWB and EWB, was conducted³ via small group sessions in addition to a supplemental electronic component. The in-person component lasted 1.5 hours. In line with Lyubomirsky *et al.*'s (2011) findings that self-selection into well-being interventions specifically can compromise the efficacy of findings (although Nabe-Nielsen *et al.*, 2015 found otherwise), participants were blinded to the specific construct (well-being) that the intervention was targeting. The intervention targeted action-taking steps (voluntary behavioral acts and changes that participants can make to their lives), cognition (positive thoughts and reflection about the nature and extent of well-being in one's life), and a eudaimonic perspective (developmental and forward-focused on the ideal of becoming a better version of oneself). It began with an introduction about well-being, including distinctions between hedonic and eudaimonic conceptualizations (approximately 10 minutes). This was included for purposes of participant background knowledge and understanding, but was limited as suggested by the

³ For all subgroups, the intervention was facilitated by the first author (a trained industrial-organizational psychologist) only. This eliminated any confound arising from participants being exposed to different facilitators.

[©] Emerald Group Publishing Limited

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

relative failure of Fordyce's (1977) 'insight' intervention, which involved an extensive instructional component. Subsequently, the facilitator incited discussion regarding well-being in participants' lives (approximately 40 minutes). This discussion was designed to begin relatively open-ended, with the facilitator subsequently directing it into a discussion of various activities associated with increased well-being for each participant, focusing on workplace activities. As part of this, the facilitator incorporated 13 of Fordyce's '14 fundamentals' found to increase HWB.⁴

Finally, the facilitator turned the discussion toward EWB, and its relevance to participants' work lives (approximately 40 minutes). Participants were asked to think about their strengths and how they can channel those into actions. The facilitator asked for examples from participants' work-related experiences. Participants were then asked to separately list activities they do or have done to increase their HWB, and a similar list for EWB. A facilitated discussion ensued, with the goal that the discussion would lead individuals to realize additional action plans for their listed activities as well as adopt additional activities from others' lists. Participants discussed how well their lists aligned with Fordyce's fundamentals, and the facilitator discussed activities that may increase well-being (e.g., becoming more open to novel work experiences, expanding on social and volunteer activities and organizational citizenship behaviors).

These latter activities led into a discussion of EWB in that they indicated actions taken to better the world around oneself by utilizing one's capabilities to make a positive contribution. As such, participants were encouraged to channel their resources toward increasing EWB in addition to HWB. Doing so is arguably less appealing to many individuals, since a focus on EWB

⁴ Fordyce's (1977) activity of lowering expectations and aspirations was omitted because this activity may limit EWB – important considering the current intervention targeted both HWB *and* EWB, versus Fordyce's sole HWB focus.

[©] Emerald Group Publishing Limited

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

requires a longer time commitment. That said, participants were encouraged to invest in worthwhile causes contributing to a sense of fulfillment and contribution, including investing in oneself in addition to investing in causes of importance to the individual. Finally, the importance of positive cognition was reiterated, and suggestions for managing it were discussed, including requests for examples from the group. Participants were encouraged to reflect on positive experiences in their past and present, and to envision (realistically) positive events occurring in their future. The facilitator encouraged participants to recognize and challenge negative thoughts rather than suppressing them.

Three follow-up e-mails were sent to participants, beginning several hours postintervention through the subsequent two weeks. These e-mails encouraged participants to continue with exercises to increase HWB and EWB. First, as a follow-up to the list that participants completed during the meeting (which asked participants to list things they currently or have previously done to increase well-being), they were requested to make lists of challenging yet realistic things they could *start* doing in both the short-term and long-term that would increase both areas of well-being. Participants were also encouraged to keep a journal of positive cognitions, including listing five positive things that happened each day. The journal purpose was to help participants reflect on positive experiences, and to lead them to seek out and recognize positive experiences throughout the day that they otherwise may have overlooked. Participants were encouraged to note negative experiences by challenging their negative cognitions about such events, employing a sense of agency regarding actions they could take to mitigate the effects of the experiences. Participants were asked to reflect on the prior week's journaling, including whether they recognized themselves looking for positive experiences throughout the day, and whether it helped them manage negative cognitions. It was crucial for

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

participants to realize that the goal was not to overlook such negative cognitions, but rather to examine them and mitigate their impact.

An informational e-mail was also distributed to participants immediately after the inperson session, including information regarding work-related resources available to them, including employer-sponsored wellness programs, employee assistance programs, and tuition reimbursement. Participants were reminded that such resources may be beneficial in targeting specific aspects of HWB and EWB, and may aid them in reaching their well-being targets outlined during the in-person intervention. At the end of the two weeks, a final e-mail encouraged participants to continue acting on the HWB and EWB activities, and to continue managing negative and enhancing positive cognitions (e.g., by journaling).

Control group participants completed the same multi-time-point measurement as the intervention participants, but did not undergo an intervention. This aligns with other positive psychology intervention controls (e.g., Giannopoulos and Vella-Brodrick, 2011), and prevented the introduction of unintended confounds, considering that any activity (e.g., team-building exercises; Luthans *et al.*, 2006) would likely impact well-being facets (e.g., EWB's focus on positive relations with others).

Measures

Participants were administered pre- and post-tests two weeks apart, between which was the intervention for those in the experimental group. Eudaimonic and hedonic well-being were assessed at both time periods. See Table 1 for Cronbach alpha reliabilities.

Eudaimonic well-being was measured via the 42-item Psychological Well-Being Scale (Ryff, 1989), assessing six EWB dimensions. Sample items: *Autonomy*, "I have confidence in my own opinions at work even if they are contrary to the general consensus"; *personal growth*,

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

"I do not enjoy being in new work situations that require me to change my old familiar ways of doing things" (reversed); *self-acceptance*, "In many ways, I feel disappointed about my achievements at work" (reversed); *positive relations with others*, "I enjoy personal and mutual conversations with the people I work with"; *environmental mastery*, "I am good at juggling my time at work so that I can fit everything in that needs to get done"; and *purpose in life*, "I enjoy setting goals at work and striving to achieve them." Each dimension was measured via seven items using a response scale from 1 (*strongly disagree*) to 4 (*strongly agree*).

Hedonic well-being was measured using the Positive and Negative Affectivity Schedule (PANAS; Watson *et al.*, 1988). The PANAS is comprised of a positive affectivity and negative affectivity subscales. Given research indicating that positive affectivity and negative affectivity are distinct constructs, these subscales were analyzed independently as opposed to as a composite. Each is comprised of ten adjectives, with participants asked to indicate the extent to which they feel that way. Response options ranged from 1 (*very slightly / not at all*) to 5 (*extremely*). Sample positive descriptors include "determined" and "proud"; sample negative descriptors include "distressed" and "upset."

Results

Insert Table 1 Here

Data were analyzed via analysis of covariance (ANCOVA), one of the benefits of which is that it is robust to small and uneven sample sizes. This benefit is enhanced by including covariates in an ANCOVA because covariate inclusion can account for some extraneous variance in the criterion score (here, post-test score) and can remove the influence of

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

inappropriate variables (here, pre-test score, sample source), thereby increasing power. This analysis of variance technique is consistent with analytic approaches employed in the aforementioned studies, which consistently included ANOVAs (e.g., Seligman *et al.*, 2005; Sheldon & Lyubomirsky, 2004), MANOVAS (e.g., Huta & Ryan, 2010), or ANCOVAS (e.g., Fordyce, 1977) in order to effectively compare groups and assess change.

The ANCOVA examined post-test scores, employing participants' pre-test scores and sample source as covariates, thereby controlling for possible inherent group differences. This procedure is suggested by Girden (1992) as preferable to a one-way ANOVA on the post-test scores, as the latter ignores pre-test data and thus may yield compromised results. Pretest scores were chosen because, although the research design does not control for these scores, they are a source of variation likely to affect post-test scores. Therefore, employing pre-test scores as a covariate removes their influence to the degree that resulting data will indicate degree of change (primarily hypothesized improvement) in scores, therefore resulting in less biased and more precise estimates of the effects of the respective interventions. Importantly, however, prior to that, t-tests indicated no differences between the intervention and control groups on pre-test (T1) HWB (positive affect) (t = -1.008, p = .317), HWB (negative affect) (t = 0.860, p = .393), and EWB (t = -0.232, p = .817).

These analyses examined the efficacy of the intervention on the experimental group versus the control group. Levene's test of equality of error variances indicated that the homogeneity assumption was met. ANCOVAs revealed that the intervention had no meaningful impact on HWB as measured by both the presence of positive affect, F(1, 69) = .70, p = .119, and by the relative absence of negative affect, F(1, 69) = .09, p = .495, thereby failing to support Hypothesis 1. However, ANCOVAs (see Table 2) revealed that the intervention did impact

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

composite EWB, F(1, 69) = 8.978, p = .004, thus supporting Hypothesis 2. Further, on a dimension level, both the purpose in life EWB dimension, F(1, 69) = 7.344, p = .009, and the personal growth EWB dimension, F(1, 69) = 11.40, p = .001, evidenced significance using the typical $p \le .05$ standard. However, such multiple comparisons necessitate a Bonferroni adjustment to avoid inflated error: For nine univariate analyses, a Bonferroni adjustment requires a significance standard of $p \le .006$ be applied. As such, composite EWB and the personal growth dimension remained significantly impacted by the intervention, however the purpose in life dimension, while approximating this stricter standard, failed to meet it.

Insert Table 2 Here

Discussion

There exists considerable theory and empirical research demonstrating why organizations should a) care about employee well-being and b) implement initiatives to enhance it. For instance, if employees are absent due to compromised well-being, they cannot optimally execute their required work. They must, therefore, be sustained by at least a moderate degree of well-being in order to adequately perform their duties. Higher levels of employee well-being can reduce accidents and errors, curb insurance rates, and contribute to internal and external corporate reputation. In turn, internal corporate reputation can be linked to perceived organizational support, which has considerable impact on crucial business outcomes (e.g., Butts *et al.*, 2009; Steele *et al.*, 2012).

We designed and implemented an intervention with the expectation of improving the employee experience via enhanced well-being. Although HWB was not meaningfully impacted

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

by the intervention in this sample (H1), EWB was improved (H2). Specifically, the personal growth dimension of EWB was particularly impacted, indicating that participants used the opportunity to explore ways to improve their capabilities, thereby growing personally and professionally. These findings speak to the consideration that HWB may be fleeting and impacted by more immediate actions, but not enduringly changed. For example, while individuals did not report an increase in positive affect between T1 and T2, many qualitatively reported having implemented some of the recommended strategies to increase HWB. It is likely, perhaps, that their HWB increased during the time they were engaging in that activity. This may not, however, have been reflected at T2, when they were no longer actively engaged in that activity. Future researchers may consider an experience sampling methodology to better assess momentary change in HWB. Relatedly, it is worthwhile to consider that our data reflected a restricted range for well-being reports, suggesting the possibility of a set-point to which individuals return after momentary events. This may further speak to why such a short-term intervention yielded only some changes by T2 (EWB vs HWB), emphasizing the deepseatedness of HWB in particular and pointing toward the potential need for a longer-term intervention in order to yield more lasting change.

The success of the eudaimonic aspect of the intervention over the hedonic aspect is consistent with Staudinger and Kuhbander's (2004) findings as well as self-determination theory. This relative success speaks to the consideration that such an intervention is more likely to improve the various aspects of one's desire for personal growth and development than it is to improve fleeting happiness. Results demonstrated that intervention participants reported significantly greater change between their T1 and T2 personal growth (EWB) than did control participants, thus indicating the well-being intervention's success at positively impacting these

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

components. It is particularly beneficial that the current study analyzed EWB at the dimension level. This supports Lindfors *et al.*'s (2006) finding that different dimensions of EWB may yield differential relationships, leading them to recommend examining EWB at the dimension-level, as was done here. Notably, were the current study to have overlooked EWB's component parts in favor of analyzing solely composite EWB, the finding regarding the personal growth dimension would have been masked.

Implications

The present findings have important implications for organizations in light of increased employee desire for personal and professional growth opportunities supported by their employer. This research sheds light on how positive internal resources may react to development attempts, and such group interventions are an important way for organizations to develop and invest in employees in a feasible way with minimal resource expenditure. Organizations (and those acting on their behalf, such as consulting firms) can build positive resources within employees, most notably building employees' sense of personal growth. We provide actionable steps for organizations in terms of intervention techniques. Past intervention attempts are evaluated and critiqued, and are combined, modified, and enhanced in line with recent empirical findings and recommendations. The resulting updated intervention techniques are explicated in detail, thereby allowing for future research and/or organizational application of these strategies. Such application is particularly appropriate for the personal growth dimension of EWB, but should not be discounted for other EWB dimensions or for HWB. The present intervention should be implemented with new and larger samples, and modified accordingly. Just as the present research utilized past interventions as guides, the current intervention can also be used as a guide on which future intervention developers and facilitators can build. For instance, pending future

[©] Emerald Group Publishing Limited

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

research, it could be expanded or contracted as needed, enhancing its utilitarian potential within a variety of organizational constraints and resources. In so doing, future researchers should pay particular attention to the inclusion of EWB, a crucial component of well-being – arguably even more so than HWB (McMahan and Estes, 2011).

Another potential avenue for application is manager training. Common organizational constraints (size, cost) may limit the feasibility of directly involving all employees in interventions. However, the present intervention could be utilized to train managers regarding well-being development, and future researchers should explore its efficacy in this regard. In such interventions, the focus would be not only development of managers' resources and personal growth, but also how to promote and facilitate such positive development among subordinates. In this way, the intervention may impact many employees via effective mentoring, while the direct organizational investment could be limited to a comparably minimal number of managers. Nevertheless, it is important to remember amidst this context that interventions, despite their importance, are often implemented to improve a non-optimal state. However, as LaMontagne et al. (2014) note, an optimally integrated approach focuses too on preemptive action in terms of prevention, as opposed to a reactive approach. Although the intervention outlined here is malleable enough to be used as either preventative or reactive, we encourage its proactive use in line with LaMontagne *et al.*'s recommendations, as well as other proactive approaches to optimizing employee well-being, such as risk reduction approaches via job design and attention to the psychosocial work environment.

Limitations and Future Research

Self-report measures warrant consideration of possible common method variance. Nevertheless, self-reports are arguably the most appropriate way to measure such internal

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

constructs as well-being, particularly when assessing change. Further, in recent years some research has countered criticisms of single-method studies. For instance, Goffin and Gellatly (2001) found substantial redundancy in self- and peer-report measures, noting that self-reported responses appear to be driven primarily by experience, rather than by systematic bias. Spector (2006) similarly contended that self-report measures are unlikely to result in the biases of which they are often accused. Another design limitation is that more long-term longitudinal analyses would have been ideal, and may have borne out even more impactful results, considering Huta and Ryan's (2010) finding that interventions may have long-lasting effects on EWB in particular. As such, our two-week time period is both a strength (beyond cross-sectional administrations) and a limitation (longer time periods may have evidenced greater impact).

Sample size is another notable limitation, as it compromised power, providing an important caution for results interpretation. A more robust effect size could likely have been detected with a larger sample. The small sample also prevented analysis of the natural breakdowns within the data (e.g., possible differences between sample sources), which would have been interesting. Unfortunately, this was not possible with the present samples in that each alone was too small for effective analyses, and therefore could only be analyzed in aggregate. However, given promising preliminary results on this small sample, future researchers are encouraged to replicate the intervention designed here within larger groups and in various occupations in order to assess its wider applicability. In this way, we hope that this intervention will guide future intervention designers and facilitators in implementing appropriate interventions for various populations.

The nature of our sample can also be considered a potential limitation, as extension agents in particular may have higher baseline happiness than the rest of the population. This may

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

be true not only because their job involves varied activities rather than a monotonous routine, but also because it involves service to the public. While not strictly a 'random act of kindness' – as suggested by Sheldon and Lyubomirsky (2004) to be facilitative of happiness - considering that it is part of their job, the positive nature of the job may mean higher-than-average happiness for workers – a characteristic that may have stifled the impact of the intervention. Relatedly, lack of random assignment to groups left open the possibility that individuals self-selecting into the intervention may be characteristically different than individuals choosing not to participate, despite being blinded to the specific target construct of the intervention. Although Nabe-Nielsen et al. (2015) found that this is unlikely to be the case, and although no significant differences were found on intervention and control group pre-tests of well-being (p = .32-.82), it remains possible that intervention participants may be more open to self-enhancement or more inclined toward positivity than individuals who did not self-select into the intervention. As such, future research should randomize participant assignment to groups. Future researchers would also do well to extend this research to alternative samples, such as workers with more 'traditional' occupations, including occupations with more definitive work hours and stricter work-nonwork boundaries. Furthermore, extending future samples to include workers outside of the United States would also be of benefit, thereby yielding cross-cultural implications. Although some recent research (Boehm et al., 2011; Layous et al., 2013) has provided initial evidence suggesting that individuals may respond differently to interventions depending on cultural dispositions (e.g., individualism versus collectivism), more research is needed to investigate such findings, considering the increasing globalization and multiculturalism of the workplace.

Conclusion

© Emerald Group Publishing Limited

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

The present study theoretically and empirically investigates hedonic and eudaimonic well-being, from both macro and micro perspectives, as well as the various dimensions of each. This builds upon prior interventions, many of which predominantly emphasize HWB. Our more inclusive and detailed approach accounted for construct multidimensionality, thereby identifying results that would have been masked by only a broader composite consideration. Further, an in line with broaden and build theory, our intervention suggests methods by which EWB and its personal growth dimension can be augmented in a group approach that respects organizational resources and could enhance organizations' human capital while simultaneously satisfying employee growth needs.

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

References

- Ariely, D. (2010), "The long-term effects of short-term emotions", *Harvard Business Review*, Vol. 88, p. 38.
- Boehm, J. K., Lyubomirsky, S., and Sheldon, K. M. (2011), "A longitudinal experimental study comparing the effectiveness of happiness-enhancing strategies in Anglo Americans and Asian Americans", *Cognition and Emotion*, Vol. 25, pp. 1152-1167.
- Brickman, P., and Campbell, D. (1971), "Hedonic relativism and planning the good society", inM. Appley (Ed.), *Adaptation-level theory*, Academia Press, New York, NY, pp. 287-302.
- Butts, M., Vandenberg, R., DeJoy, D., Schaffer, B., and Wilson, M. (2009), "Individual reactions to high involvement work practices: Investigating the role of empowerment and perceived organizational support", *Journal of Occupational Health Psychology*, Vol. 14, pp. 122-136.
- Chancellor, J., Layous, K., and Lyubomirsky, S. (2015), "Recalling positive events at work makes employees feel happier, move more, but interact less: A 6-week randomized controlled intervention at a Japanese workplace", *Journal of Happiness Studies*, Vol. 16, pp. 871-887.
- Deci, E. L., and Ryan, R. M. (2008), "Hedonia, eudaimonia, and well-being: An introduction", *Journal of Happiness Studies*, Vol. 9, pp. 1-11.
- Diener, E., Lucas, R., and Scollon, C. (2006), "Beyond the hedonic treadmill: Revising the adaptation theory of well-being", *American Psychologist*, Vol. 61, pp. 305-314.
- Disabato, D. J., Goodman, F. R., Kashdan, T. B., Short, J. L., and Jarden, A. (2016), "Different types of well-being? A cross-cultural examination of hedonic and eudaimonic wellbeing", *Psychological Assessment*, Vol. 28, pp. 471-482.

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

- Fazio, R., Eiser, J., and Shook, N. (2004), "Attitude formation through exploration: Valence asymmetries", *Journal of Personality and Social Psychology*, Vol. 87, pp. 293-311.
- Fordyce, M. W. (1977), "Development of a program to increase personal happiness", *Journal of Counseling Psychology*, Vol. 24, pp. 511-521.
- Fredrickson, B. L. (1998), "What good are positive emotions?", *Review of General Psychology*, Vol. 2, pp. 300-319.
- Fredrickson, B. L. (2000), "Why positive emotions matter in organizations: Lessons from the broaden-and-build model", *The Psychologist-Manager Journal*, Vol. 4, pp. 131-142.
- Fredrickson, B. L. (2001), "The role of positive emotions in positive psychology: The broadenand-build theory of positive emotions", *American Psychologist*, Vol. 56, pp. 218-226.
- Fredrickson, B. L., and Branigan, C. (2005), "Positive emotions broaden the scope of attention and thought-action repertoires", *Cognition and Emotion*, Vol. 19, pp. 313-332.
- Fredrickson, B. L., Brown, S., Cohn, M. A., Conway, A., and Mikels, J. (2005, January).
 Positive emotions build personal resources and predict future subjective well-being.
 Paper presented at Society for Personality and Social Psychology. New Orleans, LA.
- Fredrickson, B. L., Mancuso, R. A., Branigan, C., and Tugade, M. M. (2000), "The undoing effect of positive emotions", *Motivation and Emotion*, Vol. 24, pp. 237-258.
- Fujita, F., and Diener, E. (2005), "Life satisfaction set point: Stability and change", *Journal of Personality and Social Psychology*, Vol. 88, pp. 158-164.
- Giannopoulos, V. L., and Vella-Brodrick, D. A. (2011), "Effects of positive interventions and orientations to happiness on subjective well-being", *Journal of Positive Psychology*, Vol. 6, pp. 95-105.

Girden, E. (1992), ANOVA Repeated Measures, Sage, Thousand Oaks, CA.

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

- Goffin, R. D. and Gellatly, I. R. (2001), "A multi-rater assessment of organizational commitment: Are self-report measures biased?" *Journal of Organizational Behavior*, Vol. 22, pp. 437-451.
- Headey, B. (2006), "Subjective well-being: Revisions to dynamic equilibrium theory using national panel data and panel regression methods", *Social Indicators Research*, Vol. 79, pp. 369-403.
- Huta, V., and Ryan, R. M. (2010), "Pursuing pleasure or virtue: The differential and overlapping well-being benefits of hedonic and eudaimonic motives", *Journal of Happiness Studies*, Vol. 11, pp. 735-762.
- LaMontagne, A., Martin, A., Page, K., Reavley, N., Noblet, A., Milner, A., et al. (2014),
 "Workplace mental health: Developing an integrated intervention approach", *BMC Psychiatry*, Vol. 14, pp. 131-142.
- Layous, K., Lee, H., Choi, I., and Lyubomirsky, S. (2013), "Culture matters when designing a successful happiness-increasing activity: A comparison of the United States and South Korea", *Journal of Cross-Cultural Psychology*, Vol. 44, pp. 1294-1303.
- Lent, R., and Brown, S. (2008), "Social cognitive career theory and subjective well-being in the context of work", *Journal of Career Assessment*, Vol. 16, pp. 6-21.
- Lindfors, P., Berntsson, L., and Lundberg, U. (2006), "Total workload as related to psychological well-being and symptoms of full-time employed female and male whitecollar workers", *International Journal of Behavioral Medicine*, Vol. 13, pp. 131-137.
- Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., and Combs, G. M. (2006), "Psychological capital development: Toward a micro-intervention", *Journal of Organizational Behavior*, Vol. 27, pp. 387-393.

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

- Luthans, F., Avey, J. B., and Patera, J. L. (2008), "Experimental analysis of a web-based training intervention to develop positive psychological capital", *Academy of Management Learning & Education*, Vol. 7, pp. 209-221.
- Luthans, F., Vogelgesang, G. R., and Lester, P. B. (2006), "Developing the psychological capital of resilience", *Human Resource Development Review*, Vol. 5, pp. 25-44.
- Lyubomirsky, S., Dickerhoof, R., Boehm, J., and Sheldon, K. M. (2011), "Becoming happier takes both a will and a proper way: An experimental longitudinal intervention to boost well-being", *Emotion*, Vol. 11, pp. 391-402.
- Lyubomirsky, S., Sheldon, K. M., and Schkade, D. (2005), "Pursuing Happiness: The architecture of sustainable change", *Review of General Psychology*, Vol. 9, pp. 111-131.
- McMahan, E., and Estes, D. (2011), "Hedonic versus eudaimonic conceptions of well-being: Evidence of differential associations with self-reported well-being", *Social Indicators Research*, Vol. 103, pp. 93-108.
- Mäkikangas, A., Kinnunen, U., Feldt, T., and Schaufeli, W. (2016), "The longitudinal development of employee well-being: A systematic review", *Work & Stress*, Vol. 30, pp. 46-70.
- Nabe-Nielsen, K., Persson, R., Nielsen, K., Olsen, O., Carneiro, I., and Garde, A. (2015),
 "Perspectives on randomization and readiness for change in a workplace intervention study", in M. Karanika-Murray and C. Biron (Eds.), *Derailed organizational interventions for stress and well-being: Confessions of failure and solutions for success*, Springer, New York, NY, pp. 201-208.
- Norrish, J. M., and Vella-Brodrick, D. A. (2008), "Is the study of happiness a worth scientific pursuit?", *Social Indicators Research*, Vol. 87, pp. 393-407.

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

- Ryan, R. M., and Deci, E. L. (2001), "On happiness and human potentials: A review of research on hedonic and eudaimonic well-being", *Annual Review of Psychology*, Vol. 52, pp. 141-166.
- Ryan, R. M., Huta, V., and Deci, E. L. (2008), "Living well: A self-determination theory perspective on Eudaimonia", *Journal of Happiness Studies*, Vol. 9, pp. 139-170.
- Ryff, C. (1989), "Happiness is everything, or is it? Explorations on the meaning of psychological well-being", *Journal of Personality and Social Psychology*, Vol. 57, pp. 1069–1081.
- Ryff, C. and Keyes, C. (1995), "The structure of psychological well-being revisited", *Journal of Personality and Social Psychology, Vol.* 69, pp. 719–727.
- Seligman, M. E. P. (2002), Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment, Free Press, New York, NY.
- Seligman, M. E. P., Steen, T. A., Park, N., and Peterson, C. (2005), "Positive psychology progress: Empirical validation of interventions", *American Psychologist*, Vol. 60, pp. 410-421.
- Sheldon, K. M., Boehm, J. K., and Lyubomirsky, S. (2012), "Variety is the spice of happiness: The hedonic adaptation prevention model", in I. Boniwell and S. David (Eds.), Oxford Handbook of Happiness, Oxford University Press, Oxford, UK.
- Sheldon, K., and Lyubomirsky, S. (2004), "Achieving sustainable new happiness: Prospects, practice, and prescriptions", in P. Linley and S. Joseph (Eds.), *Positive psychology in practice*, Wiley, Hoboken, NJ, pp. 127-145.
- Sheldon, K., & Lyubomirsky, S. (2006), "Achieving sustainable gains in happiness: Change your actions not your circumstances", *Journal of Happiness Studies*, Vol. 7, pp. 55-86.

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

- Spector, P. E., Chen, P. Y., and O'Connell, B. J. (2000), "A longitudinal study of relations between job stressors and job strains while controlling for prior negative affectivity and strains", *Journal of Applied Psychology*, Vol. 85, pp. 211-218.
- Staudinger, U., and Kuhbandner, C. (2004), "Promoting eudaimonic and hedonic well-being in old age: A real-life intervention", *The Gerontologist*, Vol. 44, p. 51.
- Steele, J. P., Rupayana, D. D., Mills, M. J., Smith, M. R., Wefald, A. J., and Downey, R. G. (2012), "Relative importance and practical utility of positive worker states", *Journal of*

Psychology: Interdisciplinary and Applied, Vol. 146, pp. 617-650.

- Straume, L., and Vittersø, J. (2012), "Happiness, inspiration and the fully functioning person: Separating hedonic and eudaimonic well-being in the workplace", *Journal of Positive Psychology*, Vol. 7, pp. 387-398.
- Watson, D., Clark, L. A., and Tellegen, A. (1988), "Development and validation of brief measures of positive and negative affect: The PANAS scales", *Journal of Personality* and Social Psychology, Vol. 54, pp. 1063-1070.
- Waterman, A. S. (2007), "On the importance of distinguishing hedonia and eudaimonia when contemplating the hedonic treadmill", *American Psychologist*, Vol. 6, pp. 611-661.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 01:51 11 November 2016 (PT)

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

	M (TI / T2)	SD (TI / T2)	α (TI / T2)	1	2	Э	4	5	9	7	8	6
- 5 - <u>6</u> 1. HWB – Positive Affect 3.54/3.63 0.65/0.75 92/.9444** .37** .50** .53** .49** .66** .58** .66*	3.54 / 3.63	0.65 / 0.75	.92 / .94		44**	.37**	.50**	.53**	.49**	**99.	.58**	.66**
HWB – Negative Affect	1.51 / 1.53	0.48 / 0.59	.86 / .90	23*		26*	37**	33**	31**	38**	45**	45**
EWB – Autonomy	4.25 / 4.33	0.41 / 0.41	.73 / .79	.26*	17		.53**	.40**	.31**	.43**	.48**	.67**
EWB – Env. Mastery	4.41 / 4.48	0.37 / 0.40	.76 / .80	.38**	20	.36**		.51**	**69`	.71**	.70**	**68.
5. EWB – Personal Growth	5.28 / 5.30	0.40 / 0.33	.66 / .53	.45**	29**	.37**	.54**		.36**	**99.	.48**	.70**
6. EWB – PrwO	4.42 / 4.43	0.46 / 0.43	.83 / .83	.40**	25*	.34**	.64**	.35**		.53**	.59**	.76**
7. EWB – Purpose in Life	5.21 / 5.24	0.42 / 0.39	.76 / .75	.47**	23*	.14	.50**	.62**	.43**		.70**	.85**
8. EWB – Self-Acceptance 4.38 / 4.43	4.38 / 4.43	0.37 / 0.39	.63 / .80	.53**	27*	.43**	.61**	.49**	.56**	.56**		.84**
9. EWB – Overall	4.66 / 4.70	0.30 / 0.31	.91 / .93	.56**	32**	.59**	.82**	.75**	.75**	.73**	.82**	

HWB & EWB INTERVENTION

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

HWB & EWB INTERVENTION

2

	6
	t
	2
	.2
	2
	2
	ΰ
	- i
	2
	0
	0
	3
	Ŧ
	0
	2
	ب
	5
	5
	Ð
	0
	F
	7
	\geq
	\sim
	5
	\leq
	V
m	hr.
	210
ime	а
5 13	a

eiut © Table 2 ald Group Publishing Limited

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.