

## The **Psychological capital development:** Incubator **toward a micro-intervention**

**FRED LUTHANS\***, JAMES B. AVEY, BRUCE J. AVOLIO,  
STEVEN M. NORMAN AND GWENDOLYN M. COMBS

*Department of Management, Gallup Leadership Institute, University of Nebraska-Lincoln, Lincoln, Nebraska, U.S.A.*

---

**Summary** After first providing the meaning of psychological capital (PsyCap), we present a micro-intervention to develop it. Drawn from hope, optimism, efficacy, and resiliency development, this PsyCap Intervention (PCI) is shown to have preliminary support for not only increasing participants' PsyCap, but also financial impact and high return on investment. Copyright © 2006 John Wiley & Sons, Ltd.

### **Introduction**

Often talked about in the field of organizational behavior, but seldom operationalized and implemented, are micro-intervention models to impact performance. Notable exceptions that come quickly to mind would be work associated with the Hackman and Oldham job characteristics model or the Luthans and Kreitner O.B. Mod. model. Interventions associated with these models have considerable research back-up over the years showing they have a positive impact on performance.

Drawing from positive psychology and the recent emergence of positive organizational behavior (e.g., see Luthans, 2002a,b; Wright, 2003), we have recently proposed what we are calling psychological capital or simply PsyCap (Luthans & Youssef, 2004; Luthans, Avolio, Walumbwa, & Li, 2005; Luthans, Youssef, & Avolio, in press). Our purpose here is to first briefly review what we mean by PsyCap and then enter into the *JOB* incubation process, the still developing PsyCap Intervention or what we call the PCI.

### **Brief Introduction to PsyCap**

Our purpose here is not to provide the background and theoretical underpinnings of positive organizational behavior and PsyCap (the interested reader should see Luthans, 2002a,b; Luthans &

---

\* Correspondence to: F. Luthans, Department of Management, University of Nebraska-Lincoln, Lincoln, NE 68588-0491, U.S.A.  
E-mail: fluthans1@unl.edu

Youssef, 2004; Luthans, Youssef, & Avolio, in press). Let it simply be said that PsyCap, like now widely recognized human and social capital, is a take off from economic capital, where resources are invested and leveraged for a future return. However, PsyCap goes beyond human ('what you know') and social ('who you know') capital, and is more directly concerned with 'who you are' and more importantly 'who you are becoming' (i.e., developing one's actual self to become the possible self). We operationally define PsyCap as follows:

*An individual's positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals, and when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success* (Luthans, Youssef, & Avolio, in press). To be included in this conception of PsyCap, the following criteria must be met: (1) grounded in theory and research; (2) valid measurement; (3) relatively unique to the field of organizational behavior; (4) state-like (i.e., open to development as opposed to trait-like and thus relatively fixed); and (5) have a positive impact on sustainable performance (Luthans, 2002a,b; Luthans & Youssef, 2004; Luthans, Youssef, & Avolio, in press).

Confidence/efficacy, optimism, hope, and resiliency have been determined to best meet the PsyCap operational definition and inclusion criteria (Luthans, 2002a; Luthans & Youssef, 2004). In our initial research, these four factors have been shown, when combined, to have a synergistic effect. Specifically, we have found that PsyCap is a core construct that predicts performance and satisfaction better than any of the individual strengths that make it up (Luthans, Avolio, Norman, & Avey, 2006; Luthans et al., 2005). We propose the next logical step is to see if this PsyCap can be developed through a micro-intervention; that is, that PsyCap is indeed state-like and can be developed in a highly focused, very short training session. First, we will provide a brief overview of how we drew from the established positive psychology (not traditional organizational behavior, but newly emerging positive organizational behavior) constructs of hope, optimism, efficacy/confidence, and resiliency in developing our PCI approach and then summarize our preliminary findings on actually implementing this PCI.

## The Input of Hope Development

Although hope is a commonly used term and has been given some attention historically in humanistic psychology, we primarily draw from positive psychologist Rick Snyder's (2000) extensive theory-building, research, and development processes of hope. He identifies the primary components of hope to be agency, pathways, and goals. This hope theory and clinical guidelines by Snyder (2000) and some of our own work on hope development (Luthans & Youssef, 2004; Luthans, Youssef, & Avolio, in press) are used as input into our PCI. Specifically, in our PCI, we use a three-pronged strategy embedded in a goal-oriented framework, which includes goal design, pathway generation, and overcoming obstacles.

Our micro-intervention sessions (lasting from 1 to 3 hours depending on the number of participants and exercises/video clips used) begin with participants identifying personally valuable goals that they will use throughout the session. Once they have recorded these goals, the facilitator explains the ideal design for such goals includes: (1) concrete end points to measure success; (2) an approach (rather than an avoidance) framework, which allows participants to positively move toward goal accomplishment as opposed to away from desired goals (e.g., work toward quality targets instead of avoiding product

rejects); and (3) the importance of identifying sub-goals in order to reap the benefits of even small 'wins' (what Snyder calls 'stepping' in his hope training).

After the personal goals are determined, pathways are developed. First, using the stated personally valuable goal, participants are asked to generate multiple pathways to this goal. They are encouraged to brainstorm as many alternative pathways as possible, regardless of the practicality of implementation. Next, small groups are formed in order for participants to hear from others, and provide to others, alternative potential pathways to the group members' various goals. The final step is to inventory pathways. This process entails considering the resources required to pursue each pathway. After careful deliberation, the unrealistic pathways are discarded and a smaller number of realistic pathways are identified.

Snyder (2000) posits there will be obstacles to virtually any goal. These obstacles can act as goal blockers leading to negative reactions and disengagement from pursuing the goal. Thus, the final stage in the hope development input into the PCI is building the participants' goal setting processes and anticipatory abilities in such a way to anticipate, plan for, and overcome obstacles. Participants are instructed and given a few minutes to consider the potential obstacles or 'what can stop you from accomplishing your goal?' After time for self reflection, small groups are formed again to hear alternative perspectives on potential obstacles and strategies to overcome them. The facilitator focuses on utilizing this process to identify obstacles in advance and choose an alternate pathway to avoid pathway blockage.

At the completion of this hope dimension of the intervention session, participants have defined a personally valuable goal in such a way as to take ownership, be prepared for obstacles, and be ready to implement multiple pathways as contingency plans. Throughout this PCI development process, the facilitator tries to acknowledge and encourage positive, rather than negative, self talk. The facilitator maintains focus on goal setting, pathway generation, and overcoming obstacles as a process that can and should be applied to an array of participants' goals in the workplace. Transferability back to the job is constantly emphasized. In other words, this part of the intervention focuses on how to increase participants' level of hope in the PsyCap developmental process.

## The Input of Optimism Development

The widely recognized theories of optimism we draw from include both an expectancy-value orientation and a positive attributional, explanatory style, with realistic optimism being the ideal. From such a theoretical basis, it follows that widely recognized self-efficacy training (outlined next) can also be used to build optimism. In addition, we submit hope training can have a positive impact on optimism development. For example, participants in our PCI forecast 'bad events' by anticipating potential obstacles and then create alternative pathways to minimize their impact. As this process of preparing for obstacles is engaged in the PCI, the pessimist loses more options for expecting bad things to happen. The worst-case scenarios are anticipated and preparations are proactively in place. This process of counteracting pessimism supports the development of realistic, yet optimistic, expectations and is reinforced by positive 'self-talks.'

## The Input of Confidence/Efficacy Development

Because of the widely recognized work of Albert Bandura, the theoretical foundation and developmental process for building efficacy or confidence (the term commonly used when applied to

the workplace) is arguably the most extensive and accepted. The efficacy input into our PCI largely draws from his taxonomy of sources of efficacy. **These include task mastery, modeling, or vicarious learning, social persuasion and positive feedback, and physiological and/or psychological arousal.**

In our PCI, following Bandura's emphasis on the role that goal orientation and framing plays in building efficacy, we integrate our previously described goal exercise with the four sources of efficacy. Specifically, the facilitator engages in allowing participants to experience and model success and through social persuasion and arousal are all aimed at accomplishing the personal goals set earlier in the session. This efficacy building process elicits positive emotions and builds the participant's confidence to generate and implement plans to attain goals.

The facilitator and other participants in the small group breakouts serve as role models for this efficacy-building process. Bandura asserts that the perceived expertise and relevance of models is key to determining the magnitude of influence. As described under the hope input, when participants generate pathways, inventory resources required for goal accomplishment, and identify sub-goals as milestones or mini-goals to goal accomplishment, they have created an imaginal successful experience. This success in turn is modeled by participants for each other. Participants are able to visualize accomplishing each step toward their goal. In other words, in this micro-intervention, participants gain 'imaginal' task mastery experience to enhance their efficacy in the PsyCap development process.

## The Input of Resiliency Development

Targeted for development in the PCI are the three major recognized components of resiliency attributed to the work of positive psychologist Ann Masten (2001): **Asset factors, risks factors, and influence processes.** The assets refer to factors that increase levels of resiliency (e.g., a stable home and a solid education). Risk factors, on the other hand, are those factors that lead to lower levels of resilience such as an abusive home or a lack of mentors. Typically, both assets and risks are acquired at a young age and are predominantly stable over the course of one's adult life. However, Masten (2001) and others have found that these **resilience factors can be managed, developed, and accelerated in later life.** The most effective development strategies are based on **enhancing assets** (e.g., becoming more employable) and **proactively avoiding risky, potentially adverse events** (e.g., meeting critical deadlines).

The resiliency input into our PCI draws mainly from Masten's work and focuses on **developing and changing the participants' perception of influence through cognitive, emotional, and behavioral processes.** For example, in summarizing the clinical research, Coutu (2002) found that resilient people are characterized by a staunch view of reality. Thus, as the resilience input into our intervention strategy, participants identify **recent personal setbacks within their work domain.** This can be major (the firm is downsizing) or minor (I have two managers who want different things on project X). Participants are then instructed to write their immediate reactions to the identified setback. The facilitator then elaborates on examples of a staunch view of reality and an ideal resilient process for mentally framing a setback. Participants individually and in their groups then assess the realistic impact of their setback—**what is in their control, out of their control, and options for taking action.**

In affecting the perception of influence in building resiliency, cognitive processes are employed to frame setbacks in terms of **impact, control, and options.** Participants are asked to repeat/practice these new processes on additional personally relevant setbacks at work in order to reinforce learned cognitive processes which perpetuate the development of not only resiliency, but also 'realistic' optimism. Participants are encouraged to practice anticipating and addressing set backs associated with the personal goals set in the hope building process or with other events inside or outside of work. When

participants more accurately frame a personal setback in terms of true impact, control, and options, they are more apt to not only bounce back quickly from a setback, but may be able to attain levels even above where they started. Thus, going beyond the original level of performance after a setback is central to the resiliency input into the PsyCap development process.

## Preliminary Results Using the PCI

As the above discussion of the inputs into PsyCap development indicates, there is considerable overlap and resulting interactive impact among the various components of the PCI. Although the individual states are all intended to be affected by the design of our intervention, our research to date has found that PsyCap seems to be synergistic (Luthans et al., 2006). PsyCap appears to be a core construct where the whole is greater than the sum of its parts. This gestalt phenomena is also found in the way our micro-intervention is operationalized—the participants experience a result greater than the sum of the four components of the training. A major research initiative in our Gallup Leadership Institute (GLI) at the University of Nebraska is to test the micro-intervention as outlined above and the initial results have been very encouraging.

We initiated our research program using management students randomly assigned to experimental and control groups. These subjects' PsyCap was measured before and after the experimental and control interventions by our recently developed 24-item PsyCap questionnaire (PCQ). This PCQ has been found to be both reliable and predictive of performance and satisfaction across diverse samples (Luthans et al., 2006). The 1-hour micro-intervention given to the experimental groups closely followed the content and process of our PCI outlined above. This PCI significantly increased the participants level of PsyCap. The control groups, on the other hand, received a non-related intervention (the 'Desert Survival' exercise) and showed no increase in their level of PsyCap.

To move toward more external validity, we have also conducted interventions using practicing managers. In the first follow-up study, we used a cross-sectional sample of managers from all types of organizations who volunteered to participate in a 2 hour PCI. Their pre to post measured PsyCap significantly increased about the same (3 per cent) as the management student sample. Also, in an on-going study in a very large high-tech manufacturing firm, our initial PCI 2.5-hour session with a sample of engineering managers resulted in a slightly lower, but still significant, increase in their measured PsyCap. Longitudinal data for this latest field study is still being collected to determine the performance effects of this PCI.

## Potential Dollar Impact of PCI

Although still preliminary, results so far indicate that a very brief and focused intervention (PCI) may be able to increase participant's PsyCap. The percentage increase in PsyCap found in these studies to date may not seem very large, but utility analysis demonstrates this could result in competitive advantage. For example, drawing from recognized utility formulas used in human resource management and published data from the Forbes list of the top mid-sized firms (mean of \$1.7 billion in revenues and standard deviation of \$1.3 billion) the impact of a conservative 2 per cent increase in PsyCap we have calculated could potentially increase revenues by over \$10 million per year (Luthans, Youssef, & Avolio, in press). Obviously, many robust assumptions go into such calculations, but the

point is, even subtracting out the relatively minimal costs of a 2–3 hour micro-intervention session (e.g., the hourly cost of the participants and training overhead), the return on PsyCap development could potentially be dramatic, especially if the impact is sustainable.

Using such utility analysis, we could precisely calculate the potential return we obtained on our intervention study in the high-tech firm with the sample of 74 engineering managers. Following the guidelines suggested in the utility analysis literature that the cost of keeping an employee on the payroll (i.e., two times salary to account for benefits and some indirect expenses), as a conservative estimate of an employee's productivity or contribution, the actual per cent increase in PsyCap from the PCI we conducted, and the actual correlation between participants' PsyCap and their performance outcomes, we calculated a \$73 919 one-year impact. To get the return on investment from this PCI, we must calculate the per hour wages of the 74 participants' time in the 2.5-hour session times 2 to account for their benefits and indirect expenses ( $74 \times 2.5 \times \$50/\text{hour} \times 2 = \$18\,500$ ) plus the estimated facilitator/training overhead costs (\$1500). The return on this approximately \$20 000 investment in the PCI would be 270 per cent ( $73\,919 - 20\,000 / 20\,000$ ).

Although we realize that such utility calculations have many limitations, when compared to investment in economic and financial capital, these results demonstrate the potentially highly significant impact that PsyCap development may have on an actual application. In fact, if the same results could be obtained from our micro-interventions conducted on training groups of 100 members each throughout this very large high-tech firm that has about 170 000 employees and average \$62 500 in wages and salaries, using the same assumptions as above in terms of costs and 1-year impact, the calculated utility results would be astounding: Over a 100 million in value added and again well over a 200 per cent return on this massive PsyCap development investment.

## Conclusion and Future Research

We feel that our psychological capital intervention (PCI) is at the right stage to be a good fit for the intent of this 'Incubator' section of *JOB*. Our preliminary research results seem promising, and important for application, we are able to demonstrate dollar impact and very high return on investment of a newly emerging construct and micro-intervention. By the same token, we fully realize much more research is required (i.e., there is the need for incubation) before any definitive conclusions can be drawn.

In particular, besides the usual needs for replicating our intervention with other samples and other organizational and cultural contexts, future research needs to examine the impact that the PCI has on performance (and other types of outcomes such as wellness), over time. Another research question would be how does the PCI developing PsyCap compare to other traditional (e.g., job redesign or O.B. Mod.) and more recent (e.g., human capital competencies) interventions in terms of performance impact. Finally, there may be additional PsyCap components that need to be added to the present four as more research is accumulated. Nevertheless, although this and other research is needed, the construct of PsyCap and the micro-intervention described here to develop it seems at least worth 'incubating' for the future.

## Author biographies

**Fred Luthans** is the George Holmes University Distinguished Professor of Management in the Department of Management and Gallup Leadership Institute, University of Nebraska-Lincoln. A past

president of the Academy of Management, his current research revolves around positive organizational behavior and psychological capital.

**James B. Avey** is currently a PhD student in the Gallup Leadership Institute, University of Nebraska-Lincoln. He worked in industry for a few years as a human resources management professional after receiving his MBA and before entering the doctoral program.

**Bruce J. Avolio**, is the Clifton Chair in Leadership at the College of Business Administration at the University of Nebraska-Lincoln. He is also Director of the Gallup Leadership Institute, Co-Director of the UNL and Gallup MBA/MA program in executive leadership, and Director of the PhD program with a specialization in leadership in the College of Business Administration at UNL.

**Steven M. Norman** is completing his PhD in the Gallup Leadership Institute, University of Nebraska-Lincoln. He received his MBA from the University of Colorado-Colorado Springs and held various managerial positions in the IT and financial services industries.

**Gwendolyn M. Combs** is an Assistant Professor of Management at the University of Nebraska. She received her MBA from Washington University in St. Louis, PhD from the University of Nebraska-Lincoln, and held human resources leadership positions in public organizations.

## References

- Coutu, D. L. (2002). How resilience works. *Harvard Business Review*, 80(5), 46–55.
- Luthans, F. (2002a). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, 23, 695–706.
- Luthans, F. (2002b). Positive organizational behavior: developing and managing psychological strengths. *Academy of Management Executive*, 16(1), 57–72.
- Luthans, F., Avolio, B. J., Norman, S. M., & Avey, J. B. (2006). Psychological capital: measurement and relationship with performance and satisfaction. *Gallup Leadership Institute Working Paper*. Lincoln, NE: University of Nebraska.
- Luthans, F., Avolio, B. J., Walumbwa, F. O., & Li, W. (2005). The psychological capital of Chinese workers: exploring the relationship with performance. *Management and Organization Review*, 1, 249–271.
- Luthans, F., & Youssef, C. M. (2004). Human, social, and now positive psychological capital management. *Organizational Dynamics*, 33, 143–160.
- Luthans, F., Youssef, C. M., & Avolio, B. J. (in press). *Psychological capital*. Oxford, UK: Oxford University Press.
- Masten, A. S. (2001). Ordinary magic: resilience processes in development. *American Psychologist*, 56, 227–239.
- Snyder, C. R. (2000). *Handbook of hope*. San Diego: Academic Press.
- Wright, T. A. (2003). Positive organizational behavior: an idea whose time has truly come. *Journal of Organizational Behavior*, 24, 437–442.