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The relationship between Psychological Capital and Creativity with Engagement

By

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The relationship between Psychological Capital and Creativity with Engagement

Reem Al Bitar

ABSTRACT

Today, the challenging business environment and the latest technologies are thought to be potential threats to replacing employees. However, creativity is the area that still favors humans. The purpose of this study is to fill the gap in the literature by exploring the relationship between Psychological Capital and Creativity, and to test whether Engagement mediates the relationship between Psychological Capital and Creativity in response to recent research call (Yu et al., 2019). The research sample consisted of 205 respondents working in Lebanese private firms. The questionnaire was comprised of established measures relating to psychological capital, employee engagement, and creativity – in addition to various demographic questions. The data obtained were then analyzed using SPSS. The findings showed a significant positive effect of employee psychological capital on creativity. However, mediation analysis using bootstrapping methods has revealed that employee engagement has partially mediated the relationship between psychological capital and creativity.

Moreover, the researcher was curious to dig more into the impact of each dimension of psychological capital (self-efficacy, hope, resilience, optimism) on creativity with engagement acting as a mediator. Results revealed a positive significant effect of each of self-efficacy, optimism, hope, and resilience, on creativity. Moreover, engagement partially mediated the relationship between each of the four PsyCap dimensions and creativity. The author extends prior research and validates more the

findings by exploring the relationship between psychological capital and creativity in new non-western context. Furthermore, to the best of our knowledge, this is the first study that examines the role of engagement in the relationship between psychological capital and creativity. This research has crucial implications for managers and HR professionals.

Keywords: Psychological Capital, Self-efficacy, Hope, Resilience, Optimism, Creativity, Engagement.

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List of Abbreviations

PsyCap: Psychological Capital

ENG: Engagement

CREA: Creativity

PsycapSE: Psychological Capital Self-efficacy

PsycapHP: Psychological Capital Hope

PsycapRE: Psychological Capital Resilience

PsycapOP: Psychological Capital Optimism

Chapter One

Introduction

1.1 General Background

The business environment and the nature of work are changing continuously and this have posed challenges to organizations. Given that competitiveness, technology and instability have come to influence the current market, causing a shift from focusing on employees' traditional performance to adapting to the new challenges (Eldor & Harpaz, 2016). In other words, global competition, disruptive technology, people analytics, and talent mobility pose challenges for organizations and require employees to be creative, proactive, risk takers, and to face hardship in order to grow.

From the above, it is thus expected that employers offer their employees motivating jobs that can help to increase their engagement in the workplace. Motivating jobs provide timely feedback and greater job enlargement and enrichment. Simultaneously, organizational strategies that focus on improving work engagement should be implemented in a work culture that fosters employee creativity as the relationship between engagement and performance relies on creativity (Ismail, Iqbal, & Nasr, 2019). According to Databank (2007), the effect of creativity on organizations expands through the entire supply chain from design and logistics all

the way to marketing and branding. The better off an organization is in levels of creativity, the greater its competitive advantage and its return on investment (Databank, 2007). Furthermore, the latest technologies including automated machines, analytics, robots, and artificial intelligence are thought to be potential threats to replacing employees, and creativity is the area that still favors humans. However, to enhance and drive creativity, it is essential to raise the levels of employees' hope, optimism, resilience (Yu, Li, Tsai, & Wang, 2019) and psychological capital (Yu et al., 2019; Wang, Liu, & Zhu, 2018; Wojtczuk-Turek & Turek, 2015).

Basing the present study on Amabile theory of creativity (Amabile & Mueller, 2008) and the Conservation of resources (COR) theory (Hobfoll, 1989), the purpose of this study is to explore the relationship between psychological capital and creativity with engagement.

1.2 Significance of the Study

In fact, a number of studies have revealed a significant relationship between Psychological Capital and Creativity (e.g. Rashid et al., 2019; Nurfaizal, 2018; Zubair & Kamal, 2017).

However, despite the fact that psychological capital construct is a popular one and that numerous studies have been conducted in the Psychological Capital–Creativity area over the last decade, there are still some gaps in the literature. Yu, Li, Tsai, & Wang (2019) recommend that future studies address other variables that could act as mediators in the relationship between Psychological Capital and employee creativity.

They suggested employee engagement as a mediating variable affecting employee creativity. Moreover, Sun & Huang (2019) suggested that to better understand the impact of positive psychological capital, research should be conducted to examine the link between psychological capital and innovation, with engagement as a mediating variable. There is definitely a need for a deeper understanding of the impact of individual characteristics on engagement (Meskelis & Whittington, 2020).

Moreover, Karatepe and Karadas (2015) argue that research on the link between Psychological Capital and Engagement is scarce and Psychological Capital research will progress by exploring its effect in the workplace. Additionally, the majority of the research on Psychological Capital has been carried out by Luthans and his colleagues in the US and China. Thus, there is a need for such research in other contexts, to generalize its effect and importance in the workplace (Yadav & Kumar, 2017).

Thus, in response to the above mentioned calls for research and to fill the gap in the existing knowledge base, this study links Psychological Capital to Creativity through Engagement while underpinning the Amabile theory and the Conservation of resource theory (COR) theory as the theoretical base.

1.3 Purpose of the study

The purpose of this study is to fill the gap in the literature by exploring the relationship between Psychological Capital and Creativity, and to test whether Engagement mediates the relationship between Psychological Capital and Creativity. The study will also grant empirical findings for human resource managers and management personnel on managing and retaining their workforce.

1.4 Statement of the Research Problem

This study investigates the relationship between Psychological Capital and Creativity via Engagement. This research attempts to answer the following questions:

1- What is the effect of Engagement on the relationship between Psychological Capital and Creativity?

2- What is the effect of Engagement on the relationship between specific Psychological Capital components and Creativity?

This paper will seek to answer the above questions by collecting and analyzing quantitative data. Chapter 2 includes a review of the literature to establish the prevalent definitions of the three variables-Psychological Capital, Creativity, and Engagement. In addition, it also provides the theoretical context for the relationships between three variables as put forth in the extant literature. Chapter 3 discusses the hypothesis formation. Chapter 4 describes the methodology by which data was collected for this study and presents the statistical findings, where the acceptance or rejection of the hypothesis is justified. In addition, Chapter 5 includes an elaborated discussion of the findings and how they relate to the business world. This chapter also discusses the limitations of this study and provides recommendations for future studies.

Chapter Two

Literature Review

2.1 Psychological Capital

According to researchers, organizations today are facing the challenge of creating ways to develop psychological capacities of employees and to utilize these capacities. Retention strategies including pay and benefits, growth opportunities, job crafting, etc. are no longer sufficient as permanent employment, seniority-based human resources practices, and employees' attitude of having a stable working conditions have given way to the term "career resiliency" (Luthans, Youssef, & Avolio, 2007).

As the ways to gain a competitive advantage have changed, there has become a need for a new path. According to Luthans et al. (2007), the new competitive advantage can be achieved through developing and managing Psychological capital.

The term positive organizational behavior is aimed to recognize a newly arising focus on a positive way to managing and retaining talents in today's challenging work environment.

Positive organizational behavior is described as the study of individuals' strengths and psychological competencies and the ways to measure, facilitate, and manage those competencies in order to improve performance (Luthans, 2002b).

Positive psychologist Csikszentmihalyi (as quoted in Kersting, 2003, p. 26) recognized that such psychological capital "is developed through a pattern of investment of psychic resources that leads to gaining experiential rewards in the present moment while also increasing the likelihood of future benefit. . . It is about the positive psychological capital state of the components of your inner life. When you add up the components, experiences and capital, it makes up the value".

The components of psychological capital are efficacy, optimism, hope, and resilience.

Psychological Capital is comparatively a new emerging construct in the psychology field that drew attention with its important role in creating a competitive advantage for organizations. The construct of Psychological Capital was developed by Luthans and his colleagues (Luthans, 2002; Luthans et al., 2007; Luthans, Avolio, Avey and, Norman, 2007) and describes individuals with psychological capital as having confidence (efficacy) in their ability to achieve challenging goals and tasks; having positive assumptions (optimism) about accomplishing; being dedicated towards achieving goals, planning to achieve those goals (hope); and when faced by adversity and challenges, preserving and adapting (resilience) in order to succeed (Luthans et al., 2007; Luthans et al., 2007).

2.1.1 Hope

Hope is defined as an individual optimistic state of mind which is built on a desire to plan and achieve goals (Snyder et al., 1991).

Snyder et al. (1991, p. 287) define hope as a positive motivational state that is comprised of three conceptual components: agency, pathways, and goals. The agency

component is to have the will and determination to achieve the planned goal (Snyder et al., 1996; Snyder, 2000, 2002). Moreover, the pathway component is about identifying the goals and the routes (including alternative plans) to achieve those goals (Snyder, 2000).

The positive impact of hope on work outcomes has been studied by some researchers. For example, the relationship of hope with depression, stress, and wellbeing was negative (Frankham, Richardson, & Maguire, 2019). Hope has positive effect on knowledge sharing and knowledge creation (Goswami & Agrawal, 2019); goal attainment (Barrios, Reficco, & Taborda, 2019); creating a positive work environment with less burnout (Yavas, Babakus, & Karatepe, 2013); greater organizational citizenship behavior and job satisfaction (Jung & Yoon, 2015); and non-violent work behavior (Sarkar & Garg, 2020).

2.1.2 Optimism

Optimism reflects the level of employees' positive attribution or attitude that future outcomes will be positive and successful (Luthans et al., 2010).

According to Seligman (1998), optimistic individuals attribute positive consequences to personal, internal, and permanent causes, and negative consequences to external and situational causes (Luthans et al., 2007).

Luthans et al. (2007) highlight that optimism should be realistic, logical, and flexible by analyzing past scenarios and creating contingency plans. In other words, being excessively optimistic can damage by which a person becomes unable to accurately examine a situation (Luthans et al., 2007).

In the workplace, the positive effect of optimism has resulted in a lower turnover intention (Kim & Hyun, 2017); positive impact on job satisfaction (Badran & Youssef-Morgan, 2015); better psychological well-being (Lee, 2019); positive organizational behavior (Brady, Credé, Sotola, & Tynan, 2019); greater innovative behaviors (Wojtczuk-Turek & Turek, 2015); stronger role commitment (Hundera, Duysters, Naudé, & Dijkhuizen, 2019); team learning behaviors (Rebelo, Dimas, Lourenço, & Palácio, 2018); lower psychological exhaustion, depersonalization, low personal accomplishment (Rehman, Qingren, Latif, & Iqbal, 2017); and better job performance (Tho, Phong, Quan, & Trang, 2018).

2.1.3 Self-efficacy

Self-efficacy is defined as "an individual's confidence about his or her 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, p. 66).

Self-efficacy is based on Albert Bandura's (1997) social cognitive theory and it has the most established theoretical foundation where it is considered a crucial input for understanding psychological capital (Luthans et al., 2007).

Strong evidence has been found to validate the link between self-efficacy and performance. The impact of self-efficacy on performance is documented where self-efficacy led to job crafting (Tresi & Mihelič, 2018); better onboarding experience (Gupta, Bhattacharya, Sheorey, & Coelho, 2018); team cohesion (Black, Kim, Rhee, Wang, & Sakchutchawan, 2019); organizational citizenship behavior (Kao, 2017; Kim, Kim, Holland, & Han, 2018; Choong, Ng, Na, & Tan, 2019; El-Zohiry & Abd-

Elbaqy, 2019); low turnover intention (Afzal, Arshad, Saleem, & Farooq, 2019; Ibrahim, Suan, & Karatepe, 2019; Albrecht & Marty, 2020); performance (Çetin, & Aşkun, 2018; Alkhateri, Abuelhassan, Khalifa, Nusari, & Ameen, 2018; Kakeeh, Hassan, Van-Hemmen, & Hossain, 2020); motivation to lead (Cziraki, Read, Laschinger, & Wong, 2018); career aspirations of women in the workplace (Hartman & Barber, 2020); extra-role behaviors (Rodríguez, Estreder, Martinez-Tur, Díaz-Fúnez, & Pecino-Medina, 2020); Commitment (Orgambídez, Borrego, & Vázquez-Aguado, 2019; Lyons & Bandura, 2019; Liu, 2019; Mokoena & Dhurup, 2019); and job satisfaction (Idris & Manganaro, 2017; Zakariya, 2020).

2.1.4 Resilience

In positive psychology, resilience is the ability to sustain and revive when faced with issues and difficulty (Masten, 2001; Masten & Reed, 2002). Resilience in the workplace is defined as the psychological ability to mentally cope, recover, and bounce back from hardship, failure, or even positive change such as a promotion at work followed by greater accountability (Luthans, 2002a).

Clinical psychologists notice that an individual becomes more resilient when the individual effectively overcomes setbacks and unfavorable situations (Richardson, 2002). Such positive emotions have been found in studies to have a continuous and dramatic increase in their effects (Fredrickson & Joiner, 2002); Effects include OCB (Paul, Bamel, Ashta, & Stokes, 2019); low deviant behavior (Jiang, Jiang, Sun, & Li, 2020); job performance (Amiri & Baghbanbashi, 2018; Walpita & Arambepola, 2019; Suryaningtyas & Sudiro, 2019); engagement (Gupta & Sharma, 2018); proactive work behavior (Caniëls & Baaten, 2019); commitment (Cho, Park, &

Dahlgaard-Park, 2017; Meng, Luo, Huang, Wen, Ma, & Xi, 2019); and reduced level of occupational burnout (Ogungbamila, Ogobuchi, & Ogungbamila, 2019; Khaksar, Maghsoudi, & Young, 2019).

2.1.5 Psychological capital in the workplace

Each dimension of psychological capital has been examined in previous research as well as the psychological capital construct as a whole and their effect on work-related outcomes, including organizational citizenship behavior, commitment, performance, and job satisfaction. The overall construct of psychological capital had stronger relation with work-related outcomes than the single dimensions self-efficacy, hope, optimism, and resilience. This suggests that "PsyCap does appear to have a combined impact; that is, the overall construct PsyCap may have stronger effect than the sum of its components (i.e. efficacy, hope, optimism, and resiliency)" (Luthans Youssef, & Avolio, 2007, p. 212).

More specifically, Sarkar and Garg (2020) further analyzed the relationship between PsyCap and turnover intention. Specifically, the researchers investigated the links between psychological capital, abusive supervision, and employees' turnover intention. Findings showed that abusive supervision results in higher turnover intention. This relationship was mediated by PsyCap.

Other research focused on psychological Capital in employees and its effect on the workplace. For example, Shah, Khattak, Zolin, and Shah (2019) investigated the relationships among psychological capital and positive employee attitudes. The authors collected data of 411 participants from seven telecommunication companies located in Pakistan. They concluded that employees' psychological capital leads to

the generation of positive attitudinal outcomes in employees such as intention to stay, employee job satisfaction, and work commitment.

Moreover, using a two-wave panel design with a sample of 274 employees, Qian, Zhang, and Jiang (2020) noted that leader humility can enhance subordinates' self-efficacy, hope, resilience, and optimism (PsyCap components) and then leads to higher Organizational citizenship behavior and less withdrawal behavior. This finding is consistent with the study conducted by El-Zohiry and Abd-Elbaqy (2019). El-Zohiry and Abd-Elbaqy (2019) performed their study on 335 employees working in the branches of a Telecom Egyptian Company located in Greater Cairo Governorate and concluded that the higher PsyCap the employees had, the higher organizational citizenship behavior that they would demonstrate.

Additional support for the link between psychological Capital and performance is proposed by Santos, Neto, and Verwaal (2018) who conducted their study in companies of the public and private sectors in Brazil. They have deduced that psychological capital has a role in driving employee's job performance. Santos et al. (2018) recommended that organizations must nurture the development of their employees' positive psychological factors because psychological capital is a key driver of individual job performance.

Organizations are advised to train managers in order to develop the four dimensions of PsyCap through equipping them with materials and courses so that their organization has a positive feedback loop (Tüzün, Çetin, & Basim, 2018). Similarly, Sameer, Mohamed, and Mohamad (2019) examined the effect of the four psychological capital components on task performance. The study was conducted using structural equation modeling where data was obtained from 251 Egyptian professionals. A statistically significant relationship existed between the four

components and task performance where resilience was the strongest predictor. The finding of this study is parallel to a study carried out by Hsu, Chun-Yang, Pi-Hui, and Ching-Wei (2019) who showed that psychological capital positively affects job performance since employees with positive psychological capital are likely to be hopeful and confident about the success of things (optimism and hope), believe in their ability to produce the intended result at work (self-efficacy), and are less prone to setbacks (resiliency).

Moreover, several recent studies have found that psychological capital is positively correlated with employees' well-being (Roemer & Harris, 2018; Grover, Teo, Pick, Roche, & Newton, 2018; Polizzi Filho & Claro, 2019); commitment (Singhal & Rastogi, 2018; Dubey, Ruparel, & Choubisa, 2019; Wu, 2019; Gurbuz & Bozkurt Yildirim, 2019); emotional intelligence (Aderibigbe & Mjoli, 2019); and happiness at work (Kawalya, Munene, Ntayi, Kagaari, Mafabi, & Kasekende, 2019).

2.2 Creativity

Given the rapid pace of change and the high level of competition that today's organizations are facing, creativity in employees has become a valuable asset. "In the new millennium…creativity, the ability to produce new knowledge, will become our most cherished trait….In the fast-changing world to come, the ability to deal with a vast range of complex problems will be at a premium….This growing complexity exists in most aspects of human endeavor. It seems safe to say that in no other era of human history have we had so great a need for creative ideas. We will

require not only a higher general level of innovative quality but also imaginative contributions from many more individuals" (Dacey & Lennon, 1998, p. 3).

While innovation and creativity are related, they are distinct and not fully identical (Anderson et al., 2014). Creativity is the production of new knowledge and ideas that are novel, useful, and valuable to the organization (Amabile, 1983). However, innovation is the implementation of those ideas or the conversion of ideas into actions (Hughes et al., 2018).

2.2.1 Antecedents of Creativity

Many scholars have been curious about the causes of creativity. For instance, Al Harbi, Alarifi, and Mosbah (2019) concluded that there is a positive effect of intrinsic motivation on employees' creativity. This finding contradicts the results of the research carried out by Korzynski, Paniagua, and Rodriguez-Montemayor (2019) who found no effect of intrinsic motivation on creativity.

When it comes to leadership, Semedo, Coelho, and Ribeiro (2018) performed their study on 543 employees of Cape Verdean organizations and concluded that authentic leadership influences creativity positively and significantly. This is parallel to the findings of other studies (Lee, Legood, Hughes, Tian, Newman, & Knight, 2020; Ribeiro, Duarte, Filipe, & Torres de Oliveira, 2019).

On the contrary, recent studies have shown that transformational leadership (Durrah, Allil, Gharib, & Hannawi, 2020; Haron, Rela, & Saad, 2020; Al Harbi, Alarifi, & Mosbah, 2019; Chaubey, Sahoo, & Khatri, 2019; Minh-Duc & Huu-Lam, 2019), ethical leadership (Kalyar, Usta, & Shafique, 2019; Tu, Lu, Choi, & Guo, 2019; Mo,

Ling, & Xie, 2019; Shafique, Ahmad, & Kalyar, 2019), and servant leadership (Yang, Ma, Gu, & Liu, 2019) are positively linked to employee creativity.

Moreover, a study performed by Chaudhary and Akhouri (2019) in different information technology firms in India confirmed that employees' perception of corporate social responsibility have direct and indirect effect on their creativity.

Zhang, Jia, and Chen (2019) performed their study by collecting data from 593 followers and their 98 supervisors in organizations that are tackling a big data revolution in China. The researchers used regression and bootstrapping analysis to test the mediation and the moderation model. Zhang et al. (2019) found a negative relationship between job burnout and employee creativity. Similarly, job insecurity is associated with less creativity (Probst, Chizh, Hu, Jiang, & Austin, 2019).

Furthermore, Miao, Komil ugli Fayzullaev, and Dedahanov (2020) conducted a study where data was collected from 352 employees of manufacturing organizations in the Republic of Korea. They found that abusive supervision is negatively related to employee creativity (Miao et al., 2020; Shen, Zhang, Yang, & Liu, 2020). Abusive supervision simulates negative emotions that inhibit the creation of new ideas (Khan, Khan, Bodla, & Gul, 2019).

Zhang, Xu, and Sun (2020) examined the link between employees' openness to experience and their creativity. Data were collected from a sample of 434 supervisors and employees from organizations in different industries (including advertising and Internet gaming) in China. Their results showed a positive relation between openness to experience and employee creativity. As a result, they suggested that organizations aiming to increase the level of creativity, should recruit and select employees with high openness to experience (Zhang, Xu, & Sun, 2020).

Chaubey and Sahoo (2019) investigated the impact of HR interventions (compensation, training and development) on employee creativity by gathering 258 valid responses of middle-level and top-level executives working in four wheeler automobile production units and Research & Development departments in Southern India. They found that when employees are rewarded for their creative ideas, they tend to challenge themselves more and thus become more creative. Similarly, creativity training and sharing knowledge can unleash employees' potential in solving problems and coming up with creative ideas (Chaubey & Sahoo, 2019). Finally, Zhang, Sun, Lin, and Ren (2020) studied the influence of knowledge sharing on employee creativity in a physics research institution in northern China. They found that knowledge sharing was positively related to creativity. The findings are consistent with the results of the studies conducted by Thuan (2020) and Zeb, Abdullah, Hussain, and Safi (2019).

2.3 Engagement

Kahn (1990) defined employee engagement as the level to which employees are immersed physically, mentally, and emotionally in their work. In specific, Schaufeli et al. (2002) focused on the role of engagement components– vigor (having the will to make an effort and spend time on finalizing work), dedication (a feeling of significance and pride) and absorption (being immersed at work.

2.3.1 Antecedents of Engagement

Recent studies about engagement at work have sought to understand the drivers of employee engagement in the workplace. For instance, Sandhya and Sulphey (2020) conducted their study using a cross-sectional and quantitative research design based on a sample of 392 Indian IT professionals. They reported that psychological contract and psychological empowerment significantly promote employee engagement.

The findings from Sandhya and Sulphey (2020) study are consistent with the study conducted by Fan, Zheng, Liu, and Li (2016) who collected their data from 923 nurses working in four large university hospitals in China. They found that psychological empowerment has a positive significant contribution to job engagement where psychological empowerment acts as a mediator in the relationship between perceived work environment and job engagement. Hence, psychological empowerment is a predictor of employee engagement at the workplace (Meng & Sun, 2019; Arefin, Alam, Islam, & Rahaman, 2019).

Furthermore, in their study among employees in the construction industry in South Africa, Thomas, du Plessis, and Thomas (2020) reported that employees' involvement in job-crafting interventions enhances their engagement. This finding is consistent with other studies' (Sharma & Nambudiri, 2020; Zhang & Li, 2020; Matsuo, 2019).

In their study, Khodakarami and Dirani (2020) collected their data from 2,408 adults working in private companies or non-profit organizations in USA and concluded that perceived organizational support POS is positively and significantly linked to employee engagement (Adil, Hamid, & Waqas, 2020; Abbas, 2018).

On the other hand, recent studies have reported negative relationships between abusive supervision and employee engagement (Yan, Wang, Su, 2020; Kirrane, Kilroy, & O'Connor, 2019). For example, in their study conducted in the hotel industry in Taiwan, Wang, Hsieh, and Wang (2020) reported that employee silence negatively affected work engagement and that employee silence mediated the relationship between abusive supervision and employee's engagement level.

When it comes to leadership, Mostafa and Shen (2019) argue that there is a positive and significant relationship between ethical leadership and engagement at work. They performed their study in the Egyptian banking sector. Similarly, Mostafa and Abed El-Motalib (2020) conducted their study in the Egyptian public hospitals and found that ethical leadership is a driver of employee engagement (Özsungur, 2020; Naeem, Weng, Hameed, & Rasheed, 2020; Sugianingrat, Widyawati, da Costa, Ximenes, Piedade, & Sarmawa, 2019).

Moreover, transformational leadership has been found to have a positive significant impact on employee engagement (Ree & Wiig, 2020; Amor, Vázquez, & Faíña, 2020; Lai, Tang, Lu, Lee, & Lin, 2020; Mostafa, 2019; Balwant, Mohammed, & Singh, 2019).

Furthermore, Chandra-Pattnaik and Panda (2020) explored the association between supervisor support, employee engagement, and intention to leave the organization. They collected data from 386 Indian call center employees through questionnaire survey. They found that supervisor support induces work engagement and work engagement mediates the relationship between supervisor support and intention to leave the organization. Similar studies have confirmed the finding that supervisor support has a positive link with work engagement (Mukaihata, Fujimoto, & Greiner,

2020; Park, Johnson, & Chaudhuri, 2019).

Various studies have validated the relationship between employees' personal resources and their work engagement (Contreras, Espinosa, & Esguerra, 2020; Meskelis & Whittington, 2020; Engelbrecht, Rau, Nel, & Wilke, 2020). For example, Lappalainen, Saunila, Ukko, Rantala, and Rantanen (2019) conducted their study in knowledge-intensive organizations (n=503). They found that employees' attributes, mainly analytical thinking, assertiveness, and leadership, have a stronger effect on employee engagement than environmental factors do.

However, Ning and Alikaj (2019) conducted a study of 804 employees from firms in China and they found that job resources (autonomy, recognition, coworkers' support, and flexible work programs) promote work engagement for older employees, while other resources (timely feedback, development opportunities, promotion) enhance the work engagement of younger employees. The positive significant effect of job resources on employee engagement is confirmed by other studies as well (Albrecht & Marty, 2020; Chen, 2019).

HR practices (learning and development opportunities, performance evaluation) are positively linked to employee engagement (Ahmed, Kura, Umrani, & Pahi, 2020). Organizations should focus on delivering better rewards, development programs, and opportunities for advancement as this may enhance the three components of engagement: vigor, absorption, and dedication (Shibiti, 2020). Moreover, a study conducted by Sakr, Zotti, and Khaddage-Soboh (2019) in five different financial institutions and banks in Lebanon, found that workplace fun enhances the level of employee engagement at work regardless of their financial satisfaction. Sakr et al. (2019) used a qualitative approach.

2.3.2 Engagement and work outcomes

Previous research reported that engaged employees produce positive work outcomes, including increased performance (Ismail, Iqbal, & Nasr, 2019), higher intention to stay (Rai, Ghosh, & Dutta, 2019), and decreased employees' ability to adapt to change (Parent & Lovelace, 2018). Employee engagement influences employee's voluntary turnover intentions (Xiong & Wen, 2020; Van & Nafukho, 2019).

Santhanam and Srinivas (2019) performed their study on 1,197 blue-collar employees of three manufacturing facilities in India and concluded that employees with low engagement levels tend to have a high risk of burnout at work and as a result, they have high intentions to leave the organization. They also found that happiness moderates the relationship between employee burnout, engagement, and turnover intention

Furthermore, Orgambídez and Almeida (2020) conducted their study with a sample of 267 participants from two Portuguese state hospitals. They found that engagement had significant and positive correlation with organizational commitment. This finding is in harmony with the findings of other studies (De Guzman & Dumantay, 2019; Putri & Setianan, 2019).

Moreover, Ali, Sabir, and Mehreen (2019) carried out their study in Pakistan, with a sample of 355 participants working in different departments of textile mills. Ali et al. (2019) highlighted that engagement had a significant effect on performance. They suggested that employee engagement is an important factor for achieving organizational and individual goals. This finding is consistent with other studies' (Aboramadan, Dahleez, & Hamad, 2020; Uddin, Mahmood, & Fan, 2019; Tian,

Wang, Zhang, & Wen, 2019).

On the other hand, with a sample of 227 Bank employees in China, Xiong and Wen (2020) explored that turnover intention leads to lower work engagement of employees, which in turn, decreases their organizational citizenship behavior and increases their counterproductive work behavior.

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Chapter Three

Hypotheses and Conceptual Model

3.1 Hypotheses Development

3.1.1 Psychological Capital and Engagement relationship

Various recent studies (e.g. Bonner, 2016; Adil & Kamal, 2016; Gyu-Park, Sik-Kim, Yoon, & Joo, 2017; Li, Castaño, & Li, 2018; du Plessis & Boshoff, 2018; Alessandri, Consiglio, Luthans, & Borgogni, 2018; Lupsa, Baciu, & Virga, 2019; Carmona-Halty, Salanova, Llorens, & Schaufeli, 2019) have shown that psychological capital positively predicted work engagement. For example, a study by Alessandri, Consiglio, Luthans, and Borgogni (2018) on 420 white collar employees, found that employees who scored high on Psychological Capital tend to engage and perform better at work over time. In other words, enhancing work engagement is dependent on the development of psychological Capital over time.

Additional support for the association of psychological capital with engagement is provided by Karatepe and Avci (2017) where they conducted their study in the healthcare industry. Their results revealed that psychological capital has a positive impact on employees' engagement. As a result, they suggested that managers should measure the psychological capital of employees because psychological capital was greatly linked to employees' engagement (Karatepe & Avci, 2017).

Employees' personal resources assist them to deal with job demands in a more

efficient and effective way and to experience positive behavior or state of mind, such as engagement at work (Costantini, De Paola, Ceschi, Sartori, Meneghini, & Di Fabio, 2017). The process of developing employees' self-efficacy, hope, optimism, and resilience enhances their level of work engagement (du Plessis & Boshoff, 2018), empowers employees to strongly work on their goals, and promotes their well-being (Datu & Valdez, 2016). They are expected to be more self-confident and to hold the belief that they will succeed by investing their time and effort, with a sense of dedication, vigor, and absorption which leads to the accomplishment of their goals (Martínez-Martínez, Youssef-Morgan, Chambel, & Marques Pinto, 2019). Therefore, organizations are searching for employees who are psychologically immersed and attached to their work (Bonner, 2016). Nevertheless, those results are in opposition to De Waal and Pienaar (2013) study who found no significant effect of psychological capital on work engagement.

Moroever, Nikhil and Arthi (2018) proposed a theoretical framework to identify the link between Psychological capital, work engagement, and perceived organizational support, and to enhance the understanding of the process through which employees' psychological capital impacts their engagement at work.

They concluded that psychological capital, being a personal resource, is attached to one's inner strength. Thus, when the cause of employees' engagement is having a high psychological capital rather than a perceived organizational support, their engagement tends to be deeper and it lasts longer (Nikhil & Arthi, 2018). This is because employees with high PsyCap are more resilient, efficacious, confident, hopeful, and optimistic (Gupta, Shaheen, & Reddy, 2017). Positive psychological intervention is required so as to increase work engagement (Wang, Liu, Zou, Hao, &

Wu, 2017) and leaders should invest in developing employees' psychological capital (Li, 2018).

Similarly, Gupta, Shaheen, and Das (2019) explored the direct effect of employees' psychological Capital on their work engagement. The research was conducted in the emergency section of tertiary hospitals. Findings showed a statistically significant relationship between psychological capital and work engagement. As a result, they suggested that managers select and retain employees with high psychological capital. Such employees can reap the benefits of their personal resources by being engaged and able to deal with burnout (Gupta, Shaheen, & Das, 2019). Engaged employees with high level of psychological capital have high levels of emotional well-being (Diedericks, Cilliers, & Bezuidenhout, 2019).

In brief, employees with high PsyCap score tend to be motivated, devoted, and joyfully involved in their work (Karatepe & Karadas, 2015). Consequently, it is expected that when individuals are high in those four PsyCap dimensions and engaged at work, they will have a higher level of Creativity. We therefore propose the following hypothesis:

H1*:* Psychological Capital is positively related to employee engagement.

3.1.2 Engagement and Creativity relationship

The concepts of creativity and innovation are often differentiated by authors in the literature. They usually define creativity as the process of creating new ideas, whereas innovation is the execution of such ideas (Iqbal, 2011).

Few studies have shown a positive association between the engagement and creativity of employees. For instance, Ismail, Iqbal, and Nasr (2019) carried out a research study within Lebanon to specify the link between engagement and performance mediated by creativity. The outcomes of their study revealed a significant and positive correlation among engagement, creativity, and performance. Engaged employees feel immersed at work and concentrate their energy on creating new ideas which in turn improves their performance in the organization (Ismail et al., 2019). This makes sense, as engaged employees are likely to seek and solve problems through idea generation, according to Messarra et al. (2019) study. Similarly, backed by broaden-and-build theory (Fredrickson, 2001), Bakker and Xanthopoulou (2013) suggested that work engagement may expand by generating the need to broaden the self through learning and accomplishing of goals. Accordingly, they hypothesized that engagement will lead to creativity. And this hypothesis was supported.

Moreover, according to Chaudhary and Panda (2018) and Mubarak and Noor (2018), work engagement has significant and positive correlation with employee creativity. According to Mubarak and Noor (2018), authentic leaders can boost the level of creativity in employees by influencing their work engagement levels.

From a theoretical point of view, the Amabile theory of creativity (Amabile & Mueller, 2008) provides support to our model. This theory proposes that work engagement is a main driver or cause of creativity on the job. To put it another way, employees are more likely to have autonomy in achieving their goals. Thus, they tend to have control over their tasks and ideas. However, when employees perceive their jobs as uninteresting and not challenging, they tend to be less engaged and as a result, feel less encouraged to think creatively. Hence, it is predicted that:

H2: Employee engagement is positively related to creativity.

3.1.3 Psychological Capital and Creativity relationship

A number of empirical studies have examined the link between psychological capital and creativity (e.g. Jafri, 2012; Wang, Liu, & Zhu, 2018; Nurfaizal, Dwiatmadja, & Setyawati, 2018; Yu, Li, Tsai, & Wang, 2019). The results from these studies showed that psychological capital positively affects creativity. The four components of psychological capital (hope, optimism, resilience, and self-efficacy) lead to higher level of employee creativity. According to Jafri (2012), employees with high psychological capital tend to demonstrate creative behaviors at the workplace, compared with employees with low Psychological capital.

Accordingly, recent studies have illustrated that employees' psychological capital has a positive impact on creativity. For example, Yu, Li, Tsai, and Wang (2019) investigated the roles of the four components of psychological capital – optimism, hope, self-efficacy and resilience – in enhancing employee creativity among 468 employees of multiple manufacturing firms in China. They found that psychological capital is positively related to employees' creativity at work. This finding is in agreement with the study conducted by Nurfaizal, Dwiatmadja, and Setyawati (2018).

Furthermore, Huang and Luthans (2015) performed their study on 405 full-time software engineers working in 56 teams in China and concluded that the better off employees in terms of psychological capital, the greater their levels of creativity.

In addition, Rashid, Islam, Asif, and Ahmer (2019) explored the relationship between psychological capital and employee creativity where they found that

employee psychological capital significantly affects employee creativity (R^2= 0.68). In sum, most results of recent research studies have emphasized a positive link between employee Psychological capital and creativity.

Some researchers explored the impact of each of self-efficacy, hope, resilience, and optimism on creativity. For instance, Ghassabkar and Mirjafari (2018) concluded that as self-efficacy increases, it enhances employees' creativity. To elaborate, high self-efficacy reduces turbulence from stressful events since employees who strongly believe in their abilities, perform better at work. This finding is in harmony with the study carried out by Azim, Fan, Uddin, Abdul Kader Jilani, and Begum (2019) who noted that creative self-efficacy positively influenced creative performance.

Chen and Zhang (2019) provided additional support for the relationship between self-efficacy and creativity. They conducted their study in a state-owned enterprises including three banks and one manufacturing industry. They found that creative self-efficacy positively affected employee creativity as self-efficacious individuals would be more likely to seek feedback for their creative ideas and solutions, leading to increased creativity. They recommended that organizations develop their employees' self-efficacy through effective management and training such as making them participate in creativity-motivating activities (Chen & Zhang, 2019).

The recent study of Kim, Choi, and Butt (2019) on individuals' reflected self-efficacy and creativity found that reflected self-efficacy affects individual creativity. They suggested that when people are recognized by others as being capable and valuable, they tend to become more motivated to initiate interpersonal exchanges which can then help them to secure resources necessary for solving problems in a creative way (Kim, Choi, & Butt, 2019). In other words, employees become

confident in their abilities, which in turn, enhances their self-efficacy thus, improving their creativity potential (Khalid & Zubair, 2014).

Hopeful employees who encounter difficulties at work tend to create and find new ways to resolve problems and overcome obstacles (Yu, Li, Tsai, & Wang, 2019).

Rego, Sousa, Marques, and Cunha (2012) proposed that hope predicts employees' creativity not only because hopeful employees develop positive state of mind and positive psychological state, but also because they are likely to have more intrinsic motivation at work and aim for high job satisfaction. Also, Zhang, Liu, Liu, Huang, and Liu (2019) suggested that hope is a significant predictor of creativity. Hopeful employees tend to resist, do not give up when faced with obstacles at work, and think positively while developing effective solutions for problems that arise.

This is consistent with Mishra, Bhatnagar, Gupta, and Wadsworth's (2017) findings who assumed that such hopeful individuals will be positive about the success of their initiatives and ideas and will examine alternative ways to achieve goals, displaying resilience and hope.

Mafabi, Munene, and Ahiauzu (2015) identified a strong and positive relationship between creative climate and resilience. A creative climate is connected to the strength of adaptability and resilience in an organization. Furthermore, organizations should create human resource practices that enhance a culture of creativity accompanied with innovation and organizational resilience (Mafabi, Munene, & Ahiauzu, 2015).

De Clercq and Pereira (2019) confirmed that there is a positive link between resilience level and creative work. High resilient employees approach challenges and setbacks as an opportunity to learn and move forward. They do not fear that their

ideas will be rejected. As a result, they allocate their energy to create radically new ideas. Accordingly, managers should realize that employees' resiliency can stimulate their tendency to give rise to creative new ideas for sustaining the organization (De Clercq & Pereira, 2019). Team resilience is present when a team can collectively improvise while facing adversity. They rely on open communication and mutual trust and consequently, solve problems in a creative way (Breen, 2018). Creating a capacity for resilience, through cognitive resources, emotional resources, and structural resources, can enhance employees' level of creativity (Richtnér & Löfsten, 2014).

A number of recent studies have shown that optimism predicts unique variance of creativity. For instance, Rego, Cunha, Reis Júnior, Anastácio, and Savagnago (2018) found that promoting optimism and diminishing pessimism would increase employees' creativity. Optimistic and hopeful employees are often unthreatened by frustrations and issues at work, show more resilience, and are willing to try creative and innovative ways to solve problems since they view frustrations as opportunities. Accordingly, case interviews can be applied during the recruitment process to observe and assess candidates' optimism and resilience when dealing with difficulties at work (Hsiao, Lee, & Hsu, 2017).

Jafri (2012) showed that optimists make positive attributions about succeeding at work, have internal control, and always expect good things to happen.

Considering the above-noted reasoning, we argue that psychological capital is positively related to creativity. Accordingly, the following hypothesis is proposed in our study:

H3: Psychological Capital is positively related to Creativity.

3.1.4 Engagement as a mediator between employee psychological capital and creativity

To date, the relationship between the three variables, psychological capital, engagement, and creativity, has not yet been fully explained in the literature. As mentioned in Section 3.1.3, psychological capital has been studied as an antecedent to creativity. Likewise, engagement has a link with both psychological capital and creativity individually. Yet, the role of engagement as a mediator in the relationship between psychological capital and creativity has not been studied.

The aforementioned discussion investigating the constructs separately, which reveals an association between psychological capital and engagement on one hand, and engagement and creativity on the other hand, implies that engagement may act as a mediator between psychological capital and creativity (See Figure 1).

Considering the above literature, the model particularly proposes that employee psychological capital results in enhanced engagement which in turn is transformed to high level of creativity.

We based our assumption on the conservation of resources (COR) theory (Hobfoll, 1989). COR theory explains resource acquisition and maintenance. In other words, individuals introduce existing resources to avoid the loss of other resources and those with a great pool of resources have greater ability to gain further resources (Hobfoll & Shirom, 2001).

Psychological capital represents personal resources that enhance employees' motivation (e.g. engagement) to protect these resources through reinvesting them by being creative at work. In specific, we examine if PsyCap levels and changes cause

an increase in employees' creativity level through the mediation of work engagement.

Therefore, we propose the following hypothesis which will address research question 1:

H4: Engagement mediates the relationship between Psychological capital and Creativity.

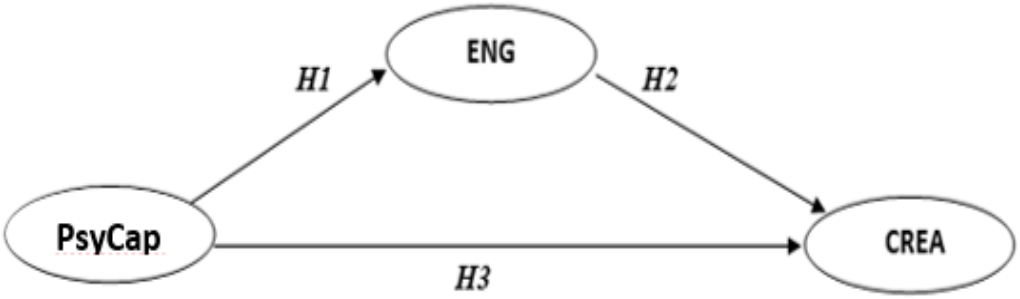


Figure 1*: Schematic model of engagement as a mediator in the relationship between psychological capital and creativity.*

Furthermore, to address research question 2, we considered conceptual model in terms of specific components of Psychological Capital (See Figure 2).

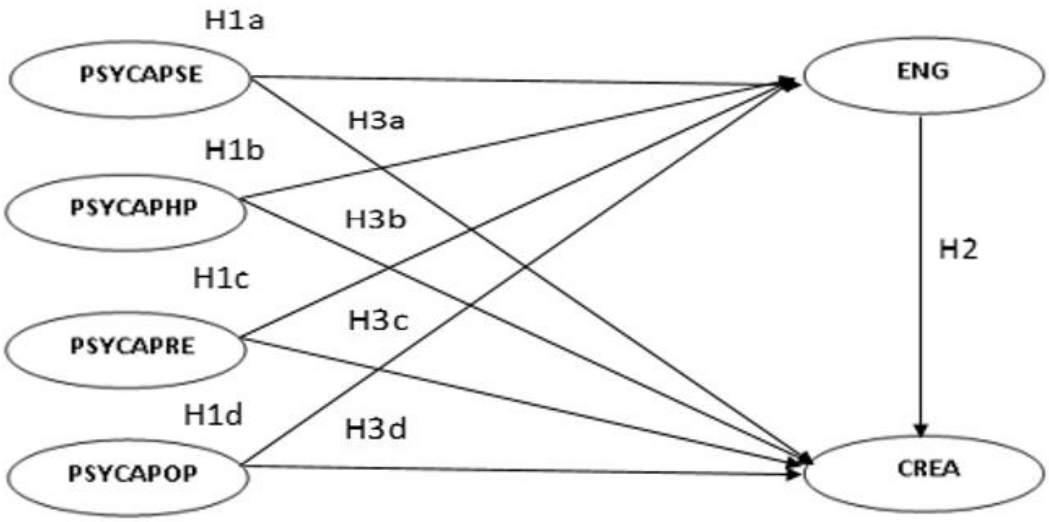


Figure 2*: Schematic model of engagement as a mediator in the relationship between specific psychological capital components and creativity.*

Chapter Four

Research Methodology & Statistical Analysis

This chapter comprises a description of the research population, measures, instrumentation, and the applied procedures to collect and analyze the data. It also includes the statistical analysis and findings.

4.1 Research Methodology

4.1.1 Participants

The target population for the study includes employees working for different privately held companies within Lebanon. A total of 205 complete and usable responses were generated out of the 240 participants who responded to the survey. The survey was distributed based on convenience sampling. In convenience sampling, subjects are more readily accessible to the researcher (Suen, Huang, & Lee, 2014). Moreover, certain ethical issues were taken into account during the administration of the questionnaire. For instance, respondents had the right to anonymity and confidentiality of the data that was shared through the questionnaire where data was used for the purpose of this research thesis which is “Exploring the

relationship between psychological capital and creativity with engagement". Furthermore, participants were not requested to disclose detailed personal information. Finally, information about this research thesis, including its purpose, was provided to potential participants prior to their participation in the study. Thus, obtaining their informed consent to enroll in the study.

4.1.2 Measures and Instrumentation

An online questionnaire was used to collect data from the sample population. It comprised of four parts including the demographic section.

The demographic section consisted of questions to collect data related to:

- Gender;
- Year of Birth;
- Education; (High School or Less, Baccalaureate of Technical (BT-TS), University/BA/BS Degree, Master's Degree, Doctorate Degree)
- Years of Experience (Less than 5 years, 6-10 years, 11-15 years, 16-20 years, More than 20 years);
- Work Industry (Business, Engineering, Education, Healthcare Services, Other);
- Work Position (Non-managerial position, Operational-Level Manager, Middle-Level Manager, Top-Level Manager);
- Company Size (Less than 10 Employees, 10-50 Employees, 51-250 Employees, 251-1000 Employees, More than 1000 Employees).

Psychological Capital. Psychological capital was measured using the Psychological Capital Questionnaire (Luthans et al., 2007). The scale is constituted of 24 items, where each of the four components of psychological capital; self-efficacy, optimism, hope and resiliency are measured by six items each. The collective result of all the components reflects an individual's overall psychological capital. Example of scale statements: "I feel confident analyzing a long-term problem to find a solution" and "I can think of many ways to reach my current work goals". The responses to these statements were collected using six-point Likert scales ranging from 6 "strongly agree" to 1"strongly disagree" (Rehman, Qingren, Latif & Iqbal, 2017). This scale has been proven reliable and valid in the Middle East; see for example; Sharifi & Shahtalebi, 2014; Badran & Morgan, 2015; Tamer, 2015; Estiri, Nargesian, Dastpish, & Sharifi, 2016; Bouzari & Karatepe, 2017; Tüzün, Çetin, & Basim, 2018; MASLAKCI & SESEN, 2019).

Creativity. A 13-item scale adopted from Zhou and George (2001) was used to measure creativity. This scale has been frequently used in many previous studies, see for example; Semedo, Coelho, & Ribeiro (2018) study. The scale has also been proven reliable and valid in Lebanon by Ismail, Iqbal, and Nasr (2019). Sample items include: "Comes up with new and practical ideas to improve performance", "Suggests new ways of performing work tasks" and "Comes up with creative solutions to problems". The scale ranged from 1, "not at all characteristic of me," to 5, "very characteristic of me".

Engagement. This study uses the nine-item version of the Utrecht Work Engagement Scale (UWES) that is developed by Schaufeli et al. (2006) which includes vigor (3 items, e.g. statement, I am enthusiastic about my job), dedication (3 items, e.g. statement, I am immersed in my work) and absorption (3 items, e.g. statement, I get carried away when I am working). Respondents are requested to rate their responses to the engagement statements on a five-point Likert scale ranging from 1=strongly disagree to 5=strongly agree.

This scale is widely used for measuring employee engagement (e.g. Aktar & Pangil, 2018) and has been proven reliable and valid in Lebanon (Messarra, 2014; Dagher, Chapa, & Junaid, 2015; Ismail, Iqbal, & Nasr, 2019).

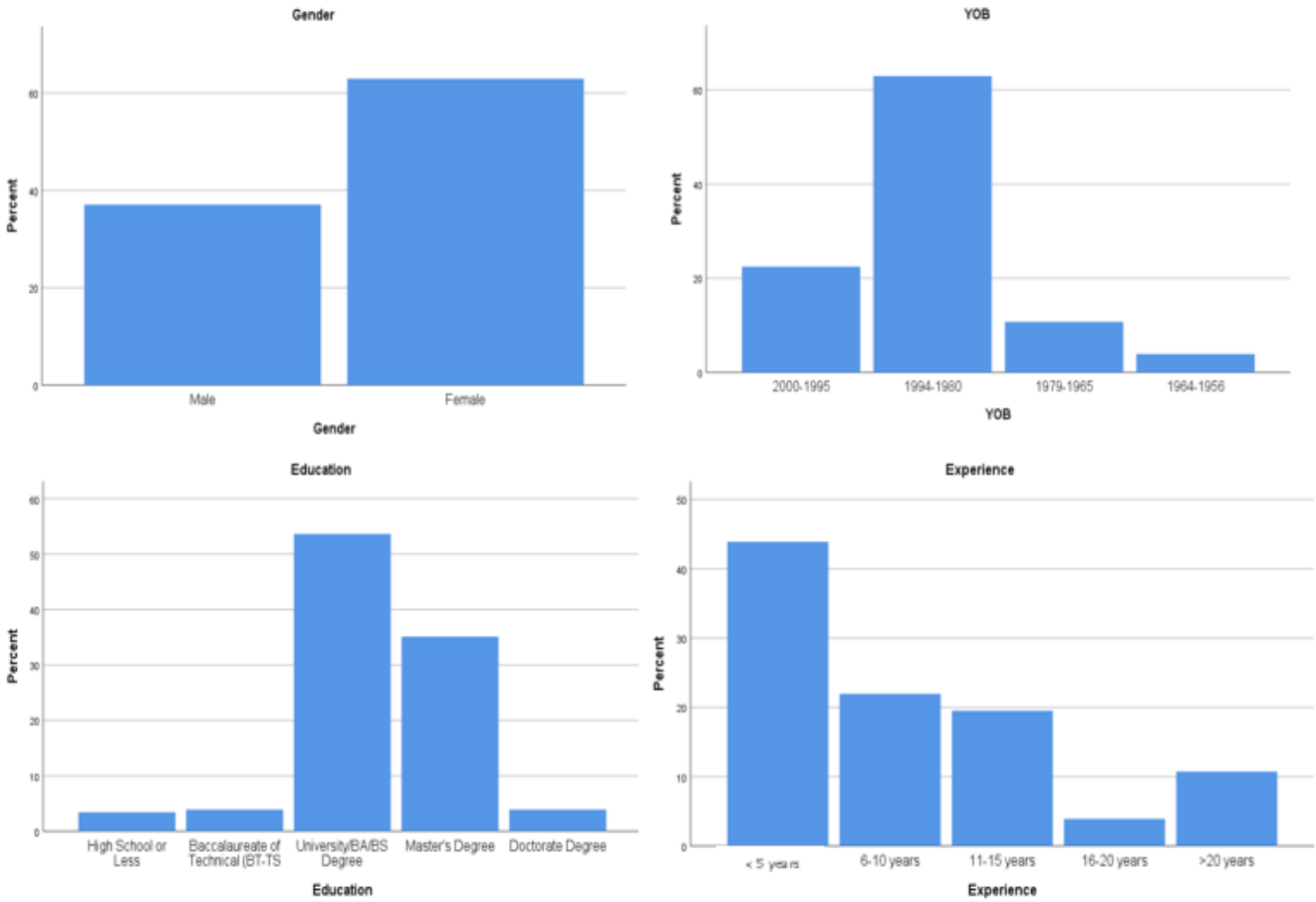
4.2 Descriptive Analysis

In our sample, the 205 respondents were divided into 129 Females (62.9%) and 76 Males (37.1%). Our sample also included individuals from four generation groups – Baby boomers (3.9%) are born between 1964 and 1956, Generation X (10.7%), born between 1979 and 1965, Generation Y (62.9%), born between 1994 and 1980 (Kasasa, 2020), and Generation Z (22.4%) born between 2000 and 1995 (Reeves & Oh, 2007).

Moreover, more than half of the respondents hold a University/BA/BS Degree (53.7%). However, most respondents had limited work experience; less than 5 years (43.9%), in non-managerial position (62.4%), in companies' size of 251-1000

employees (41%). Demographic percentages among respondents are shown in Figure 3.

Table 1 to 7 represent respondent's distribution by Gender, Year of Birth (Generational cohort), Education level, Work experience, Work Industry, Work position, and Company size.



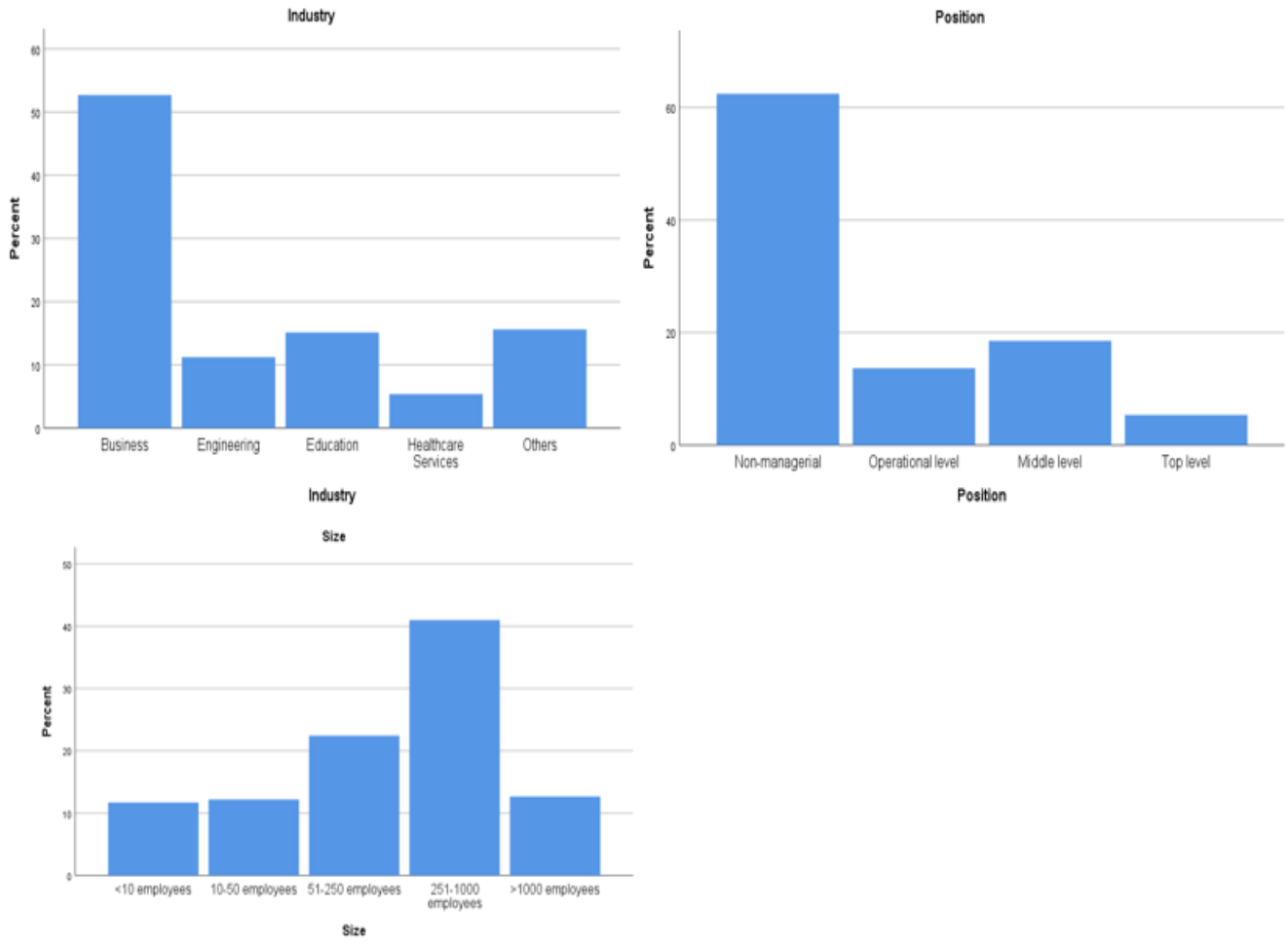


Figure 3: *Demographic percentages among respondents*

Table 1: *Distribution by Gender*

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	76	37.1	37.1	37.1
Female	129	62.9	62.9	100.0
Total	**205**	**100.0**	**100.0**	

Table 2: *Distribution by Year of birth (Generational cohort)*

Year of Birth	Frequency	Percent	Valid Percent	Cumulative Percent
2000-1995	46	22.4	22.4	22.4
1994-1980	129	62.9	62.9	85.4
1979-1965	22	10.7	10.7	96.1
1964-1956	8	3.9	3.9	100.0
Total	**205**	**100.0**	**100.0**	

Table 3: *Distribution by Educational level*

Education	Frequency	Percent	Valid Percent	Cumulative Percent
High school or less	7	3.4	3.4	3.4
Baccalaureate of Technical (BT-TS)	8	3.9	3.9	7.3
University/BA/BS Degree	110	53.7	53.7	61.0
Master's Degree	72	35.1	35.1	96.1
Doctorate Degree	8	3.9	3.9	100.0
Total	**205**	**100.0**	**100.0**	

Table 4: *Distribution by Work Experience*

Work Experience	Frequency	Percent	Valid Percent	Cumulative Percent
< 5 years	90	43.9	43.9	43.9
6-10 years	45	22.0	22.0	65.9
11-15 years	40	19.5	19.5	85.4
16-20 years	8	3.9	3.9	89.3
> 20 years	22	10.7	10.7	100.0
Total	**205**	**100.0**	**100.0**	

Table 5: *Distribution by Work Industry*

Work Industry	Frequency	Percent	Valid Percent	Cumulative Percent
Business	108	52.7	52.7	52.7
Engineering	23	11.2	11.2	63.9
Education	31	15.1	15.1	79.0
Healthcare services	11	5.4	5.4	84.4
Others	32	15.6	15.6	100.0
Total	**205**	**100.0**	**100.0**	

Table 6: *Distribution by Work Position*

Work Position	Frequency	Percent	Valid Percent	Cumulative %
Non-managerial	128	62.4	62.4	62.4
Operational level manager	28	13.7	13.7	76.1
Middle level manager	38	18.5	18.5	94.6
Top level manager	11	5.4	5.4	100.0
Total	**205**	**100.0**	**100.0**	

Table 7: *Distribution by Company Size*

Company Size	Frequency	Percent	Valid Percent	Cumulative %
< 10 employees	24	11.7	11.7	11.7
10-50 employees	25	12.2	12.2	23.9
51-250 employees	46	22.4	22.4	46.3
251-1000 employees	84	41.0	41.0	87.3
> 1000 employees	26	12.7	12.7	100.0
Total	**205**	**100.0**	**100.0**	

4.2.1 Model 1

Model 1 studied the mediating effect of engagement on the relationship between psychological capital and creativity. Therefore answering our research question 1. But, in order to test the mediation effect of Engagement and its significance to the proposed model, we must show that the mediator ENG is affected by the independent variable PsyCap and has a significant influence on the dependent variable CREA.

4.2.1.1 Reliability and Validity

The three latent constructs of Model 1 (Psychological capital, creativity, and engagement) were tested for reliability and validity using SPSS as per Table 8.

The confirmatory factor analysis and the KMO measure validated the convergent validity of the constructs. The results in Table 8 revealed significant loading (approximately greater than 0.7) for almost all the items of the 4 dimensions of Psychological Capital: Self efficacy (6 items), Hope (6 items), Resilience (6 items), and Optimism (6 items) except for items PsycapRE1, PsycapOP2, PsycapOP5 that were excluded. Most of the loadings must be at least 0.60 and ideally at 0.70 or above (Chin, 1998). The items related to Psycap-Self efficacy, Psycap- Hope, Psycap-Resilience, Psycap-Optimism were averaged to get overall scores of PsycapSE, PsycapHP, PsycapRE, PsycapOP, respectively.

Moreover, all the items used to measure the dimensions of Engagement and Creativity obtained a significant loading, except for ENG3, ENG8, ENG9, CREA3, CREA4, CREA6, CREA11, and were averaged to obtain a score denoted by ENG and CREA, respectively.

The KMO measure of sampling adequacy was adequate for all constructs (above the threshold 0.5) and ranged between 0.74 and 0.91. Moreover, The Bartlett's test of sphericity was significant $p = 0.000$ for all variables (See Table 9).

Finally, the high-scale reliability for the three constructs is confirmed with Cronbach's alpha values as all its values are well above the threshold of 0.7 after excluding the reversed items from the final analysis (PsycapRE1, PsycapOP2, PsycapOP5).

Table 8: *Model 1 Factor Loadings and Construct Reliability*

	Manifest variables label	Loading factors	Cronbach alpha
PsycapSE	*PsycapSE1*	0.813	0.88
	PsycapSE2	0.717	
	PsycapSE3	0.826	
	PsycapSE4	0.803	
	PsycapSE5	0.778	
	PsycapSE6	0.83	
PsycapHP	*PsycapHP1*	0.665	0.878
	PsycapHP2	0.828	
	PsycapHP3	0.722	
	PsycapHP4	0.852	
	PsycapHP5	0.883	
	PsycapHP6	0.79	
PsycapRE	*PsycapRE2*	0.832	0.846
	PsycapRE3	0.73	
	PsycapRE4	0.763	
	PsycapRE5	0.83	
	PsycapRE6	0.786	
PsycapOP	*PsycapOP1*	0.789	0.797
	PsycapOP3	0.859	
	PsycapOP4	0.813	
	PsycapOP6	0.688	
Engagement	*ENG1*	0.771	0.859
	ENG2	0.763	
	ENG4	0.861	

	ENG5	0.775	
	ENG6	0.733	
	ENG7	0.727	
Creativity	*CREA1*	0.772	0.94
	CREA2	0.836	
	CREA5	0.736	
	CREA7	0.821	
	CREA8	0.817	
	CREA9	0.872	
	CREA10	0.77	
	CREA12	0.774	
	CREA13	0.815	

Table 9: *KMO and Bartlett's Test*

Latent Variable	KMO	P-value (Bartlett's Test)
PsycapSE	0.865	0.000
PsycapHP	0.862	0.000
PsycapOP	0.745	0.000
PsycapRE	0.825	0.000
CREA	0.913	0.000
ENG	0.814	0.000

4.2.1.2 Regression Analysis

To test for mediation, various regression analyses were used (Baron & Kenney, 1986). Using SPSS, the first regression studied the independent and dependent variable. The second studied the significance of the relationship between the independent variable and the mediator. The third regression studied the dependent variable with the mediator. The fourth and final regression studied the relationship between the independent and dependent variable with respect to the mediator. The following sections explain the regressions in more detail.

The first regression carried out included psychological capital as the independent variable and creativity as the dependent variable. The model confirmed the significance of the relationship as the regression coefficient is 0.517 and the p-value is 0.000. Thus, the total effect is 0.517.

Hence, H3 is supported.

Second, the significance of the relationship between the independent variable PsyCap and the mediator ENG is confirmed by constructing another regression equation. The model resulted in an R-Squared value of 0.162 indicating that the regression equation explained 16.2% of the variability in ENG. Moreover, analysis of variance resulted in a test statistics of F(1, 203)=39.315 and p-value= 0.000 confirming the significance of the model. The regression confirmed the significance of the influence of Psycap on ENG as the standardized regression coefficient is beta = 0.403, test statistics t(203)= 6.270, and the p-value is 0.000. Hence, psychological capital increases engagement and H1 is supported (See Table 10).

Next, a multiple regression analysis was used where the independent variables were

Psychological capital and engagement and the dependent variable was creativity. The model resulted in R^2 = 0.348 indicating that the regression equation explained 34.8% of the variability in CREA. Results showed that for Psychological capital: β= 0.392, t(202)= 6.311, and p-value=0.000. As for engagement, β= 0.310, t(202)= 4.997, and p-value=0.000. Thus, engagement enhances creativity. Hence H2 is confirmed (See Table 11).

The results revealed that the relationship between the mediator ENG and the dependent variable Creativity in the presence of independent variable PsyCap is significant. To illustrate more, when the regression was applied to all three variables (Psychological capital, engagement, and creativity), the beta for psychological capital (β= 0.392) was less by 0.125 than the beta obtained from the regression of psychological capital on creativity in step 1 (β= 0.517). In other words, engagement partially mediated the relationship between psychological capital and creativity. Thus, H4 is supported.

Additionally, the bootstrapping technique suggested by Hayes (2013) was used in our mediation analysis to further confirm H4. Table 12 reveals a significant direct effect of psychological capital on creativity with an effect size of 0.392, with a 95% confidence interval which did not include zero where SE= 0.062 and p-value= 0.000, presenting engagement as a partial mediator to this relationship.

Moreover, Table 12 also shows a significant indirect effect (Effect size= 0.125, SE= 0.039, p-value=0.000) where the lower limit 95% CI (+0.059) and the upper limit (+0.211) of the confidence interval are both positive and different than zero.

Table 10: R^2, F-values, Beta, t-values, p-values (Total effect)

	R^2	F Values	β Values	t Statistics	p-values
PsyCap → ENG	0.162	39.315	0.403	6.27	0.000
ENG → CREA	0.219	56.94	0.468	7.54	0.000
PsyCap → CREA	0.267	73.97	0.517	8.601	0.000

Table 11: *Multiple Regression*

Independent variable: CREA			
	Beta	**t**	**Sig.**
PsyCap	0.392	6.311	0
ENG	0.31	4.997	0

Table 12: *Direct and Indirect effects using process (Hayes, 2013)*

					95% CI	
x → y	**Effect**	**SE**	**t**	**p**	**Lower**	**Upper**
PsyCap → creativity	0.392	0.062	6.311	0.000	0.269	0.514

			95% CI	
x→ m →y	**Effect**	**SE**	**Lower**	**Upper**
PsyCap → engagement → creativity	0.125	0.039	0.059	0.211

4.2.2 Model 2

The first conceptual model was tested after combining PsyCap dimensions (Self efficacy, Hope, Resilience, Optimism). Yet, the discussion of the relationship between PsyCap and its four dimensions on Creativity in part 3.1.3 and the primary findings of this study led to questioning any difference in the impact of engagement on the relationship between each of the PsyCap components and Creativity. Additionally, in response to research call by Cai, Lysova, Bossink, Khapova, and Wang (2019) to study the effect of each PsyCap dimension on creativity in order to further indicate the role of PsyCap in enhancing creativity and to answer our research question no. 2, a second conceptual model was proposed, and the analysis was performed after splitting the PsyCap constructs into: PsycapSE, PsycapHP, PsycapRE, PsycapOP. The following sub hypotheses were proposed:

H1a: Self-efficacy is positively related to employee engagement

H1b: Hope is positively related to employee engagement

H1c: Resilience is positively related to employee engagement

H1d: Optimism is positively related to employee engagement

H2: Engagement is positively related to creativity

H3a: Self-efficacy is positively related to employee creativity

H3b: Hope is positively related to employee creativity

H3c: Resilience is positively related to employee creativity

H3d: Optimism is positively related to employee creativity

H4a: Employee engagement has a mediating effect on the relationship between self-efficacy and employee creativity.

H4b: Employee engagement has a mediating effect on the relationship between hope

and employee creativity.

H4c: Employee engagement has a mediating effect on the relationship between resilience and employee creativity.

H4d: Employee engagement has a mediating effect on the relationship between optimism to employee creativity.

4.2.2.1 Regression Analysis

Model 2(a) studied the mediating effect of engagement on the relationship between self-efficacy (PsycapSE) and creativity.

The first regression carried out included self-efficacy as the independent variable and creativity as the dependent variable. The model confirmed the significance of the relationship as the regression coefficient is 0.496 and the p-value is 0.000. Thus, the total effect is 0.496. Therefore, self-efficacy enhances creativity and H3a is supported.

Second, the significance of the relationship between the independent variable PsycapSE and the mediator ENG is confirmed by constructing another regression equation. The model resulted in an R-Squared value of 0.142 indicating that the regression equation explained 14.2% of the variability in ENG. Moreover, analysis of variance resulted in a test statistics of F(1, 203)=33.525 and p-value= 0.000 confirming the significance of the model. The regression confirmed the significance of the influence of PsycapSE on ENG as the standardized regression coefficient is beta = 0.376, test statistics t(203)= 5.790, and the p-value is 0.000. Thus, higher self-efficacy leads to higher level of employee engagement and H1a is supported (See

Table 13).

Next, a multiple regression analysis was used using, where the independent variables were self-efficacy and engagement and the dependent variable was creativity (See Table 14). The model resulted in R^2 = 0.339 indicating that the regression equation explained 33.9% of the variability in CREA. Results showed that for self-efficacy: β= 0.373, t(202)= 6.041, and p-value=0.000. As for engagement, β= 0.328, t(202)= 5.303, and p-value=0.000.

The results revealed that the relationship between the mediator ENG and the dependent variable Creativity in the presence of independent variable self-efficacy is significant. To illustrate more, when the regression was applied to all three variables (self-efficacy, engagement, and creativity), the beta for self-efficacy (β= 0.373) was less by 0.123 than the beta obtained from the regression of self-efficacy on creativity in step 1 (β= 0.496). In other words, engagement partially mediated the relationship between self-efficacy and creativity. Thus, H4a is supported.

Additionally, Table 15 reveals a significant direct effect of self-efficacy on creativity with a 95% confidence interval which did not include zero where Effect size= 0.373, SE=0.062, p-value= 0.000, presenting engagement as a partial mediator to this relationship.

Moreover, Table 16, shows a significant indirect effect (Effect size=0.123, SE=0.037, p-value=0.000) where the lower limit (+0.061) and the upper limit (+0.207) of the confidence interval are both positive.

Model 2(b) studied the mediating effect of engagement on the relationship between hope (PsycapHP) and creativity.

The first regression carried out included hope as the independent variable and creativity as the dependent variable. The model confirmed the significance of the relationship as the regression coefficient is 0.457 and the p-value is 0.000. Thus, the total effect is 0.457. Therefore, hope leads to increased level of creativity and H3b is supported.

Second, the significance of the relationship between the independent variable PsycapHP and the mediator ENG is confirmed by constructing another regression equation. The model resulted in an R-Squared value of 0.132 indicating that the regression equation explained 13.2% of the variability in ENG.

Moreover, analysis of variance resulted in a test statistics of F(1, 203)=30.887 and p-value= 0.000 confirming the significance of the model. The regression confirmed the significance of the influence of PsycapHP on ENG as the standardized regression coefficient is beta = 0.363, test statistics t(203)= 5.558, and the p-value is 0.000. Thus, hope enhances work engagement and H1b is supported.

Next, a multiple regression analysis was used where the independent variables were hope and engagement and the dependent variable was creativity. The model resulted in R^2 = 0.314 indicating that the regression equation explained 31.4% of the variability in CREA. Results showed that for hope:

β= 0.331, t(202)= 5.289, and p-value=0.000. As for engagement, β= 0.348, t(202)= 5.561, and p-value=0.000.

The results revealed that the relationship between the mediator ENG and the dependent variable Creativity in the presence of independent variable PsycapHP is significant. To illustrate more, when the regression was applied to all three variables (hope, engagement, and creativity), the beta for hope (β= 0.331) was less by 0.126 than the beta obtained from the regression of hope on creativity in step 2 (β= 0.457).

In other words, engagement partially mediated the relationship between hope and creativity. Thus, H4b is supported.

Additionally Table 15 reveals a significant direct effect of hope on creativity with a 95% confidence interval which did not include zero where Effect size= 0.331, SE=0.063, and p-value= 0.000, presenting engagement as a partial mediator to this relationship.

Moreover, Table 16, shows a significant indirect effect (Effect size=0.126, SE=0.036, p-value=0.000) where the lower limit (+0.062) and the upper limit (+0.203) of the confidence interval are both positive.

Model 2(c) studied the mediating effect of engagement on the relationship between resilience (PsycapRE) and creativity.

The first regression carried out included resilience as the independent variable and creativity as the dependent variable. The model confirmed the significance of the relationship as the regression coefficient is 0.397 and the p-value is 0.000. Thus, the total effect is 0.397. Thus, resilience improves creativity and H3c is supported.

Second, the significance of the relationship between the independent variable PsycapRE and the mediator ENG is confirmed by constructing another regression equation. The model resulted in an R-Squared value of 0.042 indicating that the regression equation explained 4.2% of the variability in ENG. Hence, resilience results in higher work engagement and H1c is supported.

Moreover, analysis of variance resulted in a test statistics of F(1, 203)=8.972 and p-value= 0.003 confirming the significance of the model. The regression confirmed the significance of the influence of PsycapRE on ENG as the standardized regression

coefficient is beta = 0.206, test statistics t(203)= 2.995, and the p-value is 0.003. Next, a multiple regression analysis was used where the independent variables were resilience and engagement and the dependent variable was creativity. The model resulted in R^2 = 0.314 indicating that the regression equation explained 31.4% of the variability in CREA. Results showed that for resilience:
β= 0.314, t(202)= 5.273, and p-value=0.000. As for engagement, β= 0.403, t(202)= 6.773, and p-value=0.000.

The results revealed that the relationship between the mediator ENG and the dependent variable Creativity in the presence of independent variable PsycapRE is significant. To illustrate more, when the regression was applied to all three variables (resilience, engagement, and creativity), the beta for resilience (β= 0.314) was less by 0.083 than the beta obtained from the regression of resilience on creativity in step 1 (β= 0.397). In other words, engagement partially mediated the relationship between resilience and creativity. Thus, H4c is supported.

Additionally, Table 15 reveals a significant direct effect of resilience on creativity where Effect size= 0.314, SE=0.060, and p-value= 0.000, presenting engagement as a partial mediator to this relationship.
Moreover, Table 16, shows a significant indirect effect (Effect size= 0.083, SE=0.033, p-value=0.000) where the lower limit (+0.025) and the upper limit (+0.152) of the confidence interval are both positive.

Model 2(d) studied the mediating effect of engagement on the relationship between optimism (PsycapOP) and creativity.

The first regression carried out included optimism as the independent variable and creativity as the dependent variable. The model confirmed the significance of the

relationship as the regression coefficient is 0.381 and the p-value is 0.000. Thus, the total effect is 0.381. Thus, optimism had a positive significant relationship with creativity and H3d is supported.

Second, the significance of the relationship between the independent variable PsycapOP and the mediator ENG is confirmed by constructing another regression equation. The model resulted in an R-Squared value of 0.169 indicating that the regression equation explained 16.9% of the variability in ENG.

Moreover, analysis of variance resulted in a test statistics of F(1, 203)=41.358 and p-value= 0.000 confirming the significance of the model. The regression confirmed the significance of the influence of PsycapOP on ENG as the standardized regression coefficient is beta = 0.411, test statistics t(203)= 6.431, and the p-value is 0.000. The results confirm that there is a positive link between optimism and engagement. Hence, H1d is supported.

Next, a multiple regression analysis was used using, where the independent variables were optimism and engagement and the dependent variable was creativity. The model resulted in R^2 = 0.262 indicating that the regression equation explained 26.2% of the variability in CREA. Results showed that for optimism:

β= 0.227, t(202)= 3.425, and p-value=0.001. As for engagement, β= 0.375, t(202)= 5.649, and p-value=0.000. The results revealed that the relationship between the mediator ENG and the dependent variable Creativity in the presence of independent variable PsycapOP is significant. To illustrate more, when the regression was applied to all three variables (optimism, engagement, and creativity), the beta for optimism (β= 0.227) was less by 0.154 than the beta obtained from the regression of optimism on creativity (β= 0.381). In other words, engagement partially mediated the relationship between optimism and creativity. Thus, H4d is supported.

Additionally, Table 15 reveals a significant direct effect of optimism on creativity with a 95% confidence interval which did not include zero where Effect size=0.227, SE=0.066, and p-value= 0.001, presenting engagement as a partial mediator to this relationship. Moreover, Table 16, shows a significant indirect effect (Effect size= 0.154, SE=0.041, p-value=0.000) where the lower limit (+0.084) and the upper limit (+0.241) of the confidence interval are both positive.

Table 13: Model 2 *R^2, F-values, Beta, T-values, P-values (Total effect)*

	R^2	F Values	β Values	t Statistics	P-Values
ENG → CREA	0.219	56.94	0.468	7.54	0.000
PsycapSE → ENG	0.142	33.525	0.376	5.790	0.000
PsycapSE → CREA	0.246	66.40	0.496	8.149	0.000
PsycapHP → ENG	0.132	30.887	0.363	5.558	0.000
PsycapHP → CREA	0.209	53.650	0.457	7.325	0.000
PsycapRE → ENG	0.042	8.972	0.206	2.995	0.003
PsycapRE → CREA	0.158	38.003	0.397	6.165	0.000
PsycapOP → ENG	0.169	41.358	0.411	6.431	0.000
PsycapOP → CREA	0.145	34.524	0.381	5.876	0.000

Table 14: *Model 2 Multiple Regression*

	Independent variable: CREA			
		Beta	**t**	**Sig.**
Model 2 (a)	**PsycapSE**	0.373	6.041	0.000
	ENG	0.328	5.303	0.000
Model 2 (b)	**PsycapHP**	0.331	5.289	0.000
	ENG	0.348	5.561	0.000
Model 2 (c)	**PsycapRE**	0.314	5.273	0.000
	ENG	0.403	6.773	0.000
Model 2 (d)	**PsycapOP**	0.227	3.425	0.001
	ENG	0.375	5.649	0.000

Table 15: *Direct pathways using Bootstrapping*

					95% CI	
x→y	**Effect**	**SE**	**t**	**p**	**Lower**	**Upper**
Self-efficacy→ creativity	0.373	0.062	6.041	0.000	0.251	0.495
Hope → creativity	0.331	0.063	5.289	0.000	0.207	0.454
Resilience → creativity	0.314	0.060	5.273	0.000	0.197	0.432
Optimism → creativity	0.227	0.066	3.425	0.001	0.096	0.358

Note: n=205. SE, standard error; CI, confidence interval; 5000 bootstrap samples

Table 16: *Indirect pathways using Bootstrapping*

x→ m →y	Effect	SE	95% CI Lower	95% CI Upper
Self-efficacy→ engagement→ creativity	0.123	0.037	0.061	0.207
Hope → engagement → creativity	0.126	0.036	0.062	0.203
Resilience → engagement → creativity	0.083	0.033	0.025	0.152
Optimism → engagement → creativity	0.154	0.041	0.084	0.241

Note: n=205. CI, confidence interval; SE, standard error; 5000 bootstrap samples

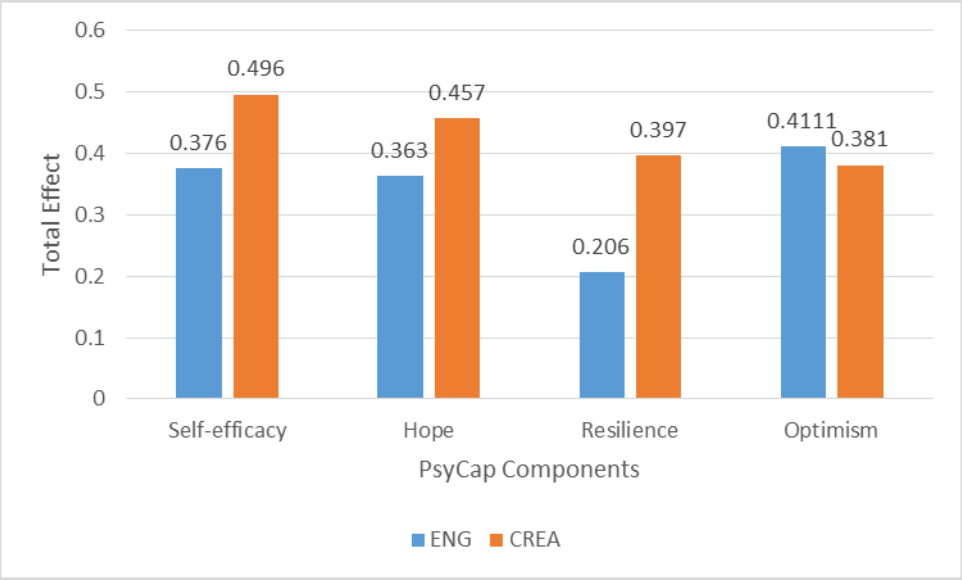


Figure 4: *The total effect of each PsyCap component on Creativity and on Engagement*

Figure 4 shows that self-efficacy had the highest influential effect on creativity (Effect= 0.373), followed by hope (0.331), resilience (0.314), and optimism (0.227).

While Optimism had the highest influential effect on engagement, followed by self-efficacy, hope, and resilience

Chapter Five

Discussion

The primary interest of this study was to explore the relationship between psychological capital and creativity where engagement acts as a mediating variable between the two.

Moreover, the researcher was curious to dig more into the impact of each dimension of psychological capital (self-efficacy, hope, resilience, optimism) on creativity with engagement acting as a mediator.

The primary results of this study indicated that there is a positive effect of psychological capital on creativity. This finding is compatible with a recent research study (Li, Wu, Li, Chen, & Wang, 2019) which revealed a significant and positive association between psychological capital and creative tendency. Similarly, other studies (e.g. Gonçalves & Brandão, 2017; Cai, Lysova, Bossink, Khapova, & Wang, 2019) showed a positive relationship between psychological capital and creativity. The results of our study add further to the limited body of knowledge on the relationship between psychological capital and creativity. Psychological capital resources help employees in times of frustration and challenging tasks, thus enhance their creativity (Huang & Luthans, 2015). Moreover, our study strengthens the results of prior studies in this domain and further denotes the creativity relationship in different contextual setting and culture.

Given that PsyCap contains four dimensions, Cai, Lysova, Bossink, Khapova, and Wang (2019) suggest that future research could specifically study the motivational

and/or emotional and/or cognitive aspects of each dimension on creativity to further indicate the role of PsyCap in enhancing creativity. Thus, this study fills this gap in literature by studying the impact of each of self-efficacy, hope, resilience, and optimism on creativity where self-efficacy had the highest influential effect on creativity, which is consistent with Azim et al. (2019) study, and optimism had the highest influential effect on engagement at work.

Furthermore, the findings of our study revealed a positive significant correlation between psychological capital (and each of its components) and engagement. Our results are consistent with Anokye and Asumeng (2019) study that found a positive relationship between the dimensions of psychological capital, with self-efficacy being the highest predictor of work engagement (ß = .481; $p < .001$). Other studies also have lend support to our findings and have noted that employees with high psychological capital demonstrated high level of work engagement (e.g. Simons & Buitendach, 2013; Costantini et al., 2017; Chen, 2018; Bouckenooghe, De Clercq, & Raja, 2019).

In addition, we concluded that engagement had a positive significant effect on creativity. This finding lends support to Amabile theory of creativity (Amabile & Mueller, 2008) where work engagement led to increase in creativity.

Studies whose purpose is to explore the link between engagement and creativity are lacking. Nevertheless, we can compare our findings with Ghosh, Sekiguchi, and Fujimoto (2020) study, which also revealed that engagement is related to creativity with $\beta = 1.29$. Employees who are not engaged at work will not utilize their resources in creativity (Bouckenooghe & Menguç, 2018; Otieno, Linge, & Sikalieh, 2019).

Moreover, our study confirmed that the relationship between psychological capital

(and each of its components) and creativity is partially mediated by engagement. Thus, our results supported the Conservation of resource (COR) theory (Hobfoll, 1989) where psychological capital represents personal resources which then enhances employees' engagement to protect these resources through reinvesting them by being creative at work. Moreover, this study fills the gap in literature and responds to recent research call by Yu et al. (2019) who suggested that future research should address other variables that may act as mediators in the relationship between psychological capital and creativity where they suggested engagement as a mediator between the two variables.

In addition, according to our research model, our finding is a crucial one which implies the existence of additional factors that can influence employee creativity. Our model proposes that the effect of psychological capital on creativity is reduced when the mediator engagement is introduced. It shows an indirect relationship as psychological capital impacts creativity through engagement partially, first, which then affects creativity. Employees with high psychological capital (high in self-efficacy, hope, resilience, and optimism) are more engaged in their work in the first phase, which in turn leads to high creativity at work. To the best of our knowledge, our study is the first to investigate the role of engagement in the relationship between psychological capital and creativity. Thus, filling the gap in literature and responding to research calls (Yu, Li, Tsai, & Wang, 2019). Moreover, as one of the first studies that explored the link between employee psychological capital and creativity in the MENA region, to the best of our knowledge, this study provides crucial implications to researchers in Arab countries and MENA region. The current study is compatible with former studies in the West, and mainly reveals that the impact of psychological capital on creativity is equally transferable to Middle Eastern contexts and cultures.

5.1 Managerial Implications

From a practical perspective, employers and organizations are encouraged to enhance employees' psychological capital (self-efficacy, hope, resilience, optimism) as the majority of the studies encompassing this study, indicate its role in increasing employee creativity at work.

For instance, a number of antecedents of employees' psychological capital were recognized in the literature review, ranging from maintaining a high autonomous work environment and job feedback to having a non-abusive supervision and good well-being at work. Furthermore, in light of the study findings, it is important for organizations to provide a working climate which enhances the engagement of employees in order to make use of psychological capital in terms of increased level of creativity. According to this study, leaders and managers are encouraged to engage their employees which could serve to enforce the effect of psychological capital on creativity. Moreover, HR managers could use employee surveys and HR analytics to measure and track their employees' engagement and accordingly, work on enhancing the levels of their self-efficacy, hope, resilience, and optimism in specific, as this study indicates that optimism had the highest effect on engagement.

Finally, the study has unique hints for the Lebanese workplace. Many Lebanese and Middle Eastern employers have applied traditional management systems and bureaucratic hierarchies that are acknowledged to hinder employees' engagement at work, and consequently obstruct the effect of psychological capital on creativity as this study reveals. The current study shows that by enhancing psychological capital,

HR managers may assist employees in building the crucial resources (engagement, creativity) needed to strive in today's challenging work environment. Employers are encouraged to increase employee's psychological capital by providing job autonomy and task significance (Sameer et al., 2019), organizational support (Wu, 2019), and by having spiritual leaders at the workplace (Baykal & Zehir, 2018). In addition to increasing employees' psychological capital, managers are advised to engage their employees at work by organizing achievement and recognition events at the workplace (Wang, Zhu, Dormann, Song, & Bakker, 2020) and by providing career opportunities (Shibiti, 2020) with support from supervisors (Chandra Pattnaik & Panda, 2020).

On the other hand, HR managers should recruit and select employees with high psychological capital (high in self-efficacy, optimistic, resilient, and hopeful), retain them by providing a clear career path and by implementing training and development programs if they want to enhance creativity. With respect to performance management practices, it may be valuable to take into account self-efficacy, hope, optimism, and resilience-related problems before making motivation related judgments. In addition, by organizing employment engagement activities for those employees, HR can foster a stimulating workplace that recognizes individual contributions and thus, foster creativity at the workplace. In other words, all organizational initiatives that aim to enhance employee's psychological capital at work should be implemented in an engaging workplace culture as the relationship between psychological capital and creativity is partially dependent on engagement as revealed in this study.

5.2 Limitations and Future Research

Like all studies, this study possesses several potential limitations. First, this study depended on convenience sampling as it is hard to access random sample in the country of Lebanon (Ismail, 2016). Despite the fact that convenience sampling is a method usually used by many researchers in the business area, it might generally have a biased effect. Moreover, the majority of our sample was constituted of young individuals, holding a university degree. Thus, they might be more engaged at work. Consequently, the researcher recommends to conduct this study using the random sampling approach in order to avoid the biased effect.

Another limitation was the length of the questionnaire (46 questions) which might have been inconvenient to some participants. Some might have chosen not to participate as a result, and the ones that filled the questionnaire complained about this matter.

Moreover, although the sample of the study had a proper size (n=205) for statistical analysis, future studies are recommended to conduct this study using a larger sample size in order to increase the reliability of the results obtained.

As this is the first study, to the best of our knowledge, exploring the mediating role of engagement in the relationship between psychological capital and creativity, the researcher suggests replicating this study in different contexts. Additionally, the findings denote the existence of other antecedents for employee creativity, implying

the necessity of further studies examining the relationship between psychological capital and other determinants that might be important to employees.

Like the majority of the studies in the literature, the researcher adopted a cross-sectional study design which may produce inaccurate information about the relationships between the research variables despite the results concluded in our study. We recommend that future studies follow a longitudinal study design to further support and strengthen the current result.

The sample used in this study is originated from a non-western context and culture. Therefore, future studies from western and non-western contexts are warranted to conduct this study in order to highlight more on this area.

Future research would address other variables that might mediate the relationship between Psychological capital and employee creativity. Potential mediating variables, such as management support, may impact employee creativity. In addition, conducting similar research while examining the differences within each generation may generate interesting results. Moreover, future researchers might address moderators that may impact the relationship between psychological capital and creativity, for instance individual-level demographic characteristic (e.g. Gender, Generational cohort), personal characteristics (e.g. self-esteem, pride, dependence, extroversion); and contextual constructs (e.g. HR practices, supervisor support).

5.3 Conclusion

Over the past decades, employee psychological capital has attracted the attention of researchers and practitioners alike, primarily due to its suggested impact on creativity, which prevails it as one of the most needed resource for organizations in

today's challenging business environment. This study has supported and revalidated this relationship in the context of Lebanon, and our findings are compatible with the findings of previous studies conducted in other contexts. However, the author suggested to explore more variables in this relationship. Moreover, the current study has explored a partially mediating variable, which is engagement, in the relationship between psychological capital and creativity. In the context of this study, it is revealed that engagement partially mediated the effect of psychological capital on creativity. Moreover, we based our study on Amabile theory of creativity and Conservation of resources (COR) theory and our results supported those two theories.

This finding may assist further in unleashing more variables that might also mediate the relation between psychological capital and creativity. Simultaneously, we advise future research to conduct this study in other countries and contexts. Finally, the study has crucial managerial implications to enhance psychological capital and engagement at work. Managerial and HR practices which enhance employee engagement at work are principal organizational ways to enhance the impact of psychological capital on creativity.

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Appendix I

LAU
الجامعة اللبنانية الأميركية
Lebanese American University

Institutional Review Board (IRB)

NOTICE OF IRB APPROVAL – EXEMPT STATUS

To: Ms. Reem Al Bitar
Advisor: Dr. Leila Messarra
School of Business

APPROVAL ISSUED: 18 December 2019
EXPIRATION DATE: 18 December 2021
REVIEW TYPE: EXEMPT CATEGORY B

Date: December 18, 2019
RE: ***IRB #:*** *LAU.SOB.LM2.18/Dec/2019*
Protocol Title: *The relationship between Psychological Capital and Creativity with Engagement*

Your application for the above referenced research project has been reviewed by the Lebanese American University, Institutional Review Board (LAU IRB). This research project qualifies as exempt under the category noted in the Review Type

This notice is limited to the activities described in the Protocol Exempt Application and all submitted documents listed on page 2 of this letter. **Final reviewed consent documents or recruitment materials and data collection tools released with this notice are part of this determination and must be used in this research project.**

CONDITIONS FOR ALL LAU NOTICE OF IRB EXEMPTION DETERMINATION

LAU RESEARCH POLICIES: *All individuals engaged in the research project must adhere to the approved protocol and all applicable LAU IRB Research Policies. PARTICIPANTS must NOT be involved in any research related activity prior to IRB notice date or after the expiration date.*

EXEMPT CATEGORIES: *Activities that are exempt from IRB review are not exempt from IRB ethical review and the necessity for ethical conduct.*

PROTOCOL EXPIRATION: PROTOCOL EXPIRATION: *The LAU IRB notice expiry date for studies that fall under Exemption is 2 years after this notice, as noted above. If the study will continue beyond this date, a request for an extension must be submitted at least 2 weeks prior to the Expiry date.*

MODIFICATIONS AND AMENDMENTS: *Certain changes may change the review criteria and disqualify the research from exemption status; therefore, any proposed changes to the previously IRB reviewed exempt study must be reviewed and cleared by the IRB before implementation.*

RETENTION: *Study files must be retained for a period of 3 years from the date of project completion.*

IN THE EVENT OF NON-COMPLIANCE WITH ABOVE CONDITIONS, THE PRINCIPAL INVESTIGATOR SHOULD MEET WITH THE REPRESENTATIVES OF THE IRB OFFICE IN ORDER TO RESOLVE SUCH CONDITIONS. IRB CLEARANCE CANNOT BE GRANTED UNTIL NON-COMPLIANT ISSUES HAVE BEEN RESOLVED.

If you have any questions concerning this information, please contact the IRB office by email at irb@lau.edu.lb

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The IRB operates in compliance with the national regulations pertaining to research under the Lebanese Minister of Public Health's Decision No.141 dated 27/1/2016 under LAU IRB Authorization reference 2016/3708, the international guidelines for Good Clinical Practice, the US Office of Human Research Protection (45CFR46) and the Food and Drug Administration (21CFR56). LAU IRB U.S. Identifier as an international institution: FWA00014723 and IRB Registration # IRB00006954 LAUIRB#1

Dr. Joseph Stephan
Chair, Institutional Review Board

Institutional Review Board
Lebanese American University
18 DEC 2019
APPROVED

DOCUMENTS SUBMITTED:

IRB Exempt Protocol Application	Received 16 December 2019, Amended 17 December 2019
Proposal	Received 16 December 2019
Consent Form – English	Received 16 December 2019
Link to online Survey	Received 16 December 2019, Amended 17 December 2019
IRB Comments sent: 17 December 2019	**PI response to IRB's comments dated:** 17 December 2019
NIH Training – Leila Messarra	Cert.# 2061311 (Dated 22 April 2015)
CITI Training – Reem Al Bitar	Cert.# 33047144 Dated (2 September 2019)

Appendix II

The relationship between Psychological Capital and Creativity with Engagement

I would like to invite you to participate in a thesis research by completing the following questionnaire/ survey. I am a student at the Lebanese American University and I am completing this thesis research as part of my graduate studies. The purpose of this questionnaire / survey aims to explore the relationship between Psychological Capital and Creativity with Engagement in the country of Lebanon

There are no known risks, harms or discomforts associated with this study beyond those encountered in normal daily life. The information you provide will be used to measure the interrelationships between the following constructs under study, namely: Psychological Capital, Creativity, and Engagement. I appreciate completing this survey that will take 7 minutes of your time.

By continuing with the questionnaire / survey, you agree with the following statements:

1. I have been given sufficient information about this research project.
2. I understand that my answers will not be released to anyone and my identity will remain anonymous. My name will not be written on the questionnaire nor be kept in any other records.
3. When the results of the study are reported, I will not be identified by name or any other information that could be used to infer my identity. Only researchers will have access to view any data collected during this research however data cannot be linked to me.
4. I understand that I may withdraw from this research any time I wish and that I have the right to skip any question I don't want to answer.
5. I understand that my refusal to participate will not result in any penalty or loss of benefits to which I otherwise am entitled to.
6. I have been informed that the research abides by all commonly acknowledged ethical codes and that the research project has been reviewed and approved by the Institutional Review Board at the Lebanese American University
7. I understand that if I have any additional questions, I can ask the research team listed below.
8. I have read and understood all statements on this form.
9. I voluntarily agree to take part in this research project by completing the following survey/Questionnaire.

If you have any questions, you may contact:

Name (PI)	Phone number	Email address
Reem Al Bitar	+ 961 76 75 93 75	Reem.albitar01@lau.edu

If you have any questions about your rights as a participant in this study, or you want to talk to someone outside the research, please contact the:

Institutional Review Board Office,
Lebanese American University
3rd Floor, Dorm A, Byblos Campus
Tel: 00 961 1 786456 ext. (2546)

irb@lau.edu.lb

This study has been reviewed and approved by the LAU IRB
LAU.SOB.LM2.18/Dec/2019

Survey/Questionnaire

Gender

- ◯ Female
- ◯ Male

Year of Birth

- ◯ 2000-1995
- ◯ 1994-1980
- ◯ 1979-1965
- ◯ 1964-1956

Education

- ◯ High School or Less
- ◯ Baccalaureate of Technical (BT-TS)
- ◯ University/BA/BS Degree
- ◯ Master's Degree
- ◯ Doctorate Degree

Years or Experience

- ◯ Less than 5 years
- ◯ 6-10 years
- ◯ 11-15 years
- ◯ 16-20 years
- ◯ More than 20 years

Work Industry

- ◯ Business
- ◯ Engineering
- ◯ Education
- ◯ Healthcare Services
- ◯ Other: _____

Work Position

- ◯ Non-managerial position
- ◯ Operational Level Manager
- ◯ Middle Level Manager
- ◯ Top Level Manager

Company Size

- ◯ Less than 10 Employees
- ◯ 10–50 Employees
- ◯ 51-250 Employees
- ◯ 251-1000 Employees
- ◯ More than 1000 Employees

Psychological Capital

Instructions: Please respond to each item by marking the response that reflects the extent to which the statement describes your behavior

Note: Psychological Capital is a positive psychological state which is comprised of four dimensions: self-efficacy, hope, optimism and resilience

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly Agree
I feel confident analyzing a long-term problem to find a solution	○	○	○	○	○	○
I feel confident in representing my work area in meetings with management	○	○	○	○	○	○
I feel confident contributing to discussions about the company's strategy	○	○	○	○	○	○
I feel confident helping to set targets/goals in my work area	○	○	○	○	○	○
I feel confident contacting people outside the company (e.g., suppliers, customers) to discuss problems	○	○	○	○	○	○
I feel confident presenting information to a group of colleagues	○	○	○	○	○	○

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly Agree
If I should find myself in a jam at work, I could think of many ways to get out of it	○	○	○	○	○	○
At the present time, I am energetically pursuing my work goals	○	○	○	○	○	○
There are lots of ways around any problem	○	○	○	○	○	○
Right now I see myself as being pretty successful at work	○	○	○	○	○	○
I can think of many ways to reach my current work goals	○	○	○	○	○	○
At this time, I am meeting the work goals that I have set for myself.	○	○	○	○	○	○

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly Agree
When I have a setback at work, I have trouble recovering from it, moving on	○	○	○	○	○	○
I usually manage difficulties one way or another at work	○	○	○	○	○	○
I can be "on my own," so to speak, at work if I have to	○	○	○	○	○	○
I usually take stressful things at work in stride	○	○	○	○	○	○
I can get through difficult times at work because I've experienced difficulty before	○	○	○	○	○	○
I feel I can handle many things at a time at this job	○	○	○	○	○	○

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
When things are uncertain for me at work, I usually expect the best	○	○	○	○	○	○
If something can go wrong for me work-wise, it will	○	○	○	○	○	○
I always look on the bright side of things regarding my job	○	○	○	○	○	○
I'm optimistic about what will happen to me in the future as it pertains to work	○	○	○	○	○	○
In this job, things never work out the way I want them to	○	○	○	○	○	○
I approach this job as if "every cloud has a silver lining."	○	○	○	○	○	○

Creativity

Instructions: Please respond to each item by marking the response that reflects the extent to which the statement describes your behavior

	Not at all characteristic of me	A little bit	Neutral	Characteristic of me	Very characteristic of me
I Suggest new ways to achieve goals or objectives	○	○	○	○	○
I Come up with new and practical ideas to improve performance	○	○	○	○	○
I Search out new technologies, processes, techniques, and/or product ideas.	○	○	○	○	○
I Suggest new ways to increase quality	○	○	○	○	○
I am a good source of creative ideas	○	○	○	○	○
I am not afraid to take risks	○	○	○	○	○

	Not at all characteristic of me	A little bit	Neutral	Characteristic of me	Very characteristic of me
I Promote and champion ideas to others	○	○	○	○	○
I exhibit creativity on the job when given the opportunity to	○	○	○	○	○
I often have new and innovative ideas	○	○	○	○	○
I develop adequate plans and schedules for the implementation of new ideas	○	○	○	○	○
I come up with creative solutions to problems	○	○	○	○	○
I often have a fresh approach to problems	○	○	○	○	○
I suggest new ways of performing work tasks	○	○	○	○	○

Engagement

Instructions: Please respond to each item by marking the response that reflects the extent to which the statement describes your behavior

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
At my work, i feel bursting with energy	○	○	○	○	○
At my job, i feel strong and vigorous	○	○	○	○	○
When i get up in the morning, i feel like going to work	○	○	○	○	○
I am enthusiastic about my job	○	○	○	○	○
My job inspires me	○	○	○	○	○

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I am proud on the work that i do	○	○	○	○	○
I feel happy when i am working intensely	○	○	○	○	○
I am immersed in my work	○	○	○	○	○
I get carried away when i am working	○	○	○	○	○