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Positive Organizational Behavior in the Workplace: The Impact of Hope, Optimism, and Resilience

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Abstract

Drawing from the foundation of positive psychology and the recently emerging positive organizational behavior, two studies (N = 1,032 and N = 232) test hypotheses on the impact that the selected positive psychological resource capacities of hope, optimism, and resilience have on desired work-related employee outcomes. These outcomes include performance (self-reported in Study 1 and organizational performance appraisals in Study 2), job satisfaction, work happiness, and organizational commitment. The findings generally support that employees' positive psychological resource capacities relate to, and contribute unique variance to, the outcomes. However, hope, and, to a lesser extent, optimism and resilience, do differentially contribute to the various outcomes. Utility analysis supports the practical implications of the study results.

Keywords: positive organizational behavior, hope, optimism, resilience

Following the lead of positive psychology, that is, “what is good about life is as genuine as what is bad and therefore deserves equal attention” (C. Peterson, 2006: 4), is the recently emerging field of positive organizational behavior, or simply POB. Just as positive psychology does not claim to have discovered the importance of positivity to people, POB also recognizes that over the years there have been many positive constructs in organizational research such as positive affectivity (PA), positive reinforcement, procedural justice, job satisfaction and commitment, prosocial and organizational citizenship behav-

iors, core self-evaluations, and many others. Instead, positive psychology, and now its application to the workplace as POB, simply attempts to give a renewed emphasis (not a revolution or paradigm shift) to the importance of a positive approach.

Although this recent positive emphasis in organizational behavior is based on traditional theory-building processes and research methodologies, there is an attempt to study new, or at least relatively unique to the workplace, positive psychological resource capacities. To date, there have been at least two major parallel, but complementary, developments identified with this positive approach to the workplace—POB (see Luthans, 2002a, 2002b, 2003; Luthans & Youssef, 2007a; Luthans, Youssef, & Avolio, 2007; Nelson & Cooper, 2007; Wright, 2003) and positive organizational scholarship (POS; Cameron & Caza, 2004; Cameron, Dutton, & Quinn, 2003). The theoretical foundation for the studies reported in this article are drawn more from the emerging POB framework than from POS.

After first providing what is specifically meant by POB as used as the foundation for this study and how it differs from other positive approaches, attention turns to three important positive psychological resource capacities that meet the defined POB criteria—hope, optimism, and resilience. Discussion of the reasons for choosing these three resource capacities and their theoretical development is followed by a conceptualization of the performance outcomes that are used in the studies. The balance of the article reports the two studies that test the theory-driven hypotheses.

Theoretical Foundation for POB

Luthans (2002b) defines POB 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” (p. 59). Besides positivity, to be included as a psychological resource capacity within this defined POB framework, it must meet the following criteria: (a) The capacity must be theory and research based and validly measurable, and (b) the capacity must also be “state-like” (i.e., open to change and development) and have a demonstrated performance impact (Luthans, 2002a, 2002b; Luthans, Youssef, et al., 2007). These criteria separate POB from other related, yet distinct, positive approaches in several important ways. As pointed out by C. Peterson and Seligman (2004), such definitional inclusion criteria establish the working boundaries necessary for an emerging field to develop its research and practice. Other positive approaches (e.g., POS) have different purposes. The above POB definitional criteria are used here to differentiate and clarify the domain of this study.

To illustrate the distinctions among POB and other positive approaches, the scientific criteria of being theory and research based and measurable distinguish POB from the numerous positively oriented, but unsubstantiated, popular self-help books and management fads. Moreover, distinguishing POB from most of positive psychology and other positive constructs in traditional organizational behavior and POS is that POB exclusively focuses on psychological resource capacities that are state-like, which means that the POB capacity is readily open and malleable to change and development (Avolio & Luthans, 2006; Luthans, 2002a, 2002b; Luthans & Youssef, 2007a; Luthans, Youssef, et al., 2007).

By contrast, the other positive approaches and constructs most often depend on dispositional, relatively stable, more trait-like characteristics that tend to be developed (a) over time, across one's lifespan (b) through the presence of the appropriate enabling factors and the absence of various inhibiting factors or (c) through long-term professional interventions and intensive treatments (Linley & Joseph, 2004; C. Peterson & Seligman, 2004). Such approaches to development do not as readily lend themselves to the pace of change, limited time, and scarce financial resources that characterize today's workplace.

Similar to other conceptualizations in the field of psychology, there seems to be recognized degrees of stability and more of a state-trait continuum rather than a construct being either stable or not stable, either a trait or state. For example, C. Peterson (2006) notes that PA proves highly stable across weeks, months, years, and even decades. Thus, PA, along with recognized positive personality dimensions such as conscientiousness and core self-evaluations such as self-esteem, would seem to be placed at least toward the trait side of the continuum. Perhaps moving a bit more toward the middle of the continuum, but still on the trait side, would be the POB construct of psychological well-being (PWB). For example, Wright and Bonett (2007) note that although PWB exhibits some measure of temporal stability, it has also been shown to be influenced by many environmental events. Wright (2005) proposes that "trait-like" PWB is a more reflective operationalization of the happiness construct in relation to the happy worker-productive worker thesis. Specifically, he makes the case for trait-like PWB compared to other operationalizations such as (a) more dispositional traits such as extraversion, emotional stability, or PA; (b) more transient states such as positive mood or lack of emotional exhaustion; and (c) highly contextualized constructs such as job satisfaction.

Importantly, just as Wright uses the term *trait-like* to represent PWB, Luthans and colleagues have used the term *state-like* to distinguish the positive capacities in POB from just positive "states" per se (see Avolio & Luthans, 2006; Luthans, 2002a, 2002b; Luthans & Youssef, 2007a; Luthans, Youssef, et al., 2007). The traditionally recognized states are momentary and thus very changeable (e.g., moods, positive emotions, or traditionally defined happiness). Such states represent one extreme of the state-trait continuum. However, at least in the short run, the state-like positive psychological capacities in POB tend to be more stable and to not change with each momentary situation as would the more "pure" states such as positive moods. As indicated above, the opposite end of the state-trait continuum would be the very stable "hard-wired" traits such as intelligence, talents, and positive heritable characteristics. In this continuum type of conceptualization, moving in from the extreme trait end would be the still relatively stable but not totally fixed trait-like characteristics, such as personality, core self-evaluations, and, in particular, PWB. Thus, the state-like positive psychological resource capacities are more malleable and open to change and development than are the hard-wired positive traits and the trait-like positive constructs. Moreover, the state-like positive capacities are still more stable than purely momentary states (Avolio & Luthans, 2006; Luthans, 2002a, 2002b; Luthans & Youssef, 2007a; Luthans, Youssef, et al., 2007).

Empirically, trait (e.g., intelligence or personality) characteristics can be depicted by very high, nearly perfect test-retest correlations (see Conley, 1984). On the other hand, preliminary research indicates that state-like positive psychological resource capacities

exhibit lower (yet still significant) test-retest correlations than do trait-like personality and core self-evaluations dimensions (Luthans, Avolio, Avey, & Norman, 2007). Besides the test-retest evidence supporting the state-like nature of POB capacities, there is also beginning empirical evidence that the POB capacities of organizational participants can be developed in short (e.g., 2 hours), highly focused training interventions (Luthans, Avey, Avolio, Norman, & Combs, 2006; Luthans, Avey, & Patera, in press).

Over the years, empirical evidence has supported that positive states (e.g., positive emotions) and state-like constructs (e.g., specific self-efficacy) have a relationship with and impact on organizational behaviors and outcomes (see Stajkovic & Luthans, 1998). These states tend to be more spontaneous and thus are often induced by situational factors. On the other hand, although positive traits and trait-like characteristics may be predictive of more transient positive states, the contribution of traits to organizational behaviors and performance and attitudinal outcomes generally tends to be more indirect in nature and interactive with the more direct impact of positive states and state-like characteristics (Cropanzano, James, & Konovsky, 1993; George, 1991; Ilies, Scott, & Judge, 2006; Wright, 2005; Wright, Cropanzano, & Meyer, 2004). Based on these empirical findings and others, Wright (1997, 2007) emphasizes the integral role of time as a main effect variable in organizational behavior research and proposes stability over 6 months as an operationalization of the temporal demarcation between traits and states that would help future research better understand the contribution of time in organizational research (for further analyses of state-trait issues, also see B. P. Allen & Potkay, 1981; Chamberlain & Zita, 1992; Chen, Whiteman, Gully, & Kilcullen, 2000; Cropanzano & Wright, 1999).

In a similar vein, this state-like nature of POB capacities can also be used to distinguish it from POS, which tends to focus mostly on the creation of an optimum range of organizational factors that can help facilitate the necessary upward spirals for positive change (Cameron & Caza, 2004; Cameron et al., 2003). Besides the long-term, incremental nature of the processes involved in the development of such upward spirals, the POS approach also tends to focus more on the organizational or institutional and macro level as opposed to the individual and micro level of analysis that characterizes the psychological capacities that meet the POB inclusion criteria (see Cameron & Caza, 2004; Cameron et al., 2003; Fineman, 2006; Roberts, 2006). Finally, most of the character strengths and virtues identified in positive psychology and POS are intended to have terminal value in and of themselves and do not necessarily have an impact on work-related outcomes, as in the case of POB (see Cameron et al., 2003; C. Peterson & Seligman, 2004).

The Positive Psychological Resource Capacities Selected for Study

Although several positive psychological capacities are discussed under the general domain of POB (see Luthans & Youssef, 2007a; Luthans, Youssef, et al., 2007; Nelson & Cooper, 2007), this study focuses on three positive psychological capacities that specifically meet the above definition of POB and the inclusion criteria of positivity, theory, research, valid measurement, state-like and open to development, and, especially, applicability and contribution to work-related outcomes. The three POB criteria-meeting capacities selected

for this study are hope, optimism, and resilience. It is important to emphasize again, however, that these three should not be viewed as a comprehensive, exhaustive taxonomy of what constitutes POB. Instead, they are simply intended to be three heretofore largely overlooked positive resource capacities that we propose may make a contribution to the better understanding of POB as defined here and have applicable performance impact for today's organizations.

Based on Snyder's (2000) theory building and research, *hope* is defined as "a positive motivational state that is based on an interactively derived sense of successful (1) agency (goal-directed energy) and (2) pathways (planning to meet goals)" (Snyder, Irving, & Anderson, 1991: 287). Based on this definition, hope's agency or "willpower" component provides the determination to achieve goals, whereas its pathways or "waypower" component promotes the creation of alternative paths to replace those that may have been blocked in the process of pursuing those goals. Hope has been shown to be applicable and to relate to performance in various domains, including the workplace (Adams et al., 2002; Curry, Snyder, Cook, Ruby, & Rehm, 1997; Luthans, Avolio, Walumbwa, & Li, 2005; Luthans & Jensen, 2002; Luthans, Van Wyk, & Walumbwa, 2004; S. J. Peterson & Luthans, 2003; Snyder, 1995b; Youssef & Luthans, 2006). Importantly, both dispositional and state hope are recognized in the literature and have distinct measures (Snyder, 2000; Snyder et al., 1996). Practical approaches for developing hope include setting challenging "stretch" goals, contingency planning, and regoaling when necessary to avoid false hope (Luthans, Avey, et al., 2006; Snyder, 2000). Thus, hope meets the POB inclusion criteria.

Second, *optimism* is defined by Seligman (1998) as an attributional style that explains positive events in terms of personal, permanent, and pervasive causes and negative events in terms of external, temporary, and situation-specific ones. A pessimistic explanatory style does the opposite, thus undermining the favorable impact of successes and exacerbating the destructive potential of failures. Particularly relevant to POB is realistic (Schneider, 2001), flexible (C. Peterson, 2000) optimism, which can be learned and developed through recognized approaches such as leniency for the past, appreciation for the present, and opportunity seeking for the future (Schneider, 2001; also see Luthans, Avey, et al., 2006). Finally, optimism can be validly and reliably measured (Lopez & Snyder, 2003; Scheier & Carver, 1985, 1992; Shifren & Hooker, 1995) and has a recognized performance impact in work settings (Luthans et al., 2005; Seligman, 1998), thus meeting the POB inclusion criteria.

The third POB criteria-meeting capacity is *resilience*, which Luthans (2002a) defines as "the developable capacity to rebound or bounce back from adversity, conflict, and failure or even positive events, progress, and increased responsibility" (p. 702). Resilience allows for not only reactive recovery but also proactive learning and growth through conquering challenges. In other words, resilience may incorporate both negative setbacks and positive but potentially overwhelming events. Although resilience is just emerging in the organizational behavior literature, POB has adopted a cross-disciplinary perspective, drawing from the established theory building and empirical findings in clinical and developmental psychology. For example, Masten's (2001; Masten & Reed, 2002) research supports that resilience can be developed through asset-focused, risk-focused, and process-focused strategies that are relevant and applicable to the workplace. Bonanno (2005) also supports that state-like resilience can be developed through training interventions.

Finally, resilience is measurable (e.g., Block & Kremen, 1996; Wagnild & Young, 1993) and has been shown to be applicable and related to performance in the workplace (Coutu, 2002; Harland, Harrison, Jones, & Reiter-Palmon, 2005; Luthans et al., 2005; Luthans, Vogelgesang, & Lester, 2006; Waite & Richardson, 2004; Worline et al., 2002; Zunz, 1998).

The Unique Contributions of Hope, Optimism, and Resilience

To date, convergent and discriminant validity of the various POB capacities have been supported both conceptually (Avolio & Luthans, 2006; Luthans, Avey, et al., 2006; Luthans & Jensen, 2002; Luthans & Youssef, 2004; Luthans, Youssef, et al., 2007; Snyder, 2002) and empirically (Bryant & Cvenegros, 2004; Carifio & Rhodes, 2002; Luthans, Avolio, et al., 2005; Luthans, Avolio, et al., 2007; Magaletta & Oliver, 1999). However, hope, optimism, and resilience also share some characteristics that make it necessary to elaborate on some of the similarities and differences between them to make the case for their being distinctive positive constructs and thus the utility of including all three in the current study. For example, in line with the POB inclusion criteria that hope, optimism, and resilience share, not only are all three capacities positive but they also share self-directed motivating mechanisms and processes that may have an impact on job performance and desired work attitudes.

Besides the commonalities, salient conceptual distinctions among hope, optimism, and resilience also exist, making the contribution of each of these capacities unique and, we propose, important in today's workplace. Conceptually, the hope construct draws its uniqueness from the equal, additive, and iterative contributions of its agency and pathways components (Snyder, 1995a). Although the agency or willpower component of hope is shared with other positive psychological capacities such as optimism, the pathways or waypower component is distinctive of hope. It allows for the rekindling of determination and willpower even when faced with blockages, as additional alternative pathways have been proactively determined. The resultant boost in willpower in turn motivates the search for still further alternate pathways in light of the realities of the new situation. This hope process allows blockages or problems to be perceived as challenges and learning opportunities.

The distinctiveness of optimism can be mainly found in its conceptual explanation of positive and negative events. Although hope primarily focuses on internal, self-directed agency and pathways, optimism adopts a broader perspective. The attribution mechanisms of optimism, especially for negative events and failures, are not limited to the self but also include external causes such as other people or situational factors (Seligman, 1998). Thus, realistic, flexible optimism can help protect even a very hopeful individual from striving for unrealistic goals. It can mitigate a self-inflicted sense of guilt and personal responsibility when the constant emergence and escalation of blockages and problems threatens to render a goal unachievable.

There are several unique characteristics that distinguish resilience from hope, optimism, and other positive capacities. For example, resilience recognizes the need to take both proactive and reactive measures in the face of adversity. Reactively, resilience uniquely recognizes the potential that setbacks, traumas, and even positive but overwhelming events can have a destructive impact, even on the most hopeful and optimistic individuals, and hence

the need to bounce back. The capacity for resilience promotes the recognition and acknowledgement of such impact, allowing the affected individual the time, energy, and resource investment to recover, rebound, and return to an equilibrium point. Proactively, resilience also allows for the use of setbacks as "springboards" or opportunities for growth beyond that equilibrium point (Bonanno, 2004; Luthans, 2002a; Luthans, Vogelgesang, et al., 2006; Reivich & Shatte, 2002; Ryff & Singer, 2003; Sutcliffe & Vogus, 2003; Tedeschi, Park, & Calhoun, 1998; Youssef & Luthans, 2005). Thus, resilience places a unique positive value on risk factors that may otherwise be viewed as threats that increase the probability of negative outcomes or decrease the probability of positive ones (Masten, 2001).

The focus of resilience also goes beyond just the additive sum of one's assets and risk factors. It incorporates the adaptational processes and mechanisms that combine assets and risk factors in a cumulative, interactive pattern (Egeland, Carlson, & Sroufe, 1993; Sandau-Beckler, Devall, & de la Rosa, 2002). Hope and optimism best apply to situations that can be approached with a plan (or at least a set of contingency plans and alternative pathways) and can be reasonably explained through identifiable causes. On the other hand, resilience recognizes the need for flexibility, adaptation, and even improvisation in situations predominantly characterized by change and uncertainty. It goes beyond the successes and failures of the current situation. The resilience capacity uniquely searches for and finds meaning despite circumstances that do not lend themselves to planning, preparation, rationalization, or logical interpretation (Coutu, 2002).

Related support for the existence of distinct contributions from the various positive capacities can also be drawn from psychological resources theories (for a comprehensive review, see Hobfoll, 2002). For example, integrated resource models treat individual capacities as cumulative sets or "resource caravans." These individual capacities or resources coexist. They are developed, manifested, and utilized as a collective rather than in isolation. The richness and reliability of one's "resource reservoirs:" rather than possessing one specific resource, become critical in successfully performing in a specific domain, event, or challenge and for general health and well-being (Hobfoll, 2002). There are key resource theories that are particularly relevant and supportive of this study's selected positive capacities making distinctive contributions. For example, Thoits (1994) specifically identifies optimism, resilience, and degree of goal pursuit (an integral component of hope) as uniquely essential for managing and adapting other resources to achieve favorable outcomes. In other words, the positive psychological capacities of hope, optimism, and resilience may be important for performance beyond what may be accounted for by any one of them.

To take a practical example, an ambitious manager may capitalize on his or her optimistic explanatory style to attribute an unfavorable situation, such as an undesirable transfer, to external (e.g., the department he or she is leaving was overstaffed), temporary (e.g., once the economy recovers, I can go back), and situation-specific (e.g., it is just a one-time event) causes. He or she may even interpret the situation more positively, attributing it to internal causes (e.g., they must have needed someone really good, and that's why they transferred me), therefore perceiving the change as an opportunity for additional exposure and growth. As a result, he or she is more likely to have the resilience to bounce back from the undesirable assignment and possibly even beyond by using it as a stepping stone for new networking and advancement. Most importantly, he or she is likely to use his or her hope pathways to find creative ways to apply his or her successful past experiences to the new position.

Consequently, the outcome of this situation cannot be solely explained by the relationship among any one of this manager's psychological capacities of hope, optimism, and resilience and his or her performance but rather attributable to the combined, collective contributions of all three of his or her positive psychological capacities, with each capacity possibly adding a unique perspective in relation to the desired outcomes.

Further support for the unique contribution of hope, optimism, and resilience to performance and other desirable attitudinal outcomes can be found in Fredrickson's (2001, 2003) broaden-and-build theory. Fredrickson's research supports that positivity broadens one's spectrum of problem-solving skills, adaptive mechanisms, and thought-action repertoires while building inventories and buffers of intellectual, physical, social, and, most importantly, psychological resources such as optimism, resilience, and goal orientation (critical for the hope capacity). This in turn can lead to upward spirals of performance, adaptation, and wellbeing, even when hardships are encountered (Fredrickson & Joiner, 2002). This positivity applied to the three psychological resource capacities may be limited not only to their direct positive impact on performance but also in terms of "undoing" some of the destructive impact of negativity. The result is an upward spiral of progress and flourishing beyond what can be explained by any single psychological resource or event and beyond any substitution or "compensation" that one resource can offer for the lack of another.

In line with Fredrickson's (2001, 2003) broaden-and-build theory, Wright (2005) has more directly made the case for the contribution of positivity to building and developing psychological resources and consequently to enhancing job performance. He proposes that individuals who experience a large number and variety of "positive-based emotions" are more capable of broadening and building themselves into more optimistic and resilient employees. The "broadening" contribution of positive emotions can enhance "momentary thought-action experiences," whereas the "building" part contributes to the accumulation of one's "personal resource arsenal" (Wright, 2003; Wright, 2005, 246-247). Such a perspective may be more effective in conceptualizing, operationalizing, and testing the interesting and long-studied happy worker-productive worker thesis than many alternative approaches, which may have provided equivocal findings regarding the relationship among various positive cognitions and emotions and job performance in the past (for a comprehensive review, see Wright, 2005). Indeed, recent empirical findings support PWB as a moderator of the relationship between job satisfaction and job performance (Wright, Cropanzano, & Bonett, in press) and the relationship between job satisfaction and employee turnover (Wright & Bonett, 2007).

Conceptualizing Desirable Work-Related Outcomes

Besides the above theory building needed for understanding the study variables of hope, optimism, and resilience, attention must also be given to conceptualizing the work-related outcome variables. In fact, we would suggest that one of the most critical challenges in both organizational research and practice is conceptualizing, operationalizing, and measuring job performance. This performance-measurement problem significantly contributes to the difficulties often encountered in consistently testing theory-driven hypotheses (Barrick & Mount, 2000; DeNisi & Gonzalez, 2000; Schmidt & Hunter, 2000).

Performance-measurement issues also affect decision making and resource allocation by management practitioners through the obstacles they pose in the process of quantifying and comparing the contributions of alternative human resource management systems and interventions (Cascio, 1991).

The problem of obtaining objective and consistent performance measures is being increasingly addressed by organizational researchers. Empirically, when objective performance measures are unavailable, or when the existing measures are inaccurate or simply not able to be disclosed, using multiple measures is offered as the best alternative. Even if some of these measures are subjective or self-reported, it has been found that multiple measures tend to be more consistent with those of objective performance measures (Chakravarthy, 1986; Dess & Robinson, 1984). A recent comparison that utilized both meta-analysis and structural equation modeling also showed that although focal or "in-role" performance is often the criterion of choice for researchers, a broader, more Integrative perspective of behavioral criteria has stronger predictive power and offers better fitting models (Harrison, Newman, & Roth, 2006).

Conceptually, the integration of multiple indicators of work-related outcomes is more likely to capture overall performance and effectiveness in a broader, holistic sense (Harter, Schmidt, & Hayes, 2002; Harter, Schmidt, & Keyes, 2003), which is particularly relevant to positivity research (Roberts, 2006). Thus, utilizing a combination of work-related performance and attitudinal outcomes, including those with established measures and demonstrated relationships with performance, and self-reported, more subjective ones, may represent an effective approach to conceptualizing and testing the relationship between positive psychological resource capacities and work performance. This may also be true given the tendency toward a narrow, short-term orientation and other limitations of existing performance measures often found in today's workplace.

Several potential outcomes, in addition to direct, objectively measured performance, such as productivity, work sampling, organizationally administered performance appraisals, merit-based salary increases, and rated performance by supervisors and self, have been explored as relevant to work-related outcomes in general and, more specifically, to the desirable performance impact that positive constructs can have in the workplace (see Luthans, Avolio, et al., 2005; Luthans, Avolio, et al., 2007; Wright, 2005). In this study, we used three work-related attitudinal outcomes, in addition to job performance, to capture a broad, holistic, and future-oriented perspective of desirable work-related outcomes. We propose that such an approach of using both performance and attitudinal outcomes helps in the understanding and study of the contributions of positivity in general and, more specifically, the impact of employees' positive psychological resource capacities of hope, optimism, and resilience in today's workplace. The three work-related attitudes selected for this study are job satisfaction, work happiness, and organizational commitment.

A number of years ago, Chakravarthy (1986) demonstrated that traditional performance measures may be insufficient for measuring strategic performance. He highlighted the utility of incorporating satisfaction measures of employees. Furthermore, research supports that positive personality traits such as conscientiousness and emotional stability (Judge, Higgins, Thoresen, & Barrick, 1999), and PA (Ilies et al., 2006), are positively related to job satisfaction, which in turn is positively related to performance (for comprehensive reviews, see Judge, Thoresen, Bono, & Patton, 2001; Wright, 2005). Also, in line

with a broader, more proactive perspective of desirable work outcomes, job satisfaction has been supported as a predictor of organizational citizenship behavior (Ilies et al., 2006; Konovsky & Organ, 1996; Organ & Konovsky, 1989; Organ & Ryan, 1995). Those with high organizational citizenship behaviors voluntarily go above and beyond the immediate tasks and short-term expectations often emphasized by the measured and rewarded aspects of typical conceptions of job performance but may be insufficient to predict long-term, sustainable organizational success. In other words, job satisfaction would seem to be a particularly relevant outcome to assess in positivity research.

The second attitudinal outcome we use in this study is work happiness. Happiness is generally recognized as a broader construct than job satisfaction. It encompasses positive cognitions, and emotions, that result in a subjective sense of well-being and general life satisfaction (Diener, 2000). Although conceptualized and tested in numerous ways, Wright (2005) makes the case for PWB as the most relevant operationalization of happiness, which is also in line with positive psychology and its emphasis on health, well-being, flourishing, and actualizing one's potential. Well-being is related to the perception, emotional interpretation, and cognitive processing of events and situations rather than to actual conditions and happenstances (Luthans, 2002b), making it particularly relevant to a broadened conceptualization of work-related outcomes as used in this study. Happiness and life satisfaction have been found to be related to physical and mental health, personal striving, and coping with stress (Diener & Fujita, 1995; Emmons, 1992; Folkman, 1997; Fordyce, 1988). Happiness has also been found to be related to satisfaction with important life domains (Diener, 2000; Diener, Suh, Lucas, & Smith, 1999), including being a predictor of job satisfaction (e.g., Judge & Hulin, 1993; Judge & Watanabe, 1993; Tait, Padgett, & Baldwin, 1989). This considerable research supports including work happiness as a component in the broad definition of work-related outcomes used in this study.

The third attitudinal outcome used is organizational commitment. Like job satisfaction, several recent meta-analyses support that organizational commitment is positively related to performance (e.g., Mathieu & Zajac, 1990; Riketta, 2002; Wright & Bonett, 2002) and organizational citizenship behavior (Organ & Ryan, 1995). Commitment has also been found to be negatively related to tardiness, absenteeism, and turnover (Harrison et al., 2006). According to N. J. Allen and Meyer (1990), employees with strong affective commitment remain with an organization because they want to, but those with a strong continuance commitment stay because they need to, and those with strong normative commitment stay because they feel they ought to. This three-pronged conceptualization of organizational commitment makes it a particularly relevant outcome for this study because it captures the cognitive, affective, social, and higher order dimensions often emphasized in positivity and POB research (Luthans, Youssef, et al., 2007).

Following our earlier example of the performance impact that hope, optimism, and resilience may offer to the ambitious manager with an undesirable transfer, we propose that the positivity of this individual is likely to contribute not only to higher job performance in his or her new role but also to more satisfaction, greater work happiness, and higher organizational commitment. Hope can give this manager the agency and pathways to perceive his or her new position as an opportunity for broadening his or her perspective and experience set and therefore higher determination to find innovative ways to capitalize on such an opportunity. An optimistic explanatory style can also lead him or her

to personally take more credit or assume less guilt and broaden his or her perspective to more accurately assess the external, temporary, and situational contingencies of the event, Resilience can help him or her bounce back and beyond through more effective coping mechanisms and more strategic behaviors that can be conducive to growth, development, and future advancement, Thus, it would be limiting to view the outcomes of such a situation for the hopeful, optimistic, and resilient manager only in terms of his or her immediate performance in his or her new assignment. Positively viewing, capitalizing on, learning from, and integrating new experiences can enhance job satisfaction through perceptions of job enrichment and self-actualization, They can lead to more subjective evaluations of happiness and well-being, not only in the new job role but also in relation to quality of life in general. Such positive appraisals, broadened perspective, and future orientation may lead to higher overall commitment to the organization, even beyond what may seem to be unfavorable about the immediate situation and job requirements.

Given the broad, holistic, and future-oriented perspective recommended for positivity research and adopted for this study and the conceptual theory-building and empirical results to date supporting the complementary nature of job performance, job satisfaction, work happiness, and organizational commitment as desirable work-related outcomes that can be conducive to long-term performance and sustainable, human-based organizational competitive advantage, we use these four variables as our outcome study variables. The theoretical foundation and prior empirical results discussed so far drive the below-stated hypotheses for the studies to test.

Hypothesis 1: Employees' hope, optimism, and resilience are positively related to the work-related outcomes of job performance, job satisfaction, work happiness, and organizational commitment.

Hypothesis 2: Employees' hope, optimism, and resilience each contribute additional unique variance in relation to the work-related outcomes of job performance, job satisfaction, work happiness, and organizational commitment.

Method

Sample Specifics

The sample for the first study consisted of a convenience sample of 1,032 employees from a wide range of positions in 135 midwestern organizations. These organizations were from a broad range of industries that included manufacturing (9%), services (62%), and public sector and nongovernmental organizations (NGOs) (29%). Participating organizations widely varied in size. Participants were 44% male and 56% female. Three fourths of the study participants identified themselves as Caucasian, but other ethnic groups (Asian, African American, and Hispanic) were also represented. Participant ages ranged from 19 to 74 years ($M = 31$, $SD = 11.89$), with 4 to 26 years of education ($M = 15.81$, $SD = 2.41$) and 6 months to 41 years of tenure with the organization ($M = 5.17$, $SD = 6.54$). These variables were controlled for in this study.

The sample for Study 2 consisted of a convenience sample of 232 employees, from a wide range of positions, reporting to 41 managers, from 32 midwestern organizations, in

a broad range of industries that included manufacturing (23%), services (47%), and public sector and NGOs (30%). Participating organizations widely varied in size. Participating employees were 53% male and 47% female. Of the participating employees, 84% identified themselves as Caucasian, but other ethnic groups (Asian, African American, and Hispanic) were also represented. Ages of participating employees ranged from 23 to 74 years ($M = 40.93$, $SD = 12.22$), with 10 to 25 years of education ($M = 15.41$, $SD = 2.50$) and 1 to 38 years of tenure with the organization ($M = 8.09$, $SD = 6.97$). These variables were controlled for in this study.

Procedures

In Study 1, employees from a wide variety of organizations were invited to participate in a study on "assessing employees' feelings and thoughts, and how they affect their performance." Data were collected from all consenting employees ($N = 1,032$) using a survey that included published standardized measures of hope, optimism, resilience, job satisfaction, work happiness, organizational commitment, and self-reported performance (all described next). The criteria specified for being eligible to participate in this study were at least 6 months of tenure in their present organization and having received at least one formal performance review. These criteria were used to ensure that the responses reflected the relationships between the employees' psychological resource capacities and work-related outcomes in the current organization and that the self-reported assessments of performance were grounded in actual experience (including the criterion that they had received feedback from at least one performance review in their present organization).

In Study 2, only organizations that clearly utilized, and were willing to fully share with the researchers, a formal performance appraisal system were included. This criterion was used to increase the objectivity and obtain another source of performance data. Along with a letter of commitment, consenting managers provided detailed descriptions of the performance appraisal systems utilized in their organizations, including sample copies of the forms used. Managers also supplied the date of and performance data based on the most recent performance review with every one of their associates who were eligible to participate in the study. To ensure anonymity, the performance ratings were match coded with copies of a survey, which included the standardized measures of hope, optimism, resilience, job satisfaction, work happiness, and organizational commitment. These coded surveys were distributed by the managers to their eligible associates. We then collected the completed surveys from all consenting employees within two weeks and rematched the surveys with performance data. This procedure was utilized to minimize common rater effects (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Participants were informed that the purpose of the study was "to study the feelings and thoughts that managers and employees experience, and how they relate to the ways they perform in their jobs." Eligibility for participation in the study required both the manager and the employee to have been employed full-time in their current capacities for at least 1 year. This criterion was specified to ensure that the responses reflected the relationships between the employees' psychological capacities and work-related outcomes in the current position and that the performance data reflected exposure and relationship between the manager and the employee for a reasonable period.

Measures

The psychological resource capacities hypothesized to contribute to work-related outcomes were hope, optimism, and resilience. Hope was measured using Snyder et al.'s (1996) 6-item, 8-point Likert-type State Hope Scale. Examples of scale items include "At the present time, I am energetically pursuing my goals" (agency) and "If I should find myself in a jam, I could think of many ways to get out of it" (pathways). Optimism was measured using Scheier and Carver's (1985, 1992) 12-item, 5-point Likert-type Life Orientation Test, as modified by Shifren and Hooker (1995) to reflect the state-like nature of optimism. Sample items of this scale include "In uncertain times, I usually expect the best" and "If something can go wrong for me, it will" (reverse scored). Resilience was measured using Block and Kremen's (1996) 14-item, 4-point Likert-type Ego-Resiliency Scale. "I enjoy dealing with new and unusual situations" is an example of the items utilized in this scale. Each of these published standard scales has established psychometrics and substantial empirical support. The Cronbach alphas for each of the three measures for the two studies were as follows: hope (.87, .84), optimism (.78, .79), and resilience (.78, .77).

As described earlier, measured work-related outcomes included performance, job satisfaction, work happiness, and organizational commitment. In the first study, employee performance was assessed using a single self-reported item asking participants to rank their performance relative to people they know in similar positions on a 10-point scale. In Study 2, the utilization of a formal performance appraisal system was a prerequisite for participating in the study. Managers supplied the date and results of the most recent performance review with every one of their associates. These data provided organization-generated objective performance ratings of the Study 2 participants.

In both studies, a 3-item, 7-point Likert-type scale, adapted from Oldham and Hackman's (1980) measure, was used to assess employee job satisfaction. This approach is also in line with Judge's extensive research on job satisfaction and is consistent with the measures generally utilized in his studies (Judge & Hulin, 1993; Judge & Watanabe, 1993). Fordyce's (1988) standardized measure of happiness, which measures the magnitude (on an anchored 10-point scale) and the frequency (percentage of time) of happiness was used in both studies to measure work happiness. The scale was slightly adapted by adding the words at work where relevant to capture work happiness rather than general well-being. Employees' organizational commitment was assessed using N. J. Allen and Meyer's (1990) 24-item, 7-point Likert-type commitment measure. The scale has established validity and reliability (Meyer, Allen, & Gellatly, 1990). The scale captures all three widely recognized components of organizational commitment: affective, continuance, and normative. Again, each of these attitudinal scales has established psychometrics and substantial empirical support. The Cronbach's alphas for each of the three standard work attitude measures for the two studies, respectively, were as follows: job satisfaction (.87, .86), work happiness (.87, .88), and organizational commitment (.82, .81).

Finally, as a consistency check and to assess same-source bias in Study 1, the direct managers of a subsample of more than one third ($n = 384$) of the 1,032 employees who participated were asked to rate their associates' satisfaction and commitment on a 10-point scale. These managers' ratings were positively correlated with the associates' responses to the standardized job satisfaction and organizational commitment scales ($p < .01$).

Control Variables

Individual-level demographic factors such as gender, ethnic group, age, education, and tenure were controlled for because they may have systematic relationships with the participants' psychological resource capacities or work-related outcomes. For example, human capital variables such as education and work experience have been shown to be positively related to performance (Tesluk & Jacobs, 1998). Age has also been found to contribute to the development of various positive psychological capacities over one's lifespan, and some systematic differences have been recently explored among different genders and ethnic groups, although the research findings are equivocal in this area (for reviews of those issues in relation to various psychological capacities, see C. Peterson & Seligman, 2004).

We also controlled for organizational size and the industry sector of the organization (manufacturing, services, or public sector or NGO) to isolate any systematic potential impact for such macro-level factors on the study variables (for reviews of such macro-level issues in relation to various positive concepts, see Cameron et al., 2003). In addition, given the positivity that characterizes the study variables, in Study 2 we also controlled for social desirability. We used Reynolds's (1982) short version of the Marlowe-Crowne Scale (Crowne & Marlowe, 1960), which has been supported by recent research (Loo & Thorpe, 2000) to be even more valid and reliable than the original long version. Cronbach's alpha for this social desirability measure was .72.

Statistical Method

Correlational and stepwise regression analyses were utilized to analyze the data sets for the two studies to test the hypotheses. In the regression analyses, the control variables were entered in Step 1, and hope, optimism, and resilience were then entered in Step 2 to test the hypotheses.

Results

Study 1 Preliminary Results

As shown in the top portion of Table 1, all Study 1 variables were significantly positively correlated ($p < .01$), providing initial support for Hypothesis 1. Moreover, none of the first-order correlations among hope, optimism, and resilience exceeded .6, which provides at least some initial support for discriminant validity and thus the unique contribution of each variable (Kline, 1998). Similarly, none of the first-order correlations among performance, job satisfaction, work happiness, and organizational commitment exceeded .6, which again provides initial support for the discriminant validity of these work-related outcomes. Furthermore, none of the skewness or kurtosis statistics exceeded ± 2 , indicating that all the study variables were likely to be normally distributed.

Table 1. Intercorrelations Among Study Variables

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------------------------|---|-------|-------|-------|-------|-------|-------|
| Study 1 ^a | | | | | | | |
| 1. Hope | | .53** | .52** | .22** | .34** | .31** | .17** |
| 2. Optimism | | | .39** | .16** | .34** | .35** | .09** |
| 3. Resilience | | | | .14** | .28** | .30** | .12** |
| 4. Performance ^b | | | | | .22** | .16** | .10** |
| 5. Job satisfaction | | | | | | .63** | .49** |
| 6. Work happiness | | | | | | | .36* |
| 7. Organizational commitment | | | | | | | |
| Study 2 ^c | | | | | | | |
| 1. Hope | | .52** | .44** | .16* | .36** | .42** | .14* |
| 2. Optimism | | | .30** | .23** | .20** | .32** | .07 |
| 3. Resilience | | | | .00 | .21** | .30** | .14* |
| 4. Performance ^b | | | | | .07 | .06 | .14* |
| 5. Job satisfaction | | | | | | .58** | .45** |
| 6. Work happiness | | | | | | | .32** |
| 7. Organizational commitment | | | | | | | |

a. N = 1,032.

b. Self-reported performance in Study 1, organization-generated objective performance in Study 2.

c. N = 232.

* $p < .05$; ** $p < .01$.

Study I Hypothesis Testing Results

As shown in the first portion of Table 2, each of the three psychological capacities was significantly positively related to job satisfaction and work happiness after controlling for the industry and demographic variables, with each capacity accounting for significant additional variance after controlling for the other two capacities. Moreover, none of the confidence intervals for the coefficients of the three psychological capacities in relation to job satisfaction and work happiness included zero in any of the analyses. Therefore, Hypotheses 1 and 2 were supported for the work-related outcomes of job satisfaction and work happiness. On the other hand, only the unique contributions of hope and resilience were supported in relation to organizational commitment, and only the unique contribution of hope was supported in relation to self-reported performance. As summarized in the notes to Table 2, the final models specified by the stepwise regression analysis accounted for 8% to 22% of the variance in the outcome variables, with the inclusion of the positive psychological resource capacities in Step 2 contributing 4% to 15% additional variance.

Table 2. Summary of Stepwise Regression Analyses for Variables Predicting Performance, Job Satisfaction, Work Happiness, and Organizational Commitment

| Variable | <i>B</i> | <i>SEB</i> | β | 95% Confidence Interval for <i>B</i> | |
|--|----------|------------|---------|--------------------------------------|-------------|
| | | | | Lower Bound | Upper Bound |
| Study 1 ^a | | | | | |
| Performance ^b | | | | | |
| Education | .12 | .03 | .11** | .05 | .19 |
| Experience | .11 | .03 | .11** | .05 | .17 |
| Industry sector (services) | .24 | .07 | .11** | .11 | .37 |
| Hope | .21 | .03 | .21** | .15 | .27 |
| Job satisfaction ^c | | | | | |
| Age | .23 | .03 | .23** | .17 | .28 |
| Industry sector (public or NGOs) | .13 | .06 | .06* | .01 | .25 |
| Hope | .21 | .04 | .22** | .14 | .29 |
| Optimism | .15 | .03 | .15** | .08 | .21 |
| Resilience | .10 | .03 | .10** | .04 | .17 |
| Work happiness ^d | | | | | |
| Optimism | .22 | .04 | .22** | .15 | .29 |
| Resilience | .17 | .04 | .17** | .10 | .24 |
| Hope | .11 | .04 | .11** | .03 | .18 |
| Gender | -.12 | .06 | -.06* | -.24 | -.01 |
| Organizational commitment ^e | | | | | |
| Experience | .21 | .04 | .22** | .14 | .29 |
| Age | .11 | .04 | .11** | .04 | .18 |
| Education | -.10 | .03 | -.10** | -.16 | -.03 |
| Hope | .12 | .04 | .13** | .05 | .19 |
| Gender | -.15 | .06 | -.08* | -.27 | -.03 |
| Industry sector (public or NGOs) | -.15 | .07 | -.07* | -.28 | -.01 |
| Resilience | .07 | .04 | .07* | .00 | .14 |
| Study 2 ^f | | | | | |
| Performance ^g | | | | | |
| Age | .20 | .07 | .20** | .06 | .33 |
| Experience | -.25 | .08 | -.24** | -.39 | -.10 |
| Industry sector (public or NGOs) | .39 | .15 | .19** | .11 | .68 |
| Optimism | .20 | .07 | .21** | .07 | .33 |
| Job satisfaction ^h | | | | | |
| Company size | -.18 | .06 | -.18** | -.30 | -.05 |
| Hope | .32 | .07 | .33** | .20 | .45 |
| Work happiness ⁱ | | | | | |
| Company size | -.25 | .06 | -.25** | -.38 | -.13 |
| Hope | .39 | .06 | .40** | .27 | .52 |
| Industry sector (public or NGOs) | -.35 | .14 | -.16* | -.62 | -.08 |
| Organizational commitment ^j | | | | | |
| Age | .25 | .07 | .25** | .12 | .38 |
| Education | -.19 | .07 | -.20** | -.33 | -.06 |
| Hope | .20 | .07 | .20** | .07 | .33 |
| Industry sector (public or NGOs) | -.31 | .14 | -.14* | -.59 | -.02 |

(Continued)

Table 2. (continued)

Only variables eligible for inclusion in the final iteration are reported.

- a. $N = 1,032$
 - b. $R^2 = .08, \Delta R^2 = .04$ (p values $< .01$)
 - c. $R^2 = .22, \Delta R^2 = .15$ (p values $< .01$)
 - d. $R^2 = .16, \Delta R^2 = .14$ (p values $< .01$)
 - e. $R^2 = .13, \Delta R^2 = .04$ (p values $< .01$)
 - f. $N = 232$
 - g. $R^2 = .14, \Delta R^2 = .04$ (p values $< .01$)
 - h. $R^2 = .15, \Delta R^2 = .11$ (p values $< .01$)
 - i. $R^2 = .24, \Delta R^2 = -.13$ (p values $< .01$)
 - j. $R^2 = .13, \Delta R^2 = -.05$ (p values $< .01$)
- * $p < .05$; ** $p < .01$
-

Study 2 Preliminary Results

As shown in the bottom portion of Table 1, with the exception of the relationships between employees' optimism and their organizational commitment and between their resilience and their formal performance appraisal results, all other Study 2 variables were significantly positively correlated, providing initial support for Hypothesis 1. Again, none of the first-order correlations among hope, optimism, and resilience exceeded .6, which supports their discriminant validity (Kline, 1998). Similarly, none of the first-order correlations among objective performance, job satisfaction, work happiness, and organizational commitment exceeded .6, which supports the discriminant validity of those work-related outcomes as well. Furthermore, none of the skewness or kurtosis statistics exceeded ± 2 , indicating that all the Study 2 variables were likely to be normally distributed.

Study 2 Hypothesis Testing Results

To replicate Study 1, but, importantly, utilizing the results of formal performance appraisals reported by the managers of the participating employees as their performance, stepwise regression was again utilized, with the work-related outcome variables of the managers' formal performance appraisals and the employees' job satisfaction, work happiness, and organizational commitment each being regressed on the employees' hope, optimism, and resilience scores. The same control variables, in addition to social desirability, were entered in Step 1.

As shown in the second portion of Table 2, only employee optimism was significantly positively related to performance and only employee hope was significantly positively related to employee job satisfaction, work happiness, and organizational commitment. Thus, the study hypotheses were only supported for those four relationships and unique contributions. As summarized in the notes to Table 2, the final models specified by the stepwise regression analysis accounted for 13% to 24% of the variance in the outcome variables, with the inclusion of the positive psychological capacities in Step 2 contributing 4% to 13% additional variance.

Secondary Analysis: The Utility of Psychological Resource Capacities

POB as defined in this study is directly concerned with the performance impact of positive psychological resource capacities such as hope, optimism, and resilience. The results of these studies can through utility analysis demonstrate such impact. For example, the results of the two studies support that POB can add 4% to 15% to the variance accounted for in work-related outcomes (Table 2). Using utility analysis, the studies' statistical results can be translated into dollar impact (see Becker & Huselid, 1992; Boudreau, 1991; Cascio, 1991; Cascio & Ramos, 1986; Hunter & Schmidt, 1983; Huselid, 1995). The following equation can be drawn from this utility analysis literature to assess the potential practical dollar impact of the psychological resource capacities in these studies:

$$U = NT r_{xy} SD_y$$

In this equation, U = outcomes that may be explained by psychological resource capacities, N = the number of employees being assessed, T = the average duration of the psychological resource capacities' effect on outcomes, r_{xy} = the correlation coefficient between the capacities and outcomes, and SD_y = the standard deviation of the outcomes.

As an illustrative example, the contribution psychological resource capacities may have during the period of a single year ($T = 1$), for one average employee ($N = 1$), using $r_{xy} = .2$ to $.39$ (correlation coefficient between psychological resource capacities and work-related outcomes, approximated as the square root of 4% to 15% additional variance explained), and $SD_y = 14.14\%$ (standard deviation of objectively measured performance from Study 2) would amount to 2.8% to 5.5% of performance. Using the practical rules of thumb suggested in the utility literature (see Kravetz, 2004) that the cost of keeping an employee on the payroll is a conservative estimate of the dollar value of that employee's productivity and that the total cost of keeping an employee on the payroll is about twice the employee's direct salary (to account for benefits and overhead), the utility of the positive psychological resource capacities (i.e., in this case hope, optimism, and resilience) of an employee with an annual salary of say \$50,000 would be \$2,800 to \$5,500 (i.e., $2 \times 50,000 \times .028$ to $.055$). Given that the mean number of employees per organization was 11,584 for Study 1 and 15,136 for Study 2, it could be roughly said that more than \$50 million of the average sampled organization's outcomes may be attributable to its employees' positive psychological resource capacities. Although there are certainly criticisms and limitations with such utility analysis (see Latham & Whyte, 1994), and although a wide

variety of factors that need to be taken into account to more accurately quantify the financial contributions of these and other human resource development initiatives, it could be concluded that positivity in the workplace may have considerable impact.

Discussion

Despite a well-established theoretical foundation and supporting empirical research on constructs such as hope, optimism, and resilience in positive psychology (see Snyder & Lopez, 2002), when applied to the workplace, both conceptual analysis and research on these capacities are scarce and fragmented (Sutcliffe & Vogus, 2003). For example, in the *Handbook of Positive Psychology*, only 1 of the 55 chapters is devoted to workplace applications (Turner, Barling, & Zaharatos, 2002, in the first edition and Luthans & Youssef, 2007b, in the second). Yet as recognized in the introductory comments, the positive movement is starting to emerge for the workplace in what is called POS (e.g., Cameron & Caza, 2004; Cameron et al., 2003), POB (e.g., Luthans, 2002a, 2002b, 2003; Luthans & Youssef, 2007a; Nelson & Cooper, 2007; Wright, 2003), and, more recently, psychological capital (e.g., Avolio & Luthans, 2006; Luthans, Avolio et al., 2007; Luthans, Van Wyk, et al., 2004; Luthans & Youssef, 2004; Luthans, Youssef, et al., 2007).

This study tested the emerging theory-driven relationships between the POB criteria-meeting employees' psychological resource capacities of hope, optimism, and resilience and their work-related outcomes of performance, job satisfaction, work happiness, and organizational commitment, and the unique contribution for each of these three capacities to the variance accounted for in the outcomes. Although the first study utilized self-rated performance, the second study utilized more objective results from formal organizational performance appraisals. Both studies utilized published standardized measures for all study variables and had acceptable reliabilities.

As shown in Table 2, the results of Study 1 support significant positive relationships among and unique contributions of hope, optimism, and resilience to job satisfaction and work happiness, thus supporting the study hypotheses for those two outcomes. Despite positive correlations among hope, optimism, and resilience in relation to performance and organizational commitment, the hypotheses were supported only for hope in relation to performance and for hope and resilience in relation to organizational commitment.

The results of Study 2 support the hypothesized relationships among and unique contributions of employee optimism to more objective performance and employee hope to job satisfaction, work happiness, and organizational commitment, thus only partially supporting the hypotheses. The failure of resilience to reach significance in Study 2 may have to do with the smaller sample size, and, as found in previous research (Luthans et al., 2005), it may be more relevant in organizations in extreme conditions or undergoing crises or dramatic changes. However, taken collectively, and as summarized in Figure 1, the findings highlight the potential positive impact that employees' psychological resource capacities in general, and, specifically, their hope and, to a lesser extent, optimism and resilience, may have on work-related outcomes. As with any study, there are both strengths and limitations that need to be noted and assessed to interpret these results and draw conclusions.

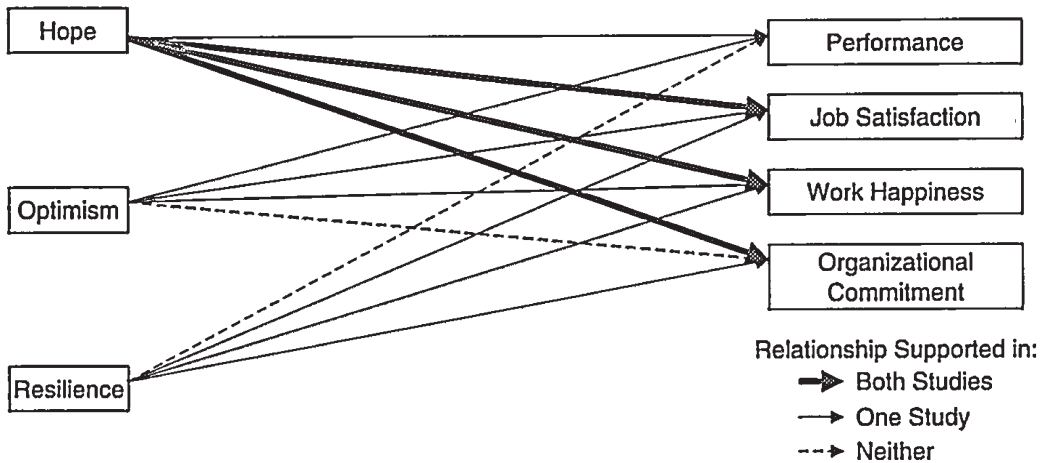


Figure 1. Positive Psychological Capacities and Work-Related Outcomes: Hypothesized Relationships and Summary of Results

Strengths and Limitations

In assessing the validity of the findings, it should be noted that the components of POB are drawn from established positive psychological theories, research, and measures. Thus, for example, the use of established standardized scales to measure the study variables reduces the chances for the instrumentation threat. Also, the cross-sectional design of these studies helps to minimize various threats such as testing, maturation, attrition, and statistical regression.

On the other hand, the design of these studies does not permit causal conclusions. In particular, a competing or alternative explanation may be that work-related outcomes such as job performance, job satisfaction, work happiness, and/or organizational commitment may predict hope, optimism, and resilience, rather than the opposite. Nevertheless, the theory-building foundation and cross-sectional findings can provide insights and at least a point of departure for future longitudinal and experimental research. Moreover, although randomization was not possible in these studies, the data were collected from different organizations and at different points in time and thus help minimize threats such as history and selection (see Podsakoff et al., 2003). In terms of generalizing the findings, samples used in both studies were drawn from very diverse industries and organizations of diverse sizes, and participant characteristics were also diverse. However, because the data were collected from domestic organizations, generalizations cannot be made across cultures.

Although Study 2 used more objective performance measures, collected from a different source (managers’ ratings of participants from organizations’ formal performance appraisal systems) and at a different time than the study predictors, a major limitation of Study 1 is the use of self-reported performance data. To help minimize this bias, a consistency and manipulation check was employed. As indicated, the responses of a subsample

of 384 participants to the standardized job satisfaction and organizational commitment scales were found to be correlated ($p < .01$) with their managers' ratings of their satisfaction and commitment.

The large sample size ($N = 1,032$) used in Study 1 contributes to statistical conclusion validity. This sample enhances the ability of Study 1 to detect even small effect sizes, which are common but often go undetected in underpowered research. For example, the lack of support for resilience in Study 2 may partially be a statistical artifact of the smaller sample size. A larger sample may have yielded significant results for resilience and more significant results for optimism. With 232 participants, and to achieve Cohen's acceptable statistical power of .8, only an effect size of about .26a or larger can be detected (Lipsey, 1990). However, in this situation, results are conservatively biased, which provides further support for the significant results obtained. Moreover, the acceptable reliability of all the measures utilized in these two studies also enhances statistical conclusion validity. Finally, many possible extraneous sources of variation have been controlled for in these studies, which further supports the results.

Implications and Future Directions

As indicated in the introductory theoretical foundation concerning the state-like nature of POB, much is drawn from the established hope, optimism, and resilience development literature. For example, as indicated in the introductory discussion, short training interventions designed to develop positive psychological resource capacities were recently demonstrated (Luthans, Avey, et al., 2006; Luthans, Avey, et al., in press). This involved developing hope in the training of participants through having them set goals and "stepping" subgoals, generate realistic pathways emphasizing approaching desirable results rather than avoiding undesirable ones, and engage in contingency planning for overcoming potential obstacles. As participants engaged in these activities, an optimistic explanatory style also began to develop, as negative events were anticipated and plans for avoiding or managing them were created. Facilitated positive self-talks and internalized controls were common factors in both the hope and optimism development. These activities and exercises also triggered the enhancement of the participants' resilience through building their assets (e.g., confidence and social support), building their risk-management strategies (e.g., contingency planning), and, most importantly, facilitating cognitive, emotional, and behavioral adaptational processes. These resilience processes were enhanced through developing and changing the participants' perceptions of influence in the application to recent examples of work-related setbacks the training participants had actually encountered.

The preliminary results of these training interventions have been very positive (Luthans, Avey, et al., 2006; Luthans, Avey, et al., in press; Luthans, Youssef, et al., 2007). Using experimental designs, broad cross-sectional samples, and training programs for specific companies, these short interventions have significantly increased the level of the participants' psychological capacities by 1.5% to 3.0%, whereas control groups not receiving the intervention showed no increase. Using real data in one utility analysis with engineering managers in a large high-tech manufacturing firm was able to show a 270% return on investment from this positivity intervention (Luthans, Avey, et al., 2006). In other

words, the study variables of hope, optimism, and resilience shown to generally relate to desirable workplace outcomes may have important practical implications for human resource development, or what we would call psychological resource development.

For future research, variations of the above developmental framework can be tested, and so can other potential positive psychological resource capacities besides hope, optimism, and resilience. For example, performance improvement attributable to each psychological resource capacity can be assessed using more focused interventions aimed at the development of only one at a time (e.g., pathways training to enhance hope in one group; facilitating the use of a positive explanatory style to enhance optimism in a second; and building personal assets, developing strategies for managing risk, and facilitating adaptational processes for developing resilience in a third group). Better understanding of the unique contributions of, and the potential interactive mechanisms among, the positive psychological resource capacities can then be accomplished. In addition, future research needs to examine the impact of other potential positive psychological resource capacities such as wisdom or courage (for how these and other potential capacities measure up to the POB criteria, see Luthans, Youssef, et al., 2007). Finally, as with other U.S.-based organizational research, studies need to test whether the findings of this research will hold across cultures.

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