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Innovative behavior and psychological capital: Does positivity make any difference?

doi: 10.22367/jem.2018.32.06

Accepted by Editor Ewa Ziemia | Received: November 14, 2017 | Revised: January 28, 2018;
February 8, 2018 | Accepted: February 15, 2018.

Abstract

Aim/purpose – Despite increasing importance of fostering innovation among employees, and the growing interest in Positive Organizational Behaviour (POB) constructs, little empirical research has been conducted on the topic of innovation with POB. Moreover, though research proved significant relationship between positive psychological capital (PsyCap) and creative performance, no studies examined PsyCap with innovative behavior. Thus, the purpose of this paper is to examine the link between positive psychological capital and innovative behavior as well as the link between innovative behavior and job satisfaction as well as engagement.

Design/methodology/approach – Using regression analyses, data were obtained from Egyptian professionals (N = 250). The survey included measures of psychological capital and innovative behavior as well as job satisfaction and engagement.

Findings – Regression analyses reveal that PsyCap, with its four components of hope, optimism, resilience and efficacy, predict innovative behavior, which in turn affects satisfaction and engagement.

Research implications/limitations – Limitations, contributions and recommendations for future research are noted. Results contribute to a better understanding of how psychological capital enhances Innovative behavior in the workplace, which in turns, enhances job satisfaction and engagement.

Originality/value/contribution – The study is the first to examine the relationship between psychological capital and innovative behavior.

Keywords: psychological capital, innovative behavior, creativity, engagement.

JEL Classification: M1, M10, M12, M20.

1. Introduction

Innovation is critical for countries to develop as it is the key to increasing market share and business profits and even to avoid bankruptcy (Baer & Frese, 2003; Dodgson, Gann, & Salter, 2005; George & Zhou, 2001; Kleysen & Street, 2001) since it is related to advances in knowledge that leads to better health, education and improvements in technology (West & Altink, 1996) and is crucial for success (Unsworth & Parker, 2003). Innovation involves the creation of a new product, service or process (De Brentani, 2001). Organizational conditions whether structural or social affects the innovation process (Kanter, 1988) whereby innovation, creativity and proactivity are becoming essential for organizational change (Rank, Pace, & Frese, 2004). Innovation is a result of creative ideas that are developed by individuals (Janssen, Vliert, & West, 2004) and this is why research on innovation focused on personal and contextual factors that promote innovation (West, 2002; West & Altink, 1996). Research on innovation is not just about technology and medicine but also psychology (West & Altink, 1996). We need to understand more the ‘what is it that makes those people who innovate’ innovate. After all, innovation is a process that involves a degree of uncertainty, controversy, knowledge and teamwork (Kanter, 1988) so it is a complex process.

In fact, studying innovation and what are its antecedents should not be at the technical process innovations only as some studies found no or moderate relationship between the implementation of process innovations such as Business Process Reengineering (BPR), Total Quality Management (TQM), Just-In-Time and others and performance (Baer & Frese, 2003). One good reason might be the lack of other critical antecedents that complement the process innovations like organizational structure, culture, and climate (Baer & Frese, 2003; Douglas & Judge, 2001; Emery, Summer, & Surak, 1996). In fact, research on potential antecedents of innovative behavior has received insufficient attention (Rank et al., 2004). Several researchers have highlighted on the importance of psychological factors to the success of innovations and on business objectives arguing that such research has been neglected (Baer & Frese, 2003; Rank et al., 2004). In fact, psychological capital has been found to predict venture performance even over and above the other types of capital like social capital, human capital and even financial capital (Hmieleski & Carr, 2008). This should draw the attention of researches to investigate more on the power of ‘positivity’ in playing a role in innovation and entrepreneurial and firm success. With the exception of few studies that linked positive psychology or POB constructs to innovation or creativity (e.g., Baas, De Dreu, & Nijstad, 2008; Vinarski-Peretz, & Carmeli, 2011), the

link between positive organizational behavior or POB constructs like PsyCap and innovation has been neglected. Innovations whether technical like new products or services or administrative like new ways of recruiting employees (West & Altink, 1996) requires employees to behave in an innovative way or to be able to implement their new ideas and process improvements. However, innovation occurs when and ideas are implemented, not just generated. Therefore, it is crucial that we start focusing more on what is it that leads to the implementation of new ideas and initiatives.

The aims of this research are twofold. Firstly, to determine the role of innovative behavior in fostering engagement and job satisfaction. Secondly, to examine the role that psychological capital plays in enhancing employees' innovative behavior.

The remainder of this paper is structured as follows. Section 2 reviews the literature on innovative behavior and psychological capital followed by the development of the hypotheses. Research design and methodology are then discussed in Section 3. The results and discussion of the finding are presented in Section 4.

2. Literature review and hypothesized model

2.1. Innovative behavior and positive outcomes

The importance of innovation and necessity of encouraging it is increasing worldwide (Anderson, De Dreu, & Nijstad, 2004; Janssen et al., 2004; Yuan & Woodman, 2010). Studying innovation as an independent variable that affects other variables has been suggested by Anderson et al. (2004) in their article that called for a shift in the innovation research. Innovation behaviors that might have been seen previously as inappropriate or disrespectful have become increasingly desirable in today's changeable fast-moving and competitive work environment (Anderson et al., 2004). Innovative behavior can be defined as "all individual actions directed at the generation, introduction and application of beneficial novelty at any organizational level" (Kleysen & Street, 2001: 285). It is not limited to developing new product ideas and new technologies, but it also includes initiating new ideas or changes in administrative procedures that aims at improving work relations or the application of new ideas or technologies to work processes aiming at enhancing the effectiveness of work (Kleysen & Street, 2001; Yuan & Woodman, 2010). It consists of various practices and behaviors such as opportunity discovery, idea generation, influential investigation, championing, and application (Jong & Kemp, 2003; Kleysen & Street, 2001; West & Farr, 1989).

Engagement is defined as “the investment of an individual’s complete self into a role” (Rich, Lepine, & Crawford, 2010: 617). Several research studies examined the impact of engagement on innovative behavior (Vinarski-Peretz & Carmeli, 2011), however, the impact of innovative behavior on engagement has never been examined despite its importance. According to Csikszentmihalyi (1996), creativity leads to a more fulfilling life and meaningful life. Moreover, creative achievements lead to more engagement in life whereby creative people experience flow (Sawyer et al., 2003). Creative people find joy and pleasure in pursuing their creative accomplishments, which in turn leads to feelings of engagement (Sawyer et al., 2003). According to Csikszentmihalyi (1996), creativity leads to more wellbeing and happiness. The experience of creative achievements, which in this case describes innovative behavior since it involves implementation, leads to the feeling of flow (Sawyer et al., 2003), which is a positive state when you feel your skills are used to their utmost, a state that makes life worth living (Csikszentmihalyi, 1996; Nakamura & Csikszentmihalyi, 2002; Seligman, 1995, 2002a, 2002b). This feeling is closely related to engagement as defined by Rich et al. (2010) and as measured in the current study whereby employees who are engaged choose to invest their affective, cognitive, and physical energies simultaneously. In their article, Rich et al. (2010) classified engagement into three types of engagement; physical, cognitive and emotional whereby engaged employees are describes as “being psychologically present, fully there, attentive, feeling, connected, integrated, and focused in their role performances” (p. 619). The fact that engaged employees are those who invest their physical, emotional and cognitive energies into their work roles makes it a closely linked concept to flow. In other words, if creative achievements lead to flow then it should lead to engagement as flow involves a higher and more deep level of using your skills and energies to the most so that you feel absorbed in the work you are doing. Therefore, it is likely to assume that innovative behavior should lead to engagement.

In addition to that, research on innovative behavior and satisfaction has been very few and examined the impact of job satisfaction on innovative behavior (Bysted, 2013; Han-Jen, 2014) and not vice versa. Based on the above link between creative achievements and flow, it is likely to assume that employees who are able to implement their creative ideas are more likely to be satisfied about their jobs. Innovative cultures influence employees’ levels of satisfaction, commitment, and cohesion (Odom, Boxx, & Dunn, 1990). In jobs that require a degree of creativity, employees’ satisfaction might suffer if the job settings are not enhancing creativity (Shalley, Gilson, & Blum, 2000). Innovative employees who have creative minds might get de-motivated and so unsatisfied with their

jobs if their ideas are not implemented. Unlike creativity, where a person might be creative but is not able to put his or her ideas into action, innovative behavior should lead to more satisfaction.

H1: Innovative behavior relates positively to employee satisfaction and engagement.

2.2. Innovative behavior and psychological capital

Innovation research has flourished over the last 40 years as organizations started to change from bureaucratic and rigid to more flexible, flat structures where innovation and team work are fostered (Anderson et al., 2004). Several research studies examined factors affecting innovative behavior at three levels of analysis; the individual, work group, and the organization (for major reviews: Amabile, 1996a, 1996b; Randall, 2005; West, 2001). In their article, Anderson et al. (2004) summarized the findings of factors affecting innovation or creativity where at the individual level factors included personality characteristics of proactivity, self-confidence and originality, motivation, and cognitive ability, at the work-level, factors included job characteristics, at the work group level, factors included team climate and team member characteristics, and finally, at the organizational level, culture, strategy, and structure were among the factors that influenced innovation. Moving to positive psychological capital or PsyCap, it was found to predict creative performance (Sweetman, Luthans, Avey, & Luthans, 2011). First, let's have a look at the literature of PsyCap or HERO – Hope, Efficacy, Resilience and Optimism (Avey, Luthans, & Jensen, 2009; Luthans, Youssef, & Avolio, 2015).

Positive organizational behavior (Luthans 2002a, 2002b; Wright, 2003) has its roots in the field of positive psychology which was initiated by positive psychologist Martin Seligman (Seligman, 2007; Seligman & Csikszentmihalyi, 2000; Seligman, Steen, Park, & Peterson, 2005; Sheldon & King, 2001). Positive psychology focuses on the study of positive emotions, positive traits and positive institutions (Seligman et al., 2005). At the subjective level, it is mainly about valued subjective experiences like well-being and satisfaction. At the individual level, it is about positive traits like courage, wisdom, forgiveness, spirituality, and originality. While at the group level, it is about work ethics, responsibility, and tolerance (Seligman & Csikszentmihalyi, 2002). Seligman (2007) defined positive psychology as “the study of positive emotion, of engagement, and of meaning, the three aspects that make sense out of the scientifically unwieldy notion of happiness” (p. 266).

The positive psychology movement was triggered as psychologists realized that for so long their main focus was on preventing problems, neglecting the competency-building dimension (Seligman & Csikszentmihalyi, 2002; Luthans 2002a; 2002b; Money, Hillenbrand, & Da Camara, 2008). As stated by Seligman et al. (2005), “it makes sense to study what is right about people in addition to what is wrong” (p. 413). Thus, positive psychology is an attempt to encourage psychologists to start adopting a more open point of view regarding what human beings can do or have (Sheldon & King, 2001).

The same goes for the field of organizational behavior. Since the origin of organization behavior, the focus has been on managerial dysfunctions and employee problems without paying much attention to positive capacities that are more likely to have an impact on performance and productivity (Luthans, 2002a, 2002b; Wright, 2003; Wright & Quick, 2009). In a computer search about psychology literature, Luthans (2002b) found approximately 375,000 articles on negative constructs like fear, depression and anxiety, and only about 1000 articles on positive concepts and capacities. Moreover, for the past decade, positively-oriented bestselling books like Peale’s message of the power of positive thinking and Covey’s seven habits of highly effective people have approached positivity in the workplace but were not theory and research driven (Luthans, 2002a, 2002b). Thus, positive organizational behavior is about bringing the positive psychology concepts and applications to the workplace (Luthans, 2002a). Luthans (2002b) defined positive organizational behavior 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).

A psychological resource capacity within the defined POB should include the following criteria: (a) The capacity should be theory-based, researchable and measurable; (b) the capacity must also be ‘state-like’ or open to development and have a demonstrated performance impact (Youssef & Luthans, 2007; Luthans, Avolio, Avey, & Norman, 2007). Thus, the main focus of positive organizational behavior (POB) is on state-like variables unlike positive psychology or positive organizational scholarship that focus on trait-like variables. Examples of constructs that meet these criteria are confidence, emotional intelligence, hope, optimism, and happiness or subjective well-being (Luthans 2002a, 2002b; Wright, 2003).

The capacities that best meet the above-mentioned criteria and that have been identified to date are self-efficacy, hope, optimism and resilience (Luthans, Avolio, et al., 2007). In the below lines, we describe how each of the four components of hope, optimism, self-efficacy and resilience, as well as PsyCap as

a core construct are related to innovative behavior. Several researchers examined personal and psychological antecedents of creative outcomes (e.g., Amabile, 1996a, 1996b; Kanter, 1988; Tierney & Farmer, 2002; Zhou, 2003). However, before linking the two variables together, we need to understand first the difference between innovative behavior, creativity and creative performance. We first discuss this then we move to our literature of PsyCap and hypotheses.

We conceptualize innovative behavior as a complex behavior consisting of activities relevant to both the generation of new ideas and the awareness or implementation of new ideas (Yuan & Woodman, 2010). Creative behavior is therefore a related concept. In their article about the 'routinization' in innovation research, Anderson et al. (2004) stressed on the importance of defining innovation and how it differs from individual creativity. According to them, innovation differs from creativity in that it involves idea generation and application while creativity can refer to idea generation alone. They also highlighted in the fact that innovation must present intended benefit while this is not a must in the case of creativity.

As mentioned earlier creativity is about the introduction and generation of new ideas while innovation involves not only the generation of ideas but also the implementation of such ideas (Anderson et al., 2004; George & Zhou, 2001). Creative performance was found to be crucial for an organization's survival and for organizations to achieve competitive edge (Amabile, 1996a; George & Zhou, 2001). Creativity has often been viewed as an antecedent to firm level innovation (Amabile, 1996a; Madjar, Oldham, & Pratt, 2002). Oldham & Cummings (1996) defined creative performance as "products, ideas, or procedures that satisfy two conditions: (1) they are novel or original and (2) they are potentially relevant for, or useful to, an organization" (p. 608). Zhou (2003) defined creativity as "employees' generation of novel and useful ideas concerning procedures and processes used at work" (p. 413). However, creative ideas might not be converted into innovative products due to the unacceptability of the field or the market to the creative idea itself (Nakamura & Csikszentmihalyi, 2002). In the current study, the focus is on the implementation aspect and so innovative behavior and PsyCap are examined for the first time.

2.2.1. Self-efficacy

The first component of PsyCap is self-efficacy. Self-efficacy is defined as "an individual's convictions (or confidence) about his or abilities to mobilize the motivation, cognitive resources, and courses of action needed to successfully

execute a specific task within a given context” (Stajkovic & Luthans, 1998b: 66; Bandura, 1997). Self-efficacy is crucial for success and achievements. That is, for a person to achieve a task or a goal, it requires not only skills but also beliefs of self-efficacy that could help out to his/her skills well (Bandura, 1993).

Stajkovic & Luthans, (1998b) identified three dimensions for self-efficacy that are crucial for its understanding. First, the magnitude of efficacy expectations, which refers to the level of task difficulty. The second dimension is the strength of efficacy expectations, or how confident an employee is about performing a certain task. People who have self-efficacy are able to find out ways of exercising control even when there are few chances or many limitations (Bandura, 1993). The third dimension is generality and refers to whether or not efficacy is indiscriminate across tasks.

The practical implications that self-efficacy has for human performance can no longer be overlooked by managers and professionals as employees who perceive themselves as highly efficacious will trigger sufficient effort that should produce successful outcomes or results (Stajkovic & Luthans, 1998b). On the other hand, a person who is low in self-efficacy will have doubts that he/she can do what is needed to achieve a certain task (Bandura, 1993). A meta-analysis conducted by Stajkovic & Luthans (1998a) showed that self-efficacy is related to work-related performance. More specifically, they found a significant weighted average correlation of .38 between self-efficacy and performance. As a positive state-like capacity, self-efficacy was found to be positively related to individual OCBs (Organization Citizenship Behaviors), and negatively related to organizational cynicism, intentions to quit, and counterproductive workplace behaviors (Avey, Luthans, & Youssef, 2009). Moreover, Avey, Wernsing, & Luthans (2008) examined the relationship between self-efficacy as a component of Positive psychological capital and positive emotions. They found a significant relationship between efficacy and positive emotions that in turn were related to positive attitudes like engagement. Furthermore, a study by Tierney & Farmer (2002) showed that there is a positive relationship between creative self-efficacy, a new construct that combines self-efficacy with creativity, and creative performance. Besides, among the characteristics of creative people is self-confidence (Barron & Harrington, 1981). People who are more self-efficacious are more likely to take risks (Shane, Locke, & Collins, 2003) whereby risk-orientation was identified as a main factor affecting the implementation of novel ideas (Amabile & Gryskiewicz, 1987). Finally, creative self-efficacy among students was found to predict innovative behavior (Li & Wu, 2011). Thus, it is likely to assume that self-efficacy is related to innovative behavior.

2.2.2. Hope

The term “Hope” is used in our daily language, but as discussed here hope is based on the theory and research of Snyder (2002; Snyder et al., 1991). It is defined as “a cognitive set that is based on a reciprocally derived sense of successful (a) agency (goal-directed determination) and (b) pathways (planning of ways to meet goals) (Snyder et al., 1991: 571). Snyder (2002) defined hope more precisely as “the perceived capability to derive pathways to desired goals, and motivate oneself via agency thinking to use those pathways” (p. 249).

The agency component refers to individuals’ thoughts about their ability to initiate and prolong movement toward goal accomplishment (Peterson & Byron, 2008). Agency can be viewed as having the will to meet goals (Snyder et al., 1991). Pathways are cognitive routes to goals (Snyder, Sympson, Ybasco, Borders, Babyak, & Higgins, 1996). Thus, the pathways component refers to one’s sense of ability to generate ways or means to meet these goals (Snyder et al., 1991, 1996). Together, the two components make the will or the “I believe I can do it” and the way or the “I believe there are so many ways”.

As proposed by Snyder et al. (1991, 1996), both components should be present if a person is to maintain a movement in his/her life. For example, one might have the will (agency), but lacks the way to meet the goals (pathways). On the contrary, one might have the sense of pathways but without the agency. However, to possess hope as defined and operationalized, one should have both, the will or motivation to accomplish a specific task or goal and the ways to achieve such goals.

Feldman, Rand, & Kahlie-Wroblewski (2009) argued that hope’s two components of pathways and agency lead an individual to “behave so as to attain personal goals” (p. 482). So it serves as the cognitive basis needed to attain such goals. In their study about hope and goal attainment, they found out that hope’s agency component is related to goal attainment. As for the pathway component, it should lead to the creation of different strategies to achieve goals (Peterson & Byron, 2008).

Hope differs from self-efficacy in that hope covers the cognitive elements of pathways and agency so it includes planning and motivation. However, self-efficacy is concerned with the belief that one can perform a certain task or behavior (Feldman et al., 2009).

Hope theory has received considerable support through empirical research in numerous settings. Research showed that hope is related to academic and sports achievement (Curry, Snyder, Cook, Ruby, & Rehm, 1997), goal attainment (Feldman et al., 2009), and performance (Peterson & Byron, 2008; Peter-

son, Gerhardt, & Rode, 2006). A study that is related to the current study was done by Peterson & Byron (2008) where they examined the relationship between retail sales associates, mortgage brokers, and executives' level of hope and its relationship to job performance. Results showed that high hope employees had significantly higher job performance. In the same study, the authors examined whether more hopeful employees tend to solve work-related problems in a way other than that of less hopeful employees. Results showed that more hopeful employees provided better and more solutions to a specific problem. Therefore, the study provided more insight into why employees that are more hopeful may perform better by developing innovative solutions to problems.

Avey et al. (2008) examined the relationship between hope as a component of positive psychological capital and positive emotions. They found a significant relationship between hope and positive emotions that in turn were related to positive attitudes like engagement. Moreover, hope has been found to be positively related to satisfaction (Luthans, Youssef, et al., 2007; Luthans, Avolio, et al., 2007), work happiness, and commitment (Youssef & Luthans, 2007). Related to the current study, hope was found to be related to creative performance (Sweetman et al., 2011). The role of goals and how they make the first and most important component in any action conducted by employees provide support for the current study's hypothesis (Frese & Zapf, 1994). Since innovative behavior consists of opportunity exploration which is mainly about identifying new opportunities (Kanter, 1988), it is likely to assume that individuals who are hopeful are more likely to be innovative as they generate pathways to their desired goals.

2.2.3. Optimism

The third POB criteria-meeting capacity is optimism, which is defined by Seligman (1995, 2006) as an attributional or explanatory style whereby an optimistic person explains positive events in terms of personal, permanent, and pervasive universal causes and negative events in terms of impersonal, temporary, and situation-specific ones. In everyday language, an optimist is the one who always expects positive and pleasing outcomes for the future and the pessimist on the contrary is the one that expects negative outcomes and is constantly having negative thoughts (Scheier & Carver, 1985; Luthans, Avolio, et al., 2007). Thus, optimism is mainly about expectancy judgment (Lee, Ashford, & Jamieson, 1993).

Optimism has been linked to a variety of positive outcomes like good morale, effective problem solving, academic, political and occupational success, happiness, achievement, good health and even long life (Seligman, 2007). On the

contrary, pessimism has been linked to depression, failure and passivity (Peterson, 2000). Innovation, team orientation and risk taking should be related to the degree of optimism of employees (Medlin, Green, & Gaither, 2010). Though optimism has been linked to innovative behavior of students (Li & Wu, 2011), no research examined this relationship at the workplace. Optimists are likely to produce new ideas since they have positive expectations about the success of their ideas.

As a positive state-like capacity, a study by Avey et al. (2009a) showed that optimism is positively related to individual OCB (Organization citizenship behavior), and negatively related to organizational cynicism, intentions to quit, and counterproductive workplace behaviors. Moreover, Avey et al. (2008) examined the relationship between optimism as a component of Positive psychological capital and positive emotions. They found a significant relationship between optimism and positive emotions that in turn were related to positive attitudes like engagement. Moreover, optimism has been found to be positively related to satisfaction (Luthans, Avolio, et al., 2007; Luthans, Youssef, et al., 2007), and work happiness (Youssef & Luthans, 2007). Therefore, a person who is high in optimism is likely to be high in innovative behavior.

2.2.4. Resilience

During the 1970s, a group of psychologists started to raise the issue of resilience in children who have experienced adversity or risk (Masten, 2001). Masten (2001) defined resilience as “a class of phenomena characterized by good outcomes in spite of serious threats to adaptation or development” (p. 288). As a positive psychological state, resilience is defined as “the positive psychological capacity to rebound, to ‘bounce back’ from adversity, uncertainty, conflict, failure or even positive change, progress and increased responsibility” (Luthans, 2002a: 702). This process of bouncing back is occurred through the positive assessment of risks and personal assets (Luthans, Vogelgesang, & Lester, 2006). As highlighted by Amabile (1996a), creative thinking, which in turn should lead to innovative behavior or is a component of innovative behavior (Fay & Frese, 2001), depends on personality characteristics related to orientation toward risk-taking, tolerance for ambiguity, and most importantly insistence in the face of frustration. Therefore, resilience is characterized by proactive responses in the face of failure or even great success. From this link, I can conclude that individuals that are more resilient are more likely to be innovative as they are more likely to take risks and are more willing to accept change.

2.2.5. PsyCap

Using the previously mentioned criteria of being open to development and research and theory-based, Luthans & Youssef (2004) proposed four POB capacities, which are self-efficacy, hope, optimism and resilience. The four state-like capacities are included as a combined construct to form what Luthans et al. have referred to as positive psychological capital or PsyCap (Luthans, Avolio, et al., 2007). Luthans, Youssef, et al. (2007: 3) defined psychological capital or PsyCap as “an individual’s positive psychological state of development and 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.) preserving 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”.

Positive psychological capital or PsyCap in short is mainly about “Who you are” and is differentiated from human capital “what you know” and financial capital “what you have” and “what you can become” (Luthans, Youssef, et al., 2007). PsyCap has been found to be an additive variable to human and social capital equation (Larson, 2004). Several studies examined the between PsyCap and performance (Luthans, Avolio, Walumbha, & Li, 2005; Luthans, Avoy, et al., 2008; Luthans, Norman, et al., 2008) and found a significant positive relationship between PsyCap and performance. According to West (2001), when individuals feel positive, they are more likely to innovate. However, up to our knowledge, the link between positive psychology constructs like hope and optimism has never been tested in relationship to innovative behavior.

Research proved that psychological safety is a crucial antecedent for innovation (West & Altink, 1996). Previous research showed that psychological empowerment leads to increased innovation (Spreitzer, 1996). Psychological empowerment is defined as “intrinsic motivation embodying a set of four psychological states reflecting an individual’s orientation toward his or her work: meaning, self-determination, impact, and competence” (Alge, Ballinger, Tangirala, & Oakley, 2006: 223). Psychological empowerment was also found to be related to creative performance (Alge et al., 2006). Creative individuals own up positivity, optimism or hope, which allow them to continue to be creative and stay fully engaged (Sawyer et al., 2003). Therefore, based on the above linkages and the ones discussed earlier, it is likely to assume that the four psychological states as well as PsyCap as a core construct could predict innovative behavior.

H2.1: Employee’s levels of hope, optimism, resilience and self-efficacy relates positively to innovative behavior.

H2.2: Employee’s PsyCap relates positively to innovative behavior.

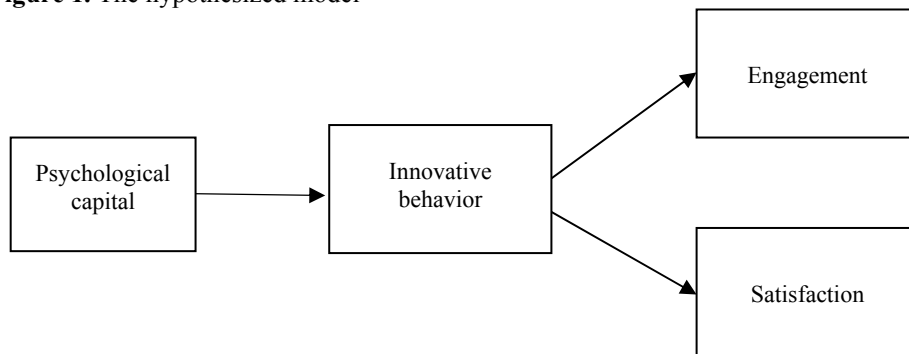
2.2.6. Mediation effects

Finally, we argue that innovative behavior mediates the relationship between PsyCap and the outcomes of engagement and satisfaction. That is, these antecedents influence engagement and satisfaction through innovative behavior. Previous research showed significant relationships between PsyCap and engagement (Avey et al., 2008) and satisfaction (Luthans, Youssef, et al., 2007; Luthans, Avolio, et al., 2007; Luthans, Avoy, et al., 2008; Luthans, Norman, et al., 2008) and between PsyCap and creative performance (Sweetman, Luthans, Avey, & Luthans, 2011). However, no research examined the mediating effect of innovation on the relationship between PsyCap and satisfaction or engagement. Based on the suggested linkages highlighted above we suggest that the relationship between PsyCap and both satisfaction and engagement is mediated by innovative behavior.

H3.1: The relationship between PsyCap and satisfaction is mediated by innovative behavior.

H3.2: The relationship between PsyCap and engagement is mediated by innovative behavior.

Figure 1. The hypothesized model



The research model with hypotheses development is presented in Figure 1.

3. Research methodology

3.1. Sample

Participants in the study are Egyptian professionals from a variety of job types in different companies. Companies were approached by email or through the phone to be able to distribute the survey. The survey was also provided via an online portal to facilitate the process of data gathering. The survey was sent to or handed in to 250 employees who agreed to take the survey, however only 120 filled the surveys and sent them back which make the response rate 48%. Around 19% came from human resources management department, 9% from marketing, 15% from finance, 10% from audit, 9% from quality, 9% from sales, and finally 29% from other departments like information technology, consultancy and teaching. Forty-two of participants hold a bachelor degree while 23% hold a master's degree and 2% holds a PHD. As for the career level, 26% were from an entry level, 60% from middle level and 6% from top level. Employees came from different companies and were asked to voluntarily participate in the study. One condition was asked for, which is that they should have spent at least 6 months in their current organization.

3.2. Measures

All instruments used in this field study are published and standardized measures. Participants were asked to indicate the extent to which they agree to the statements. All measures will use a response scale in which 1 is "strongly disagree" and 6 is "strongly agree".

3.3. Psychological capital

Positive psychological capital was measured using the PsyCap questionnaire. The PsyCap questionnaire was developed by Luthans, Avolio, et al. (2007). Results of their study provided psychometric support for a new PsyCap survey designed to assess the four facets or constructs, as well as a composite factor. Researchers (Luthans, Avolio, et al., 2007) have selected the four scales for each of the four positive constructs based on certain selection criteria. That is, the scale is reliable and valid, applicable to the workplace, and is capable of measuring the state-like capacities that make up the PsyCap. According to the above-mentioned criteria, the scales that are used are (1) hope (Snyder, Symptom, et al., 1996), (2) resilience by Wagnild & Young (Luthans, Avolio, et al., 2007), (3) optimism (Scheier & Carver, 1985), and (4) self-efficacy (Parker, 1998). The researchers selected the best six items from each scale and so reached agreement on the 24 items that make up the PsyCap questionnaire.

The Cronbach alphas across studies on PsyCap conducted by Luthans, Youssef, et al. (2007) show support for the reliability of each of the four facets and for the overall PsyCap as follows: hope (.72-.80), optimism (.69-.79), self-efficacy (.75-.85), resilience (.66-.72), and PsyCap (.88-.89). Sample items included: (a) self-efficacy: “I feel confident analyzing a long-term problem to find a solution” and “I feel confident helping to set targets/goals in my work area”; (b) hope: “I can think of many ways to reach my current work goals” and “There are lots of ways around any problem”; (c) resilience: “I usually take stressful things at work in stride” and “I feel I can handle many things at a time at this job”; (d) optimism: “If something can go wrong for me work-wise, it will” and “I always look on the bright side of things regarding my job”. For the current study, the Cronbach alphas were as follows: hope (.66), optimism (.60), self-efficacy (.80), resilience (.56), and PsyCap (.688) after items deletion. Reliability coefficients around .90 are considered to be “excellent”, values approximately .80 as “very good”, and values around .70 as “adequate” (Pallant, 2010). To increase the reliability of the hope scale two items that showed negative or very low intercorrelations were deleted. The Cronbach alpha for the new hope scale increased to .73. For resilience, two items were deleted where the Cronbach alpha then increase to .64. For optimism, Cronbach alpha increased to .77 after deletion of the reversed items that has negative correlations with other items.

3.4. Engagement

Engagement was measured using the survey by Rich et al. (2010). Sample items included “I exert my full effort to my job” (physical engagement), “I am enthusiastic in my job” (emotional engagement), and “At work, I focus a great deal of attention on my job” (cognitive engagement). Internal consistency for engagement was .72.

3.5. Innovative behavior

Innovative behavior was measured using the questionnaire by Ohly, Sonnentag, & Pluntke (2006) that is based on Zhou & George (2001) creativity rating. Sample items are “I often implement my new and innovative ideas” and “I implement new ways to achieve goals or objectives”. Cronbach alpha for innovative behavior was .84.

3.6. Satisfaction

Job satisfaction was measured using the job satisfaction scale by Brayfield & Rothe (1951). Sample items include “Most days I am enthusiastic about my work” and “I feel fairly satisfied with my present job”. Cronbach alpha was .44 which is very low so we had to delete the two reversed items as they showed negative inter-correlations with other items. Cronbach alpha increased to .75 after deleting the two items and so we formed a new scale for satisfaction that did not include the two items.

Control variables were additionally measured to account for influences of third variables as previous research showed that job experience, education, and gender are related to creative and proactive outcomes (Scott & Bruce, 1994; Sonnentag, 2003). These control variables included age, gender (female or male), career level, years of experience and educational level.

4. Research findings

4.1. Correlation analysis

The correlation analysis provides support for all hypotheses. Innovative behavior was found to relate positively to the two suggested outcomes of satisfaction ($r = .43$) and engagement ($r = .54$). PsyCap as a core construct as well as its four components were found to relate positively to innovative behavior. Further, a comparison of the correlation coefficients of PsyCap and its four components indicates that hope bears the strongest relationship to innovative behavior with $r = .56$, as compared to self-efficacy ($r = .46$), resilience ($r = .19$), optimism ($r = .20$) and PsyCap ($r = .50$).

4.2. Regression analysis

Hypothesis 1 was that employees' level of innovative behavior would be positively related to their satisfaction and engagement. For these analyses, hierarchical regression was used where the covariates of age, educational level and gender were entered into step 1 and innovative behavior was entered in step 2. The purpose was to see the independent effects of innovative behavior on both satisfaction and engagement. As seen in Table 1, when entering innovative behavior into the regression model, it predicted significant variance beyond the covariates. In both cases, the model in step 2 shows innovative behavior related positively with en-

agement ($b = .52, p < 0.001$) and satisfaction ($b = .43, p < 0.001$). Therefore, there was full support for Hypothesis 1. Hypotheses 2 predicted a positive relationship between PsyCap and its components and innovative behavior.

Table 1. Regression analyses with covariates

Variables	Job satisfaction		Engagement	
	Step 1 b	Step 2 b	Step 1 b	Step 2 b
Age	-.06	.038	-.19	-.06
Gender	-.12	-.044	-.13	-.03
Educational level	.091	.045	.18	.13
Innovative behavior		.43***		.52***
Change R2		.17***		.25***

Note: $p > 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

As evident in Table 2, PsyCap as well as its four components predicted innovative behavior whereby hope ($b = .56, p < 0.001, R^2 = .32$) explained the greatest variance in innovative behavior. Therefore, hypotheses 2.1 and 2.2 that PsyCap as well as its four components of hope, optimism, PsyCap, and resilience predicts innovative behavior is supported. Further, relationships between PsyCap and its four components with satisfaction and engagement were also examined for the purpose of testing for the mediation effect of innovative behavior later on. As can be seen in Table 2, only hope and PsyCap showed significant relationships with satisfaction while for engagement, PsyCap and its components except for resiliency were found to be related to engagement.

Table 2. Regression analyses: PsyCap, innovative behavior, satisfaction and engagement

Variables	Innovative behavior		Satisfaction		Engagement	
	b	R2	B	R2	b	R2
Optimism	.20*	.04*	.14	.02	.24*	.05*
Hope	.56***	.32***	.35***	.12***	.44***	.20***
Self-efficacy	.46***	.22***	.16	.02	.32**	.10**
Resilience	.19*	.04*	-.02	.001	.14	.02
PsyCap	.50***	.25***	.21*	.04*	.39***	.16***

Note: $p > 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Finally, regressions were performed to assess whether innovative behavior mediates the relationship between PsyCap and engagement and satisfaction. Following the guidelines of Baron & Kenny (1986), this analysis requires to assess whether the predictor variables (PsyCap components) predicts the outcome variables (satisfaction and engagement). Second, the predictor variables need to predict the mediator (innovative behavior). Third, the mediator must predict the outcome variable. Finally, if there is a mediator effect, the regression coefficient of the predictor on the outcome should decrease when controlling for the mediator. PsyCap was found to predict satisfaction and so we included PsyCap as a higher order and ignored the four components individually. Innovative behavior was found to predict satisfaction ($b = .43, p < .0001$). Finally, when controlling for innovative behavior, the regression coefficient for PsyCap it decrease from .21 to $-.002$ and became non-significant and the Sobel test of partial mediation was significant ($z = 3.76, p < .0001$). Finally, for engagement, when controlling for innovative behavior, the regression coefficient for PsyCap decreased from .39 to .166 and became non-significant, and the Sobel test was significant ($z = 3.84, p < .0001$). So we can conclude that innovative behavior partially mediates the relationship between PsyCap as a whole construct and satisfaction and engagement.

5. Discussion

This study is the first attempt to examine the relationship between innovative behavior and engagement and satisfaction. It is also the first to examine PsyCap and the constructs of hope, resilience, optimism, and self-efficacy as predictors for innovative behavior. This study examined relationships between innovative behavior and positive outcomes of engagement and satisfaction, as well as the antecedents of innovative behavior. Results revealed that innovative behavior is positively associated with engagement and satisfaction.

Though previous research showed that engagement predicted innovative behavior, no research examined whether innovative behavior predicted engagement. The finding of this study is unique and is a major contribution to research in innovation and positive psychology. Since engagement is a core positive psychology topic (Seligman, 2002a, 2002b), it is essential to know what are its antecedents and how to develop it. This also adds to the research on creativity and flow and the argument by Csikszentmihalyi (1996) that creative achievements lead to a happier and meaningful life. Though creativity and engagement are two major topics in positive psychology, the link between them was not emphasized

on. Besides, research on innovation lack the impact of innovations on other psychological aspects of employees that could in turn increase the overall performance of the organization (Rich et al., 2010).

This study also adds to several fields by focusing on antecedents from different aspects. On the psychological level, the current study is the first to examine the link between PsyCap and innovative behavior. Hope, optimism, self-efficacy and resilience were not examined as antecedents to innovative behavior before. The current findings are consistent with the findings by Sweetman et al. (2011) where PsyCap was found to predict creative performance. For optimism, the finding is in line with what Seligman (2006) proposed that optimists tend to be imaginative and come up with new ideas as they are visionary. For hope, the findings are in line with research on goals and their importance in actions (Frese & Zapf, 1994). For self-efficacy, though no research examined self-efficacy and innovative behavior before, the current finding goes in line with the study by Tierney & Farmer (2002) that showed that there is a positive relationship between creative self-efficacy and creative performance. Self-efficacious employees are more confident about the task in hand (Barron & Harrington, 1981) and so are more likely to take risks and innovate new ideas. Finally, the innovation of a new product or service indeed requires many trial and errors where an employee or a group of employees face many challenges and problems. Therefore, the ability to bounce back or resiliency is needed. The current finding goes in line with the argument by Amabile (1996a) that creativity needs persistence in the face of challenges.

Finally, though not our main hypothesis in the study, it is a very significant finding that optimism was not found to be related to satisfaction. This means that optimistic people might not necessarily be satisfied in their jobs. This is consistent with some positive psychology views that if you are optimistic you are different in a way that you will not accept anything (Seligman, 2007). Moreover, resilience and efficacy were not found to be related to satisfaction. This is also making sense in way, that is, if you are resilient, this does not necessarily mean you are satisfied about your current job. As for efficacy, highly efficacious people might not be satisfied at their current job, as one might believe so much in his or her abilities to do a certain task yet the tasks given to him is so boring for example. This might be related to research on flow (Nakamura & Csikszentmihalyi, 2002). Therefore, the current findings are crucial for future research directions in examining the link between 'positivity' and work-related outcomes like satisfaction. On the same line, engagement was not found to be affected by resilience. That is, the fact that some people are resilient than others does not necessarily mean they are more engagement at their organizations. So our ability to

bounce back does not necessarily mean we are “happy” later on and I say happy because engagement involves a great deal of positive emotions. This also sheds light on the importance of research in the field of positive psychology and perhaps suggests that some positive constructs might not be helpful all the time.

6. Conclusions

Innovation fosters economic development, adds to societies' levels of quality of life, and creates new directions to manhood flourishing. Consequently, a great emphasis should be given to employees' creativity and innovative behavior and how to enhance them. This study is the first to examine the link between psychological capital and innovative behavior. Psychological capital capacities were found to be antecedents to innovative behavior, which in turn resulted in more engagement and satisfaction. The main contribution of this study is that it added to the understanding of the antecedents to innovation in the workplaces and how ‘positivity’ plays a major role.

The practical implications is that companies and countries also should start focusing more on the positive capacities of employees as this will lead to more innovation. Perhaps the UAE with the introduction of the minister of state for happiness is a very good example that Sheikh Bin Rashid mentioned in his book, stating that happiness and employees' optimism are crucial for the development of nations (Al-Maktoum, 2017). Perhaps it is not even new that positive capacities and traits like optimism adds to employee performance (Seligman, 2006) however, what is new here is the impact of PsyCap as a whole construct on innovative behavior in specific. This paper also offers many implications for researchers as well. First, the paper adds to the POB research and emphasis on the importance of positive psychology to the workplace. In addition, it shows how when innovative behavior, that is, when employees are able to put their ideas into action, is enhanced, this leads to more engagement and satisfaction.

Finally, the sample size in the current study is relatively small and specifically in relation to the variables included in the model. One reason for that might be the length of the questionnaire since it measured many variables. However, again we tried to solve this issue by dividing the questionnaire into two parts. One other reason is the unawareness of research importance in Egypt and the fact that companies are not willing to cooperate for research and are more concerned about confidentiality issues. Therefore, future research should focus on replicating the same model with larger sample. In addition, common method variance within and between independent or dependent variables may lead to

artificially high correlations (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Since some variables showed strong correlation, common method bias could have impacted the pattern of results. However, it is important to note that for the surveys that were handed in and not the online the filing of the questionnaire was distributed in two different days which can potentially reduce the common method bias limitation.

To conclude, the current study not only suggests the seeming value of employees' psychological capital at all levels within organizations, but also serves as a model of antecedents to innovative behavior. It also shows the importance innovative behavior plays in enhancing engagement and job satisfaction. The antecedents examined here provide a framework for investing in employees' capacities as well as company resources to be able to compete in the current turbulent environment.

Acknowledgements

I dedicate this piece of work to my husband.

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