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A STUDY OF POSITIVE EMOTIONS AND TURNOVER INTENTIONS  
AMONG HONG KONG POLICE OFFICERS: THE MEDIATING ROLE OF  
PSYCHOLOGICAL CAPITAL AND WORK WELL-BEING

LUI CHUN LOK

MPHIL

LINGNAN UNIVERSITY

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A STUDY OF POSITIVE EMOTIONS AND TURNOVER INTENTIONS  
AMONG HONG KONG POLICE OFFICERS: THE MEDIATING ROLE OF  
PSYCHOLOGICAL CAPITAL AND WORK WELL-BEING

by

LUI Chun Lok

A thesis

submitted in partial fulfillment

of the requirements for the Degree of

Master of Philosophy in Social Sciences

(Psychology)

Lingnan University

2011

## ABSTRACT

A Study of Positive Emotions and Turnover Intentions among Hong Kong Police Officers: The Mediating Role of Psychological Capital and Work Well-being

by

LUI Chun Lok

Master of Philosophy

With reference to Fredrickson's (2001) broaden-and-build theory of positive emotions, the current study investigated the mechanism of how positive emotions contribute to desirable outcomes to the organization through psychological capital (PsyCap), which is a positive, state-like, and performance-related resource comprising self-efficacy, hope, optimism and resilience. To date, only few studies have been done particularly on the relationships between PsyCap and positive emotions among Chinese employees. Studies on PsyCap of police force are even rarer. The main purpose of this study was to investigate the underlying mechanism relating positive emotions and work outcomes, specifically to examine the separate roles of positive emotions and PsyCap on work well-being (job satisfaction and stress symptoms) and turnover intentions in a homogenous sample of Hong Kong police officers. Further, in view of the emerging importance of turnover issue in the Hong Kong Police Force (HKPF), another objective was to fill the knowledge gap in the research literature by bridging positive emotions and turnover intentions among police. 311 police officers from the HKPF were successfully surveyed. The results obtained from structural equation modeling (SEM) analyses showed that the PsyCap scale developed in Western society was valid and PsyCap was a higher construct comprising the aforementioned components. Further, PsyCap was found to mediate the relationships between positive emotions and the two components of work well-being (job satisfaction and stress symptoms). Moreover, positive emotions and PsyCap associated indirectly with turnover intentions through the mediation of work well-being. This study has four major contributions: (a) to fill the knowledge gap between positive emotions and work outcomes with the extension of Fredrickson's (2001) broaden-and-build theory by including PsyCap as a mediator; (b) to contribute to the turnover literature by explaining how positive emotions affect turnover intentions through the mediating process of psychological capital and work well-being; (c) to provide evidence of testing the generalizability of the Western PsyCap measure to a Chinese occupational group; (d) to study the psychological status of officers in the HKPF which has been a less explored group in Hong Kong and is thus a valuable sample. Practical implications of findings and implications for future research on this issue are discussed in the thesis.

## DECLARATION

I declare that this is an original work based primarily on my own research, and I warrant that all citations of previous research, published or unpublished, have been duly acknowledged.

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(LUI Chun Lok)  
August, 2011

CERTIFICATE OF APPROVAL OF THESIS

A STUDY OF POSITIVE EMOTIONS AND TURNOVER INTENTIONS  
AMONG HONG KONG POLICE OFFICERS: THE MEDIATING ROLE OF  
PSYCHOLOGICAL CAPITAL AND WORK WELL-BEING

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## **CHAPTER 1 INTRODUCTION**

### **1.1 Background**

In a global economy, most organizations in Hong Kong face challenges such as an uncertain economy, globalization of markets and ever-changing technology. To meet these challenges, it is important for an organization to strive for both health and productivity through investing in human resources to enhance employees' motivation and job performance so as to seek competitive advantage. Therefore, investment in developing positive capacities is an attractive course of action for human resource managers in Hong Kong.

In line with the development of positive psychology, there has been a call for more positive organizational behaviour (POB). Specifically, the call is for psychological capital (PsyCap), which implies the investment in human resources to enhance organizational members' job performance. As argued by Luthans and Avolio (2009), there has been considerable attention in workplace research being given to economic, social, human and even intellectual capital, but psychological capital has not yet received considerable inquiry.

Law enforcement organizations had been ranked the top five most stressful non-profit organizations among occupations around the world (Dantzer, 1987). Selye (1984) stated that police work was one of the most stressful occupations in the world. Possible causes of such high stress may be due to the police work and unique characteristics of this occupation. For instance, in Hong Kong, the major

responsibilities of Hong Kong Police Force (HKPF) are “preserving the public peace, maintaining law and order, preventing and detecting crimes and offences, as well as safeguarding and protecting life and property” (Standard Committee on Disciplined Services Salaries and Conditions of Service, 2008, p.111) according to the Police Force Ordinance (Cap.232). The responsibilities of HKPF are diversified and complex ranging from day-to-day issue like patrolling for boundary security to maintenance of the public peace and order in high profile events such as 2008 Olympic Equestrian Events, international conference and even civil disorders (Standard Committee on Disciplined Services Salaries and Conditions of Service, 2008). As the biggest disciplined service in Hong Kong, HKPF operates different duties through five departments which are a) Operations and Support; b) Crime and Security; c) Personnel and Training, d) Management Services; and finally e) Finance, Administration and Planning. As a matter of fact, each department undertake a wide spectrum of duties. Dealing with diversified and complex duties is uneasy and may become a potential source of stress. As the duties of HKPF included handling a wide variety of disputes including political issues, members of HKPF are prohibited to take part in any trade union and political activities to ensure impartiality and neutrality. Since the actions of HKPF are subject to close scrutiny by public and mass media, police officers are subject to strict discipline and accountability. In addition, most officers have operational duties with shift and outdoor duties in all weather conditions and their conditioned hours of work are 48 hours per week. Exposing to various dynamic and unpredictable situations ranging from risk of physical injury, health hazards and sources of stress such as armed criminals and use of force are possible factors attributing to the stressful job nature of police (Standard Committee on Disciplined Services Salaries and Conditions of Service, 2008)



In fact, there was a wide range of research supporting police work as a highly stressful occupation (e.g., Violanti, 1984; Violanti, 1985; Savery, Soutar, & Weaver, 1993). For example, from a large scale study on nearly 2000 police officers in Australia, results showed that up to 47% of officers cited stress as a significant consequence of their job according to self-report data (Savery et al., 1993). Concerning stress in police work, the literature on this issue illustrates that there is a wide spectrum of stressors in the police environment (e.g. Brown & Campbell, 1994; Toch, 2002; Violanti, 1988). For instance, Violanti (1988) summarized different academic research studies and categorized numerous stressors into four types of work stressors. The four factors were intra-group stressors (e.g. strains on family relationships caused by a perceived need to depersonalize interactions with their family to shield them from work duty as police officers), organizational stressors (e.g. administrative work and red tape), interpersonal stressors (e.g. breakdowns of relationships with peers) and individual stressors (e.g. supervisors and shift work). Moreover, Brown and Campbell (1994) suggested stressors that most often affected police officers could be the organizational and managerial factors such as large amount of paperwork and inadequate supervision.

In addition, a police force is facing more and more challenges nowadays due to changes in terms of role and duty. Miller (2006) suggested that “the world of policing at the beginning of the twenty-first century is in some respects unique in other ways link to the past” (p.3). The role of law enforcer as a police officer has been changing from the traditional role of fighting crime to tasks which require better interpersonal skills such as settling family or neighbour disputes or squabbles and

maintaining the order during political demonstrations. In fact, HKPF was undergoing transformation in face of the political, social, legal and economic changes. According to Jones and Vagg (2007), due to the Asian financial crisis in 1997 and emphasis on efficient use of resource since 1989, public spending on criminal justice declined so as to the budget dedicated to policing. For instance, the share of the government budget dedicated to policing had been reduced to 4.6 percent in 2005. Jones and Vagg (2007) further mentioned that size of the force was reduced and new contract system which offered less favourable terms of service and lower security of tenure was introduced following the declined budget. In addition, promotion of efficient use of resources increases the administration work for justification of the output. These changes may in turn increase individual workload and influence the job satisfaction of police officers. According to the report of Standard Committee on Disciplined Services Salaries and Conditions of Service (2008), introduction of considerable new legislation and amendments to existing legislation since 1990s resulted in growth of workload and changes in the functions and powers of policing. In addition, due to the advances in technology, increasing cross-boundary activities after the reunification of Hong Kong and China in 1997 and increase in large scale events held in Hong Kong in recent years, there are more demand in terms of resources and skills for the police force in maintaining public orders and tackling crime including cross-border and cyber crime. In line with the development of a customer-oriented culture in the civil service sector, HKPF has also introduced cultural change which emphasizes customer service, partnership, engagement and responsiveness to the demands of the society. (Standard Committee on Disciplined Services Salaries and Conditions of Service, 2008).

Adaptation of these changes in the nature of the work tasks could be challenging and ineffective handling of these situations might give rise to crisis and harm the relationship between the police force and the public. In fact, the number of complaints to the Hong Kong Police Force from the public increased gradually every year, but the cases of complaints suddenly increased sharply by 59 % from 2714 cases in 2008 to 4257 cases in 2009 (Hong Kong Police Force, 2009). Such an increase in complaints may in turn create stress throughout the organization in maintaining a good public image of police force because the legal unit is meant to maintain the law and order in the community.

In view of all the aforementioned stressors and potential new challenges faced by police officers, failure of overcoming these issues may lead to reactions including dissatisfactions towards their jobs and development of stress symptoms, which may be eventually detrimental to their productivity and also voluntary turnover. Voluntary turnover is costly to an organization. Cascio (2003) suggested that turnover cost was approximately 150%-250% of the annual salary of the incumbent job holders. As revealed by Mingpao (2009, p.A06), turnover for police officers in the constable level increased by more than five times from the fiscal year 2005/2006 to the fiscal year 2008/2009. Though most of the police officers who had left the Hong Kong Police Force worked in other departments of the government or disciplined forces, the loss of employees might lead to costs of finding and training new police officers to fill those vacancies and duties. Even though the overall turnover rate of the Hong Kong Police Force dropped from 3.1% to 2.3% from the fiscal year 2008/2009 to the fiscal year 2010/2011 according to a recent news released by Mingpao (2011, p.A09), the turnover rate for police officers in the inspector level increased from 4.2% to

4.8%. In 2011, the Hong Kong Police Force will recruit 170 inspector trainees in this fiscal year, in which the number of trainees to be employed will increase by 20% when compared with the past two fiscal years, to fill the job vacancies.

Considering the challenging circumstances faced by the Hong Kong Police Force nowadays, it seems that the exploration of possible resources that promote police officers' satisfaction to their jobs, protecting them from adverse effect from work stress, and finally reducing the turnover of employees are of utmost importance.

## **1.2 Rationale for the Study**

### **1.2.1 The Emerging Importance of Positive Psychology and Positive Organizational Behaviour (POB)**

Before World War II, the three major missions of psychology were “curing mental illness, making the lives of all people more productive and fulfilling, and identifying and nurturing high talent” (Seligman, & Csikszentmihalyi, 2000, p.6). At that time, apart from research studies on mental illnesses, there were also research studies and discussions on the positivity of human beings, like discovery and search for the meaning of life (Jung, 1933), and marital happiness (Terman, Bottenwieser, Ferguson, Johnson, & Wilson, 1938). However, with reference to the description of Seligman and Csikszentmihalyi (2000), employment opportunities were generated in clinical psychology for treating mental illness and more funds were directed towards research studies on diagnosis and treatment of psychological disorders and pathology with the establishment of Veteran Administration in 1946 and National Institute of

Mental Health in 1947. Thus, the focus of research on psychology was turned to mental disorders and the adverse effects of environmental stressors such as abuse and parental divorce. The explosion of research studies on mental illnesses at that period of time contributed greatly to the better understanding of psychological disorders and the enhancement in corresponding therapies. However, the emphasis on pathology in this field neglected two other fundamental objectives which were to make the lives of human beings more worth living and to develop human strengths. Seligman and Csikszentmihalyi (2000) noted that conducting research studies exclusively on the malfunctions and weaknesses of human beings and the repairing of psychological damages undermined the capability of psychology in effective illness prevention. In fact, prevention started to receive more attention in the field of psychology in the 1990s and has become the presidential theme of the 1998 American Psychological Association in San Francisco in 1998 (Seligman & Csikszentmihalyi, 2000). In view of the negative bias among research studies in psychology, Seligman and a core group of research-oriented positive psychologists proposed a renewed focus on human strengths and positive aspects of individuals and attributed to the emergence of positive psychology starting from the late 1990s (e.g. Diener, 2000; Peterson, 2000; Seligman, & Csikszentmihalyi, 2000). Seligman and Csikszentmihalyi (2000) suggested three levels of analysis can be conducted in research in positive psychology. The three levels are: (1) subjective level, which is about positive subjective experience such as well-being and satisfaction with the past, flow and happiness in the present and the hope and optimism towards the future; (2) individual level, which is about positive traits such as perseverance, courage and wisdom; (3) group level, which is about positive civic virtues and the institutes that direct individuals towards better citizenship such as altruism and work ethics.

Applying the concept of positive psychology in the workplace, Luthans has urged for the study of positive organization behaviours (POB) which was defined as “the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace” (Luthans, 2002b, p. 59). Luthans (2002a) reported that current research still focuses predominately on the “negatives”, such as mental illness, depression, and anxiety while the positive concepts of human being are relatively under-explored. With the positive psychology movement led by Seligman, the emphasis of research starts to shift from a negative approach to study human behaviours and mental process towards the development of human strengths in the workplace. At the least, we should pay an equal amount of attention to the study of positivity of human beings compared to the negativity (Luthans, 2002a).

Different from popular self-help books which lack theoretical and empirical support, Luthans and Youssef (2007) note that POB emphasizes studies of individual-level constructs which have strong theoretical groundings, valid measurements and sophisticated research support. When compared to other approaches in the research field of positive psychology that work on positive traits, the state-like criterion of POB differs from these approaches. In line with the positive psychological movement led by Seligman and other positive psychologists, a substantial number of research studies have been conducted on the positive traits which are characterized by their relative stability over the entire life span of individuals and applicability across various circumstances. Due to their stability, positive traits can serve as the basis for further development of the comparatively

transient states (Luthans and Youssef, 2007). For instance, hope is supported to be open for development and therefore consists of the state-like element (Luthans, Youssef & Avolio, 2007; Snyder, Sympson, Ybasco, Borders, Babyak, & Higgins, 1996). On the other hand, Snyder (2000) notes that hope also consists of relatively stable trait-like element which acts as the baseline for the improvement and limitation of individual's state hope. Nonetheless, repeated initiatives of attaining state hope can accumulate to build trait hope over time in return (Snyder, 2000). Contrary to the focus of the trait dimension of human strengths, POB emphasizes state-like constructs which can be developed through brief-intervention and is thus more open to development than traits. Nonetheless, state-like constructs are not as momentary as extreme states like moods and emotions and still maintain certain stability in short run. With the developmental characteristic, positive state-like capacities can be built up among employees to meet the demands from the fast-changing and unpredictable working environment nowadays. Therefore, the investment of these capacities may finally raise the competitiveness of the organizations and are thus potential resources for the workplace.

Recently, there was some evidence showing that positive subjective experience was related to intention to quit (e.g. Van Katwyk, Fox, Spector, & Kelloway, 2000). In addition, Luthans and his colleagues have developed a construct called "Psychological Capital" which meets the POB criteria. The association between psychological capital and turnover intentions have been demonstrated in some studies (e.g. Avey, Luthans, & Jensen, 2009; Avey, Luthans, & Youssef, 2010). To explore the issue of turnover in the Hong Kong Police Force from the perspective of positive psychology and POB, this study focused on the possible positive resources

in both the subjective and individual level that could enhance the well-being and lower the turnover tendency of police officers.

### **1.2.2 Positive Emotions as the Antecedent**

According to Fredrickson (2001), emotions are “multiple component response tendencies that unfold over relatively short time spans.” (p.218). Emotions are generated when people start assessing the personal meanings of events. Sometimes, the terms “affect”, “emotions” and “feelings” have been used interchangeably (e.g. Isen, 2000). With reference to the abundant empirical evidence from the review of Lyubomirsky and her colleagues (2005) on the studies about the impact of positive emotions and positive affect, it was found that people who frequently experienced positive emotions were more likely to be successful in different domains in their lives such as work life. From the empirical evidences, positive emotions or affect were positively associated with a wide range of desirable work outcomes such as organizational citizenship behaviours (Credé, Chernyshenko, Stark, & Dalal, 2007; Avey, Wernsing, & Luthans, 2008), supervisory evaluations (Staw et al., 1994; Wright & Cropanzano, 2000; Wright & Staw, 1999), job performance (DeLuga & Mason, 2000; Wright & Cropanzano, 2000; Wright & Staw, 1999), job satisfaction (Tait, Padgett, & Baldwin, 1989; Weiss, Nicholas, & Daus, 1999), and negatively correlated with undesirable work outcomes such as job withdrawal (Credé, Chernyshenko, Stark, & Dalal, 2007), emotional exhaustion (Wright & Cropanzano, 1998), turnover intentions (Van Katwyk, Fox, Spector, & Kelloway, 2000; Harvey, Stoner, Hochwarter, & Kacmar, 2007). In view of the beneficial effects of positive



emotions in the workplace, positive emotions seem to be a useful resource in alleviating the turnover of Hong Kong police officers.

Numerous studies have been conducted on the relationships between positive emotions and different work outcomes. Yet research on the underlying mechanism is rare. Considering the transient nature of positive emotions, it is not likely that they directly attribute to the varied good outcomes in the work environment. According to Fredrickson's broaden-and-build theory (2001), positive emotions broaden the variety of thoughts and actions called forth and help establishing enduring resources. Specifically, referring to the turnover of police officers, there is a possibility that positive emotions provided the employees with useful resources to deal with the stress and challenges faced in the work domain. With abundant resources for the successful coping of problems and adaptation towards adversities in the work environment, police officers enjoy both psychological and physiological well-being in their workplace and may therefore have lower intention to quit their current jobs. Considering the possible useful resources in the work environment that can be developed from positive emotions, psychological capital is one of these resources with regard to its capability for development (Luthans, Avey, & Patera, 2008; Luthans, Avey, Avolio, Peterson, 2010) and usefulness in the workplace (e.g. Avey, Luthans, & Youssef, 2010; Avey, Wernsing, & Luthans, 2008; Larson & Luthans, 2006; Luthans, Avolio, Avey, & Norman, 2007).

### **1.2.3 Psychological Capital**

Based on the POB criteria, Luthans and his colleagues suggested the positive

psychological capacities which best fit the inclusion criteria were self-efficacy, hope, optimism and resilience, and termed as “Psychological Capital” (PsyCap) when combined together (Luthans, Avolio, Avey, & Norman, 2007). PsyCap was defined as follows:

An individual’s positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success (Luthans, Youssef, & Avolio, 2007, p. 3).

Self-efficacy, hope, optimism and resilience were supported to meet the most important criterion of openness towards development from both theoretical and research perspectives (Bandura, 1997; Snyder, Rand, & Sigmon, 2005; Carver & Scheier, 2005; Masten & Reed, 2002). In addition, with regard to their relevance in workplace as discussed by Luthans and Youssef (2007), these four factors were considered to be the four components of PsyCap. A detailed discussion is provided in the next chapter.

In recent years, Luthans and his coworkers have provided empirical evidence in supporting PsyCap as a higher-order core construct (Luthans, Avolio, et al., 2007) and its capability for development within a time period as short as an intervention which was less than three hours (Luthans, Avey, Avolio, Norman, & Combs, 2006;

Luthans, Avey, Avolio, Peterson, 2010; Luthans, Avey, & Patera, 2008). PsyCap was found to be beneficial to both organizations and employees in promoting desirable work outcomes including job satisfaction and performance of employees whereas alleviating undesirable outcomes such as intention to quit and counter-productive behaviours of employees. (e.g. Avey, Luthans, & Youssef, 2010; Avey, Wernsing, & Luthans, 2008; Larson & Luthans, 2006; Luthans, Avolio et al., 2007). From a recent study, PsyCap has been supported to have additional values in explaining the variance of positive and negative, attitudinal and behavioural work-related outcomes above antecedents including contextual and individual differences, and even widely recognized positive trait construct which was core self-evidence as well as other constructs related to integration of interactions between individual and organization variables which were person-organization and person-job fit (Avey, Luthans, & Youssef, 2010). From the aforementioned evidence, PsyCap seems to be a powerful resource in the workplace and therefore likely to be a potential buffer to turnover of employees.

Although Avey, Wernsing and Luthans (2008) used positive emotions as a mediator in studying the influence of PsyCap to employee attitudes (cynicism and engagement) and employee behaviours (organizational citizenship and deviance), there is still a possibility that positive emotions can build up PsyCap and further reduces turnover intentions. Concerning cognition and emotions, they are closely linked to each other and there are still debates on whether cognition causes emotions or vice versa (e.g. see Izard, 1993; Lazarus, 2006). Certainly, it is sensible to deduce PsyCap can affect appraisal of individuals towards their circumstances and generate different emotions according to Lazarus' (2006) cognitive mediation theory which

views emotions as the outcomes of appraisals and evaluations. However, there were also research studies supporting that positive emotions could influence the underlying components of PsyCap. For example, Fredrickson and colleagues (2008) conducted an experimental study which found that changes in positive emotions among participants in the reporting phase after an intervention would predict changes in their level of ego resilience and pathway thinking which was an element of hope. Besides, several experimental studies has demonstrated that people in the experimental groups which positive emotion inducing agents are present set higher momentary goals and reported higher self-efficacy (Baron, 1990; Samson & Rachman, 1989; Schuettler & Kiviniemi, 2006). Therefore, it is also possible for positive emotions to build PsyCap for achieving desirable work outcomes.

Based on these evidences and the notion of broaden-and-build theory of positive emotions according to Fredrickson (2001), a new perspective is employed by using psychological capital as a mediator between positive emotions and turnover intentions in this study. Lazarus, Kanner & Folkman (1980) suggested the function of positive emotions was to buffer individuals from stress through providing a psychological respite, enhancing effort for continuous coping and restoring resources which were exhausted during stressful circumstances. Therefore, it is believed that psychological capital as a multidimensional construct which aid stress resistance would be the key for positive emotions to alleviate turnover intentions.

Although there have been some studies on the effectiveness of the underlying factors of PsyCap among Chinese employees (e.g., Siu, Hui, Phillips, Lin, Wong, & Shi, 2009; Siu, Lu, & Spector, 2007), research on the applicability of PsyCap as a

whole construct in China is very limited, and Luthans had only conducted PsyCap studies on Chinese factory workers (Luthans, Avey, Clapp-Smith, & Li, 2008; Luthans, Avolio, Walumbwa, & Li, 2005). Studies of PsyCap are even scarce in Hong Kong. Recently, Siu and Lin (2007) conducted a study to develop a new scale of PsyCap by exploring the validity of this measurement among healthcare workers in Hong Kong and three cities in China. However, by that time, research on PsyCap using Chinese samples are still restricted to specific occupations and hence need further exploration of its generalizability and applicability in other occupations. Besides, investigation of PsyCap specifically on the occupation of police officers only emerged in recent years in the United States (Walumbwa, Peterson, Avolio, & Hartnell, 2010). It is valuable to study the PsyCap among police officers in the Hong Kong Police Force.

#### **1.2.4 Turnover Intentions as a Distal Work Outcome**

With reference to Fishbern and Ajzen's (1975) theory, it was suggested that "the best single predictor of an individual's behaviour will be a measure of his intention to perform that behaviour" (p.369). When applying this concept in the issue of turnover, it seems to be sensible to consider turnover intention as a possible precursor for actual voluntary turnover. Turnover intentions were often found in different models of turnover theories (e.g. Mobley, Griffeth, Hand, & Meglino, 1979; Steel, 2002) and were suggested to be the very few common direct antecedents or the immediate precursors of actual turnover consistently across a wide spectrum of research studies (e.g., Horn et al., 1992; Griffeth, et al., 2000; Mobley, 1977; Steers & Mowday, 1981). With the support from these previous studies, turnover intentions

will be measured in this study to explore any possible mechanism of how the predictors including positive emotions and PsyCap would influence turnover through their effects towards turnover intentions.

### **1.2.5 Work Well-being as a Mediator between Psychological Capital and Turnover Intentions**

Well-being is a broad concept which is used in different ways and is consisted of various dimensions. Warr (2006) suggested that experience of well-being may be simply seen as feeling good or bad. With reference to the well-being in the workplace, different researchers would consider different factors in representing this concept. For example, Danna and Griffin (1999) would consider factors including non-work satisfaction, job satisfaction and health as the indicators of employee well-being. Concerning the work well-being among Chinese population, job satisfaction and stress symptoms were often considered as the indicators of this concept (e.g. Siu, Lu, & Spector, 2007; Siu, Spector, & Cooper, 2006; Siu, Spector, Cooper, & Lu, 2005).

Considering the underlying factors of work well-being, it is possible that PsyCap possesses influence to the behavioural intention of turnover through work well-being. Job satisfaction was suggested to play an important role in turnover and frequently appeared in different models of turnover (Steel & Lounsbury, 2009). With regard to the positive association between PsyCap and job satisfaction in past research studies (e.g. Luthans, Avolio et al., 2007), it is possible that PsyCap would reduce intention to quit through its effect towards job satisfaction. According to

Hobfoll's (1989) Conservation of Resources theory, which suggested that human beings strive to build, retain and safeguard resources, the potential or actual loss of these valued resources would be considered as a threat. Stress symptoms, as a signal of exhaustion or a loss of resources, would possibly drive individuals to quit their jobs in order to reduce continuous loss of resources in the present circumstances. Based on Hobfoll's (2002) review on different resource theories, the four distinct components which manifest the core construct of PsyCap identified as key resources with regard to their impact on stress resistance, and thus enhance the capability of individuals in tackling problems and fit the demands in stressful circumstances. In addition, Hobfoll also notes that resources are linked to each other and people with a solid reservoir of resources are likely to have further enrichment of their resources. Therefore, individuals who have already possessed reserves of PsyCap are capable of substituting resources used in dealing with demands in stressful situations, and were thus less likely to suffer from stress symptoms and thus less likely to feel the need to change job.

### **1.3 Research Questions and Objectives**

The main purpose of this study was to investigate the roles of positive emotions and PsyCap on work well-being and turnover intentions among Hong Kong police officers. In addition, in view of the increasing importance of the issue of turnover to the Hong Kong Police Force, another objective of this study was to develop a possible explanation for turnover intentions among police officers in Hong Kong. Specifically, through the extension of Fredrickson's broaden-and-build theory (2001), this study examined the role of PsyCap as a possible resource that can be

developed from positive emotions and of which is therefore a potential mediator linking positive emotions with work well-being and turnover intentions by elucidating an empirical investigation. In addition, past research evidence supported the mediating role of stress symptoms between PsyCap and intention to quit (Avey et al., 2009) and numerous turnover models suggested job satisfaction as the antecedent of turnover intentions (e.g. Mobley, 1979). The current study will also assess the possible mediating effect of work well-being which is composed of job satisfaction and stress symptoms. Moreover, as there has not been any study conducted on the applicability of Luthans' PsyCap as a core construct among Chinese police officers, this study also aimed at testing the generalizability of PsyCap and assess its effectiveness among police officers in Hong Kong.



## **CHAPTER2 LITERATURE REVIEW**

### **2.1 Positive Emotions**

In recent decades, given the considerable advances in the understanding of the role of emotions played in human behaviours, a growing number of industrial and organizational psychologists have devoted much effort into research on emotions in the workplace (Lord & Kanfer, 2002). However, definitions of emotions vary among researchers. Izard (1993) noted that defining emotions was a complicated matter. Nonetheless, he emphasized the experiential component of emotions was of paramount importance and manifested itself in various ways such as action tendency, cues for cognition and action, or a feeling state. He proposed a multisystem model of emotion activation which consisted of neural, motivation, sensorimotor and cognitive systems, and therefore experience of emotions was not necessary to be activated by cognitive information processing. Frijda (1993) distinguished the concepts of emotions and moods. He suggested that emotions were more transient in nature and were associated with a specific stimulus whereas moods were comparatively enduring and was disconnected from particular objects. Myers (2006) defined emotions as a mixed response comprising physiological arousal, expressed behaviours and conscious experience.

In fact, the role of emotions in workplace settings did not receive much attention for several decades until the mid 1980s to 1990s. Weiss (2002) deliberately used the term “rebirth” to describe the uprising research interest in the moods and emotions in the workplace instead of the extreme perspective of “job satisfaction as

affect” in the past. Early research studies on workplace emotions in the 1930s involved diversified discussion of new ideas like emotional maladjustment (Fisher & Hanna, 1931) and creative methods such as collecting data with both daily mood diaries and physiological measurements in studying employees’ performance and emotional lives (Hersey, 1932). Nevertheless, at the end of the 1930s, studies of workplace emotions entered a narrow focus, construing workplace emotions in terms of satisfaction (Weiss, 2002). Perhaps, due to the growing service sector resulting in increment of workforce of frontline service providers during the recent decades, there is an increase in the demand of emotional labour across different occupations and therefore emotions once again became an important issue in organizational research studies (Kalliath, Brough, O’Driscoll, Manimala, & Siu, 2010). Weiss and colleagues urged for more research on studying emotions and attitudes in separate ways as well as going beyond the borders of affectivity and mood (Brief & Weiss, 2002; Weiss 2002; Weiss & Cropanzano, 1996).

Lord and Kanfer (2002) viewed emotions as the crucial components for human beings to react to a wide variety of stimuli. He summarized several studies and suggested emotions can affect organizational behaviours in both direct and indirect ways. For instance, Scherer (1994) suggested that emotions acted as an interface for the interaction between individual behaviours and the environment. Specifically, emotions separate the stimuli and individuals by driving individuals towards certain tendencies of action and providing a latency period for additional information processing. In addition, the intensity of emotions affects the length of the latency period, in which the more intense the emotions are, the quicker the actions are performed. Therefore, human beings enjoy greater flexibility in making adjustment

to the environment, unlike lower-level organisms which produced so-called “hard-wired responses” to the stimuli. Recently, many studies have demonstrated that emotions and moods have associations with a wide range of work behaviours such as organizational citizenship behaviours (George & Brief, 1992; Credé’ et al., 2005), counterproductive work behaviours (Credé’ et al., 2005), job performance (Robbins & DeNisi, 1998), and withdrawal behaviours including absenteeism and turnover (Cropanzano, 1993). These findings supported the idea that emotions may modify human behaviours in the workplace and thus influence the productivity of organizations. Hence, study of emotions in organizations becomes more and more important.

After giving a brief description of what emotions are and the roles of them in organizations, positive emotions will be introduced as follows. With reference to Fredrickson’s (2001) perspective, emotions are “multiple component response tendencies – incorporating muscle tension, hormone release, cardiovascular changes, facial expression, attention, and cognition, among other changes – that unfold over relatively short time spans.” (p.778). Emotions are generated when people start assessing the personal meaning of events. Sometimes, the terms “affect”, “emotions” and “feelings” are used interchangeably (e.g. Isen, 2000). With regard to positive emotions, examples of them are contentment, interest and joy (Fredrickson, 2005). Fredrickson and Cohn (2008) distinguished positive emotions from other positive affective states such as sensory pleasures and positive moods. Examples of sensory pleasure include experience of satiation of hunger and sexual gratification. Though both sensory pleasure and emotions share the commonality of pleasant subjective feelings and changes in physiological states, positive emotions require appraisal to a

stimuli and emerge even without any physical stimuli (e.g. joy emerges when hearing good news). Though positive emotions and moods seems to resemble each other, similar to Frijda's (1993) view towards moods and emotions, positive emotions are more short-lived and involve personal assessment to an object whereas positive moods are objectless and last for a longer time. However, Fredrickson and Cohn (2008) point out those techniques used to elicit positive moods and emotions as identical in real-life research practices are virtually identical. Examples of those techniques are giving gifts or watching a comedy, so as to direct participants to perform an experimental task in a positive mindset. Therefore, separation of these two concepts is often at a theoretical level rather than at an empirical level.

In general, all positive emotions share a common function which is promoting the tendency to approach (Cacioppo et al., 1993; Davidson, 1993; Frijda, 1994) or, in other words, continued action (Carver & Scheier, 1990; Clore, 1994). Thus, people experiencing positive emotions are more likely to engage in the environment and tend to persevere on what they are doing in the current situation. However, Fredrickson (2001) further argued that the function of positive emotions not only increased the tendency to continue, but they also helped broadening one's momentary thought-action repertoires.

There was empirical evidence from experimental studies illustrating how positive emotion helps broadening the cognition and behaviours of individuals. Fredrickson and her colleagues (2004) had demonstrated the function of broadening attention in an experiment. Participants experiencing positive emotions were more likely to see so called "big pictures" instead of concentrating on small details through

the use of global-local visual processing tasks. In Fredrickson and Branigan's study (2005), participants were requested to list out all things they would like to do at that moment after watching films that recalled certain emotions. Eventually, it was found that participants who had watched emotionally evocative films that induce positive emotions, listed out more things which they would like to do than the ones watching films that induce negative emotion or are non-emotional.

By broadening the range of thoughts and actions come up into the mind of individuals, Fredrickson (2001) suggested that positive emotions helped developing enduring resources. She proposed that positive emotions, which rarely appeared in life-threatening circumstances, were different from negative emotions which directed people to a specific thought-action repertoire for immediate actions so as to overcome specific threat. Instead of promoting immediate benefits, positive emotions helped building up enduring resources as they broadened individuals' attention and raising their openness to possibilities. For example, positive emotions such as interest would promote urges to explore and therefore leading to gain in new knowledge and development in intellectual complexity. Joy, another positive emotion would lead to play which might facilitate creativity and develop social bonds with others (Fredrickson, 2005).

Fredrickson, Cohn, Coffey, Pek and Finkel (2008) had provided empirical evidence supporting the building hypothesis of positive emotions among employees working in the field of software and information technology. In this experimental study, participants were separated into two groups and participants in the experimental groups received a training programme called "loving-kindness

meditation”. This intervention aimed at teaching participants mediation skills for evoking positive emotions. One week after the intervention, participants interested in this study filled in an online survey consisting items measuring different resources and the outcome variables namely life satisfaction and depressive symptoms. At the same time, a daily reporting phase of this study began and lasted for approximately nine weeks. Every day, participants from both groups accessed a website and completed a report on their positive emotions and time spent in “meditation, prayer or solo spiritual activity”. After this reporting phase, participants filled in the online survey again. From the results of this study, it was shown that time spent on the mediation practices predicted the increase in positive emotions from the data collected in the daily reporting phase. Moreover, the individual initial level of positive emotions did not predict changes in the level of any resources. However, the changes in positive emotions of the participants within the reporting phase predicted the change in several personal resources including ego resilience, pathway thinking and environmental mastery in the two time points. Furthermore, changes in positive emotions did not have any direct effects towards the outcome variables. Nevertheless, the resources developed from changes in positive emotions predicted the increment in life satisfaction and reduction in depressive symptoms which signified a better mental health.

## **2.2 Psychological Capital**

As described in the introduction, PsyCap is the psychological resource which consists of four factors which are self-efficacy, optimism, hope and resilience that best fit the POB criteria which are: 1) based on theory, research and valid

measurement; 2) “state-like” and therefore open to development; 3) possess performance impact (Luthans, Youssef & Avolio, 2007). With reference to the research findings in recent years, PsyCap is not only positively related to performance (e.g. Luthans, Avolio et al., 2007; Luthans, Avolio, et al., 2005), but is also positively associated with a wide spectrum of desirable work outcomes including job satisfaction, organizational citizenship behaviours, while being negatively associated with negative work outcomes such as counter-productive work behaviours, cynicism, and turnover intentions (e.g. Avey, Luthans, & Youssef, 2010 ; Avey, Wernsing, & Luthans, 2008; Larson & Luthans, 2006; Luthans, Avolio et al., 2007). In view of the great influence of psychological capital, it is important to have a more in-depth understanding of this construct.

PsyCap refers to the positive psychological capital which fit the POB criteria as mentioned in the beginning of this sub-chapter. POB focused on state-like constructs in the micro individual level (Luthans & Youssef, 2007) and was distinguished from other positive approaches focusing on positive traits as suggested by Seligman and Csikszentmihalyi (2000) or perspectives that stressed on positive organizations and the associated macro-level variables (e.g. Cameron & Caza, 2004; Huselid, 1995). In the followings, in what way self-efficacy, hope, optimism and resilience meet the inclusion criteria of POB and the foundational feature of PsyCap as a core construct would be explained (for a comprehensive understanding, see Luthans & Avolio, 2009; Luthans, Avolio, et al., 2007; Luthans, Youssef, et al., 2007; Youssef & Luthans, 2007).

To begin with, Luthans and Youssef (2007), as previously mentioned, emphasized the state-like characteristic of POB as the distinctive feature when compared to other approaches which focused on positive traits. Avey, Luthans and Youssef (2010) have provided a detail description on the trait-state continuum:

“Pure positive traits: These are at one extreme of the continuum and are characterized by stability over time and across situations, including traits that are believed to be “hardwired,” such as intelligence or hereditary characteristics.” (p.436)

“Trait-like constructs: These are closer to the trait end of the continuum and refer to relatively stable psychological characteristics such as conscientiousness, extroversion, and core self-evaluations (CSEs).” (p.436)

“State-like psychological resources: These are closer to the opposite (state) end of the continuum and include PsyCap and its constituents of efficacy, hope, optimism, and resiliency (the focus of this study), which tend to be malleable and thus open to development and are particularly relevant to the workplace.” (p.436)

“Positive states: These are at the other extreme of the continuum and include momentary and highly variable states such as moods and emotions.” (p.436)

According to different theoretical and research support, the four underlying components of PsyCap were suggested to consist of the state-like element emphasized in the POB perspective.



### **2.2.1 Self-efficacy as a State-like Psychological Resource**

With reference to Bandura's (1997) social cognitive theory, self-efficacy was described as "people's belief in their capabilities to produce desired effects by their own actions" (p.7). For its definition in workplace, Stajkovic and Luthans (1998b) suggested self-efficacy was "the employee's conviction or confidence about his or her abilities to mobilize the motivation, cognitive resources or courses of action needed to successfully execute a specific task within a given context." (p.66). Considering the POB inclusion criteria, self-efficacy portrayed the psychological capacity which best fit with all the criteria (Luthans, 2002a).

Unlike hope, optimism and resilience which are conceptualized and measured as both traits and states, Bandura (1997) has depicted four ways to develop self-efficacy and give theoretical support to self-efficacy as a state-like construct and there have been measurement for assessing state self-efficacy (e.g. Maurer & Pierce, 1998; Parker, 1998). The four sources of self-efficacy proposed by Bandura (1997) were mastery experience, vicarious experience and modeling, social persuasion and lastly emotional and physiological arousal. With regard to the application of techniques described by Bandura, Luthans and Youssef (2007) suggested mastery experience can be nurtured in the workplace through training and actual hands-on practice of tasks with gradual increase in the difficulty of the tasks to generate frequent opportunities for further achievement and success. This is the most powerful influence on building up self-efficacy as suggested by Bandura (1997). Besides, through practices of mentoring and coaching, Luthans and Youssef (2007) suggested trainees may build up their efficacy by perceiving their own relevance and similarity

to the role models and observing the successful outcomes of the behaviours of those mentors. Positive feedback from supervisors and colleagues such as group support, encouragement, appreciation and respect can develop individual belief and capability to perform specific work tasks through this kind of social persuasion.

When compared to other three components, the relationship between self-efficacy and various performance-related dimensions are well established. Examples of these desirable work outcomes are work attitudes across cultures (Luthans, Zhu, & Avolio, 2006), participation (Lam, Chen, & Schaubroeck, 2002), creativity (Tierney & Farmer, 2002) and entrepreneurship (Boyd & Vozikis, 1994; Chandler & Jansen, 1997; C. C. Chen, Greene, & Crick, 1998; Luthans & Ibrayeva, 2006; Neck, Neck, Manz, & Godwin, 1999). Apart from this, from a meta-analysis of 114 studies, self-efficacy has strong correlations with job performance (Stajkovic and Luthans, 1998a). To reiterate, self-efficacy is enjoying a strong research foundation supporting its association with performance.

A possible explanation of how self-efficacy leads to the aforementioned positive outcomes maybe due to the capability of efficacious individuals in utilizing cognitive process such as forethought, self-reflection and observation to pursue their goals (Bandura, 1997; Stajkovic & Luthans, 1998b). For instance, Forethought represents the ability to predict proximal and distant milestones as well as success and potential hurdles. This cognitive capacity can promote contingency planning, prioritization of goals and steps towards achievement, and provided emotional drives for motivation. Observation can facilitate learning through associating the behaviours and outcomes among other individuals, which save time and effort in trial-and-error

experience before accomplishment. Self-reflection can help retrieve the memories of the valuable lessons learnt from past experience and exert positive impact towards present challenges and future opportunities (For better understanding, see Bandura, 1997; Luthans, Youssef, et al., 2007).

### **2.2.2 Hope as a State-like Psychological Resource**

Different from wishful thinking, referring to Snyder's definition (1991), hope is defined as "a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-directed energy), and (b) pathways (planning to meet goals)" (Snyder, Irving, & Anderson, 1991, p. 287). The "agency" here refers to the motivational component of hope which represents the self-referential capacity in initiating and continuing the requisite actions to reach the desired goal (Snyder, Rand & Sigmon, 2005). Although the agency is conceptually similar to self-efficacy, Snyder, Rand and Sigmon (2005) notes that efficacy pertains the perceived ability to act whereas agency focuses on the intention to act similarly to a "can" and "will" matter. On the other hand, pathways refer to the individual perceived capability in generating different possible ways to accomplish a desired goal, and this is a unique component of hope (Snyder, Rand & Sigmon, 2005).

To be considered as a POB capacity, hope has been supported for being open to development through interventions (Luthans & Youssef, 2007). For instance, Snyder (2000) proposed several goal-setting interventions for the development of hope including developing stretch-goals (setting goals which are challenging and slightly far away from current reach), graduated mastery (experience of success in particular

goals) and re-goaling for preventing the development of false hope. Apart from this, Luthans and Youssef (2007) noted that hope can be developed through practices such as contingency planning and organizational culture which encourage creativity and participation. Besides, Snyder and his colleagues (1996) have developed a state scale for hope and its reliability and validity has been established (e.g. Snyder, Sympson, Ybasco, Borders, Babyak, & Higgins, 1996; Feldman & Snyder, 2000)

Hope plays an important role in different positive outcomes at work and there were emerging research evidence supporting the effectiveness of hope in workplace. For instance, hope has been supported for having positive association with organizational profitability (Adams, Snyder, Rand, King, Sigmon, & Pulvers). Luthans and Jensen (2002) found a positive relationship between entrepreneurs' level of hope and their satisfaction with business ownership. Peterson and Luthans (2003) found that restaurant managers who had high level of hope correlated positively with gross profitability, which possibly reflected the job performance of their unit and was also associated with greater job satisfaction and higher retention rates of subordinates. Besides, hope level of the factory workers in China was also found to be positively related to their supervisory-rated performance and increase in merit-based salary (Luthans, Avolio, Walumbwa, & Li, 2005). Moreover, theory building on impact of hope to performance (e.g. Luthans, 2002a, 2002b; Luthans, Youssef, et al., 2007 ) and application in different culture continues to arise in the recent decade (e.g. Luthans et al., 2005; Luthans, Van Wyk, & Walumbwa, 2004; Youssef & Luthans, 2006).

### **2.2.3 Optimism as a State-like Psychological Resource**

Optimism refers to both positivity-oriented expectations of the future (Carver & Scheier, 2005) and attribution style which interprets positive events as internal, stable and global attribution and negative events by external, unstable and situation-specific causes (Seligman, 1998). Luthans (2002a) suggested optimism, as one dimension of PsyCap, is not only associated with positive attribution of events which promoted motivation but also being realistic. Similar to hope and efficacy, optimism helps enhance individual motivation and offers greater positive expectancy. However, optimism uses other situational factors and other individuals as referents for attribution especially in externalizing negative events which are different from hope and efficacy which only influence internalized individual positive expectancy by ones' effort (Avey, Luthans, & Youssef, 2010).

There is some support for optimism in meeting the integral state-like element of POB. Similar to hope, optimism is also suggested to have a dispositional baseline (Scheier & Carver, 1997). Nonetheless, Seligman (1998) suggested optimistic explanatory style can be nurtured and learnt resembling the conceptual counterpart which is helplessness or pessimistic explanatory style. Focused interventions may be a possible way to develop optimism (Carver & Scheier, 2005; Luthans, Avey, et al., 2006; Luthans, Avey, et al., 2007). Pessimistic explanatory style may be developed through distorted or actual pessimistic attributions over time. For instance, pessimists may tend to account for an undesirable situation with their own responsibility and their own success with credits of others or external factors. This type of pessimism is likely to be refuted through identifying and challenging of those underlying ruinous

thoughts and thus replacing with positive and productive ones in order to generate a more realistic optimism (Schneider, 2001; Schulman, 1999). In addition, Shifren and Hooker have demonstrated a measurement for state optimism.

With regard to the inclusion criteria of POB, there are also research evidence supporting the positive relationship between optimism and performance. For example, Seligman (1998) found that optimism was significantly positively correlated with the performance of insurance sales agents, whereas Youssef and Luthans (2007) reported that optimism of employees related not only to performance evaluation but also their job satisfaction. Besides, optimism of Chinese factory worker was related to their performance based on supervisory evaluations (Luthans et al, 2005). All in all, optimism has been found to predict a higher performance among different professions (e.g. Chemers, Watson, & May, 2000; Schulman, 1999; Wunderley, Reddy, & Dember, 1998).

#### **2.2.4 Resilience as a State-like Psychological Resource**

Masten and Reed (2002) defined resilience as “a class of phenomena characterized by patterns of positive adaptation in the context of significant adversity of risk” (p.75). When the concept of resilience is applied in the workplace, it was defined as “positive psychological capacity to rebound, to ‘bounce back’ from adversity, uncertainty, conflict, failure, or even positive change, progress and increased responsibility” (Luthans, 2002a, p. 702). Despite myriad theory establishment and applications in the field of clinical and developmental psychology

(e.g. Block & Kremen, 1996; Bonanno, 2004; Masten& Reed, 2002), resilience is just an emerging concept in the literature of industrial and organizational psychology.

With regard to the state-like criteria of POB, researchers have suggested several ways to foster resilience. For instance, Masten and Reed (2002) described three ways which were 1) risk-focused, 2) asset-focused and 3) process-focused strategies for nurturing resilience of children. With reference to Masten and Reed (2002), risk refers to “elevated probability of undesirable outcome” (p.76) whereas asset refers to “a measurable characteristic in a group of individuals or their situation that predicts positive outcome in the future on a specific outcome criterion” (p.76). Therefore, risk-focused strategies are aimed at protecting children from hazardous experience while asset-focused strategies are aimed at developing the accessibility and quality of resources necessary for fostering the competence of children. Finally, process-focused strategies attempted to build up a coping mechanism of children in utilizing assets to adapt to adversity. Examples of risk-focused strategies in building resilience of children may include the prevention of child abuse and reducing teenage binge drinking and drug abuse through community programmes; whereas asset-focused strategy may consist of providing a tutor for guidance, building more recreational centres and offering parent education workshops. For process-focused strategies, programmes for effective coping to specific threatening situations are one of the examples of this strategy (Masten & Reed (2002). When applying these strategies in the workplace, Luthans and Youssef (2007) suggested asset-focused strategies may build resilience through the development of assets relevant to work by ways like the promotion of social relationships as well as supportive climates in organizations, and training for knowledge and skills. Alleviating work-related risk

factors like stress, lacking of feedback and communication, or conflict are examples of risk-focused strategies. Eventually, for process-focused strategies, training for fostering coping mechanism like stress management interventions can be undertaken for the facilitation of making good use of assets when facing adversity (Luthans & Youssef, 2007). For instance, Waite and Richardson (2004) conducted a “personal resilience and resilient relationships” training programme and found a significant positive change in the resilience of participants in the experimental group when compared with the control group. In addition, Wagnild and Young (1993) have developed a state-like measurement for resilience.

Several studies have reflected the beneficial outcomes of resilience. For example, positive correlation between resilience and job performance was found in Chinese factory workers in Luthans et al.’s studies (2005 & 2008). Likewise, Youssef and Luthans (2007) reported positive associations between employees’ resilience and their commitment and job satisfaction. In general, resilience is supported as a predictor of various work-related outcomes and a capacity which can be developed in the workplace (Conner, 1993; Harland, Harrison, Jones, & Reiter-Palmon, 2005; LaMarch, 1997; Luthans, Avey, et al., 2006; Luthans, Vogelgesang, & Lester, 2006; Reivich & Shatte, 2002; Vickers & Kouzmin, 2001; Waite & Richardson, 2004; Waterman, Waterman, & Collard, 1994; Zunz, 1998).

### **2.2.5 Overall PsyCap as a state-like construct**

Unlike trait-like constructs such as the construct of “Big Five” personality dimensions (Barrick & Mount, 1991) or core self-evaluations (Judge, & Bono, 2001),



which include components that are relatively stable over time and are resistant to changes, the PsyCap construct was proposed to be state-like, which means it is relatively changeable but not momentary (Luthans, Avolio, Avey, & Norman, 2007). Luthans (2008) had provided evidence supporting the idea that PsyCap could be built through a 2-hour web-based training intervention. In this study, participants in the treatment group were assigned to online PsyCap Interventions, while the ones in the control group were assigned to online decision making intervention which was unrelated to PsyCap development. PsyCap surveys were completed by the participants before and after the experiments for both groups. Results showed that participants in the treatment group showed a significant increase in PsyCap whereas the ones in control group did not (Luthans, Avey, & Patera, 2008). In addition, a recent study with similar design has further supported the higher order factors of PsyCap. On the other hand, this study also supported that PsyCap could develop within a short period of time and could promote future performance (Luthans, Avey, Avolio, Peterson, 2010). Such empirical evidence has certainly demonstrated the capability for development of the state-like PsyCap construct.

### **2.2.6 PsyCap as a Core Construct**

To address the construct validity and theoretical basis of PsyCap as a multi-dimensional core construct represented by the integration of self-efficacy, hope, optimism and resilience, it is essential to examine the convergent and discriminant validity between PsyCap and positive constructs as well as both types of validity among the four constituents of PsyCap.

Based on empirical evidence, PsyCap does converge with some established relevant positive constructs. For instance, core self-evaluations (CSEs) referred to “basic conclusions or bottom-line evaluations that individuals hold about themselves.” (Judge & Bono, 2001, p.80) and are conceptualized as a trait-like multidimensional construct. Conceptually, there are similarities between the components of CSEs and PsyCap, such as general versus work-specific self-efficacy, internal locus of control versus optimistic explanatory style, emotional stability versus resilience. Though PsyCap is a state-like construct whereas CSEs is a trait-like construct, both of them are represented by four components (CSE, Judge & Bono, 2001; PsyCap, Luthans, Avolio et al., 2007). Previous research findings supported convergent validity between these two constructs with a moderate to strong correlation of .60 (Luthans, Avolio et al., 2007) and .72 (Avey, Luthans & Youssef, 2010). Nevertheless, these constructs are simultaneously different from each other. From the hierarchical regression analyses in the two studies, PsyCap is able to explain additional unique variance of job satisfaction and affective organizational commitment (Luthans, Avolio et al., 2007), as well as cynicism, intention to quit, organizational citizenship behaviour in organizational level and counter-productive work behaviours beyond core evaluation (Avey, Luthans & Youssef, 2010). These findings supported both convergent and discriminant validity of PsyCap with other related constructs.

Concerning the convergent and discriminant validity among the four constituents of PsyCap, Bandura (1997, p.3) suggested individuals with high self-efficacy were more resilient when confronting adversity, while Snyder (2000, p.39-40) found that hopeful people tend to have a greater level of confidence towards

specific tasks (self-efficacy) and have quicker recovery (resilience) from temporary hopelessness. In addition, empirical evidence from studying factory workers in China showed that each of the individual level of hope, optimism and resilience have similar level of correlation with the supervisory rated performance (Luthans, et al, 2005). In fact, Avey, Luthans and Youssef (2010) have made a conceptual discussion on the convergent and discriminant validity of the four components of PsyCap. For example, though self-efficacy and hope are conceptually sharing the component of internal motivation, self-efficacy refers to the motivation generated from self-perceived ability to accomplish specific tasks, whereas the agency of hope elicits motivation through the will to carry out certain actions for achieving the goal. Additionally, pathway is an element unique to hope which generates alternative ways to achieve specific goal and thus distinguishes the concept of hope from self-efficacy (Avey, Luthans & Youssef, 2010). Apart from this, optimism, hope and self-efficacy have the same function in developing positive expectancies to future as suggested by Avey, Luthans and Youssef (2010). The expectancies created from optimism are more general whereas those from hope and self-efficacy are specific to certain goals. In addition, optimism has a unique effect of using external factors in explaining negative events, unlike hope and self-efficacy which are bound to attribution of positive events to internal factors. Avey, Luthans and Youssef (2010) noted that resilience is similar to self-efficacy in fostering perseverance when confronting obstacles and adversities. Nevertheless, dissimilar to the proactive nature of self-efficacy, hope and optimism, resilience carried its function in a reactive manner through making use of available resources to mitigate the adverse effect of risk factors during setbacks (Avey, Luthans, & Youssef, 2010).

Despite the similarity among these variables, the discriminant validity of these four constructs has been demonstrated across multiple samples (Bryant & Cvenegros, 2004; Carifio & Rhodes, 2002; Magaletta & Oliver, 1999; Youssef & Luthans, 2007). For instance, Magaletta and Oliver (1999) found that hope, independent of self-efficacy, provided unique predictive power in explaining the variance of well-being and thus supported the discriminant validity of these two constructs.

Additionally, Hobfoll (2002) provided conceptual support to establish PsyCap as a core construct. He identified all the four constituents of PsyCap as key resources which are capable to utilize other resources to meet the demands from stressful situations. Furthermore, he proposed the idea of resource synergies in which resources are interlinked and therefore individuals with more resources are more likely to gain other resources. If people have more resources, they are less likely to be negatively affected by resource drains and possess greater capability in resolving problems in stressful circumstances (Hobfoll, 2002). Therefore, the whole composite of resources are likely to interact with each other and have a greater beneficial effect than the individual resources.

To sum up, though there are differences in the functions of the underlying components of PsyCap, Luthans, Avolio et al. (2007) suggested that the four components of PsyCap shared a common capacity in promoting “positive appraisal of circumstances and probability for success based on motivated effort and perseverance.” (p.550). Therefore, on top of meeting POB criteria, self-efficacy, hope, optimism and resilience share a common denominator that converge them into a core factor as PsyCap which promotes success expectancies, motivation and

perseverance while having an independent contribution to the improvement of performance.

### **2.3 Work Well-being**

Well-being is a broad concept which is used in different ways and is consisted of various dimensions. Warr (2006) suggested that experience of well-being may be simply seen as feeling good or bad. Similar to well-being, work well-being is also ambiguous. Karademas (2007) suggested both the positive and negative aspects of well-being are, on one hand, two related constructs, but on the other hand, independent constructs. Thus, it would be more accurate to measure well-being by including measurements on both sides. Traditionally, work well-being had been simply studied by using the job satisfaction construct which was defined as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences” (Locke, 1976, p.1300). Warr (1987) considered concepts including job satisfaction, job-related tension, job related depression, job-related burnout, and morale as work well-being. Danna and Griffin (1999) considered well-being in the workplace as a broad and encompassing construct which is comprised of non-work satisfaction, job satisfaction and the element of health that embrace “the combination of such mental/psychological indicators as affect, frustration, and anxiety and such physical/physiological indicators as blood pressure, heart condition, and general physical health” (p.359). Recently, Keyes (1998) proposed social well-being, which refers to “the appraisal of one's circumstance and functioning in society” (p.122) such as appraisal towards relationship of oneself and other people as well as the community, as one aspect of well-being. In contrast, psychological and

physiologically well-beings are individual focused constructs whereas social well-being emphasizes on interpersonal and social interactions (Bradbury & Lichtenstein, 2000). Though measuring well-being from a more diverse perspectives is often suggested to be more comprehensive, affective well-being is the central element of well-being considered in related literature (Diener, Suh, Lucas, & Smith, 1999) and refers to the feelings or arousals of individuals (Warr, 1987). Therefore, it seems to be more appropriate to include the indicators of well-being in the individual level. Through a summary of important elements of well-being, this study would use two concepts in representing work well-being: job satisfaction as the positive affective well-being and stress symptoms as the negative affective and physiological well-being. In fact, many Chinese studies have taken job satisfaction and stress symptoms to be the indicators of work well-being (e.g. Siu, Lu, et al., 2007; Siu, Spector, et al., 2006; Siu, Spector, et al., 2005). Individuals enjoying a higher level of job satisfaction and lower level of stress symptoms would be considered as having better work-well-being.

## **2.4 Turnover Intentions**

Turnover intentions refer to “individuals' own estimated probability (subjective) that they are permanently leaving the organization at some point in the near future” (Vandenberg & Nelson, 1999, p.1315). Turnover intentions were regularly included as one of the components in different models of turnover theories (e.g. Mobley, et al., 1979; Steel, 2002) and the very few common direct antecedent or the immediate precursor of actual turnover consistently across a wide array of studies (e.g., Horn et al., 1992; Griffeth, et al., 2000; Mobley, 1977; Steers & Mowday, 1981). For

instance, in Mobley's model (1979), intention to quit was acted as the final cognitive step before the decision of quitting the current job. In the cognitive model of turnover process developed by Steer and Mowday (1982), it was described that intention to stay or quit would mediate the relationship between affective mechanisms and turnover. Steel and Ovalle (1984) had performed a meta-analysis and found that behavioural intentions such as intention to quit were consistently superior in the prediction of turnover when compared to affective variables. In view of the difficulties for the collection of data from individuals who had left the organizations, turnover intentions certainly allowed researchers to explore possible factors attributed to actual turnover indirectly.

## **CHAPTER 3 THEORETICAL FRAMEWORKS AND HYPOTHESES**

### **3.1 Positive Emotions and Work Outcomes**

From the review of Lyubomirsky and her colleagues (2005) on the studies concerning the impact of positive affect and positive emotions, it was found that people who frequently experienced positive emotions were more likely to be successful in different domains in their lives such as work life, social relationships and health. A possible explanation for the overall powerful effect of positive emotions across different fields might be explained by the critical purpose of positive emotions in which they promoted building of enduring resources that helped organism well-prepared for challenges in the future according to broaden-and-build theory of Fredrickson (2001). Moreover, following the viewpoint of Carver (2003), positive emotions would be a signal of being free from immediate threats and thus people would be eager to seek new goals that were not yet accomplished and also think of the deficiencies and places for improvement due to an increase in cognitive flexibility that might in turn helps problem solving. Therefore, those resources, skills or characteristics developed from positive emotions might mediate its effect towards those favorable outcomes across different fields. Apart from this, as noted by Fredrickson (2001), positive emotions appeared to act as internal signal for approach behaviours which promoted active engagement towards goal pursuit and undo the effects of negative emotions which might narrow down individual actions to avoidance of harms. Therefore, happy people were more likely to persevere when pursuing their goals and thus had a comparatively higher probability to succeed. All these effects stemming from positive emotions might be the keys to make people



who frequently experienced positive emotions be successful across different life domains.

There is empirical evidence supporting the associations between positive emotions and different work outcomes including job satisfaction, stress symptoms and turnover intentions. Several studies had supported the idea that people experiencing more positive emotions were having higher satisfaction with their jobs (e.g. Tait, Padgett, & Baldwin, 1989; Weiss, Nicholas, & Daus, 1999). From a meta-analysis of Connolly and Viswesvaran (2000), it was concluded that the differences in the level of affectivity among individuals accounted for 10% to 25% of the variance of job satisfaction. In addition, the result from their analysis showed that the mean corrected correlation between job satisfaction and positive emotions was .49. This finding supported that people experiencing more positive emotions would be more likely to be satisfied with their job.

According to Lazarus, Kanner and Folkman (1980), the function of positive emotions has been suggested to serve as a buffer to stress through the provision of a psychological respite, boosting effort for continuous coping and restoring resources that got exhausted during stressful circumstances when negative emotions overwhelmed. In fact, there were empirical support for coping strategies which help maintain and promote positive emotions such as positive appraisal, instillation of positive meanings in ordinary events and problem-focused coping helped buffer individuals against the adverse effects of stress (Folkman & Moskowitz, 2000). For example, males who could find positive meaning when they were taking care of their partners with AIDS were found to cope more effectively with the distress associated

with care giving and bereavement (Folkman & Moskowitz, 2000). Apart from this, Fredrickson and Levenson (1998) provided some support for the role of positive emotions as a buffer against adverse physiological influence of stress through an experimental study. In this study, stressful situation was induced to the participants by evoking negative emotions through a film that elicited fear. Then, they were separated and watched one of the four films designed to evoke different emotions which were contentment, amusement, neutral emotions and sadness. From the result, participants watching the film that elicited positive emotions like contentment and amusement were having faster recovery from cardiovascular reactivity indicating negative physiological effects associated with negative emotions when compared with the individuals watching sad or neutral films.

Finally, a study of Van Katwyk and his colleagues provides evidence suggesting individuals who experienced positive affect in their work were less likely to have intentions to quit their jobs (Van Katwyk, Fox, Spector, & Kelloway, 2000). Even in the high level of perceived abusive supervision, the negative association between positive affect and turnover intentions was supported among population in United States including samples from both blue-collar and white-collar positions (Harvey, Stoner, Hochwarter, & Kacmar, 2007).

In total, 16 hypotheses are to be investigated in this study. Based on previous studies mentioned in Chapter 3.1, the first three hypotheses are postulated for investigation in this thesis:

Hypothesis 1a: Positive emotions will be positively related to job satisfaction.

Hypothesis 1b: Positive emotions will be negatively related to stress symptoms.

Hypothesis 1c: Positive emotions will be negatively related to turnover intentions.

### **3.2 Positive Emotions and Psychological Capital**

According to Fredrickson's (2001) broaden-and-build theory of positive emotions, it was suggested that positive emotions broadened one's attention and that individual would become more likely to carry out a series of actions that would help develop enduring valuable personal resources ranging from physical, social, intellectual and even psychological resources (Fredrickson, 2001). Psychological capital, as suggested by Luthans et al. (2007), was considered as the positive psychological capacities for performance improvement. So, it is possible to be one of the psychological resources that can be developed from positive emotions.

There is both theoretical and empirical evidence supporting the possibility of which positive emotions could develop each of the four underlying personal resources under PsyCap. According to the social cognitive theory of Bandura (1997), self-efficacy of individuals could be developed in four ways as mentioned in the Chapter 2.1.1. Among the four ways, influencing self-efficacy through physiological and emotional state was the most relevant to this study. Bandura (1997) stated that emotional and physiological states would affect self-efficacy of individuals after people have made associations between the pleasant emotions with success or negative affect with failure. Thus, it would be likely that experiencing positive emotions aroused in success such as happiness might recall the sense of competence

and therefore increase confidence in one's capability to accomplish certain tasks. On top of the theoretical framework, several studies supported the possibility that positive emotions built up self-efficacy in different experimental studies (Baron, 1990; Samson & Rachman, 1989; Schuettler & Kiviniemi, 2006). For instance, in Baron's (1990) study, male participants were reported having higher self-efficacy and participants of both genders would set higher momentary goals, which was one of the features of people who have high self-efficacy in the presence of positive emotions inducing agents than in their absence in an experimental study.

Hope, as mentioned before, consists of two components which are pathways which refer to the ability to develop plans and searching of ways to achieve the goals, and agency, which is the motivational energy. Isen (2000) reviewed a large amount of studies and suggested positive emotions would help promote cognitive flexibility and creativity in problem solving, which might in turn build up pathway thinking which is another element of hope. For examples, Estrada, Isen and Young (1997) found that physicians in the affect group which positive emotions was induced participants were more open to information, integrated information for decision making in a faster speed, less likely to use anchoring as a reasoning style which reflected insensitivity to disconfirming evidence, and considered more possibilities in diagnosis in resolving a case of patient suffered from liver disease when compared with the control group. Other studies found that individuals in whom positive affect was induced would be enjoying greater cognitive flexibility and would be more capable to perceive more differences and similarities of items as well as having a unique or creative view towards items in categorization tasks (Isen & Daubman, 1984; Murray, Sujan, Hirt, & Sujan, 1990). From these research evidences,

individuals experiencing positive emotions would pay attention on a wide spectrum of information, generate unique innovative ideas and consider a great many possibilities. All these influences brought by positive emotions might increase an individual's capabilities of having a comprehensive view towards the situation and of whom was thus more likely to think of greater variety of potential ways to achieve goals. Isen also (2000) suggested that positive affect would influence the cognitive process for expectancy motivation mentioned in Vroom's expectancy theory (1964). Specifically, Erez and Isen (2002) suggested that positive affect could increase individual expectation, that effort could lead to better performance and strengthen their belief on its association with performance due to a broader attention on information and higher cognitive flexibility. Agency is the motivational component comes from individual perceived capability to initiate and sustain actions to their goal (Snyder, Rand & Sigmon, 2005). It is likely to be affected by the association with individual perception to the linkages among own effort, performance and outcome. From an experimental study, participants in the group which positive affect was induced were having a higher level of motivation in performing anagram task reflected by self-reported data and observable data such as time spent on staying in the room to perform the task (Erez & Isen, 2002). In fact, Fredrickson and her colleagues (2008) had provided empirical evidence supporting the idea that positive emotions built hope of individuals. In their study, increase of positive emotions for the participants in the experimental group would predict the change of the level of pathway thinking before the intervention and approximately 10 weeks after the intervention. In addition, participants of the loving-kindness meditation intervention programme also showed an increase in agency for pursuing important goals.

It is sensible to suggest that optimism promote positive emotions as optimists have positive appraisal of events. However, it is also possible that people experiencing positive emotions develop state optimistic explanatory style. Since positive emotions make individuals access to and process a wide spectrum of information including positive ones, positive appraisal of events is formed. From an experimental setting, Brown (1984) had demonstrated that induced positive emotions would promote expectations by attributing future success as stable events. According to the definition of optimism suggested by Seligman (1998), this result certainly matched with the feature of optimism concerning the explanatory style towards future. Fredrickson, Tugade, Waugh and Larkin (2003) found that positive emotions were associated with the post-crisis increment of psychological resource including optimism among the participants after controlling the effect of trait resilience.

Fredrickson (2005) suggested that positive emotions would help build resilience which refers to a pattern of positive adaptation during adverse circumstances through widening the thoughts and actions for coping. As resilience refers to the positive adaptation to significant risk and adversity, capability of using positive coping methods would be a form of resilience. Fredrickson and Joiner (2002) demonstrated an upward spiral in which resilience represented by the concept of “broad-minded coping” and positive emotions would build on one another. To be specific, positive emotions in Time 1 would predict an improvement of “broad-minded coping” from Time 1 to Time 2 and “broad-minded coping” in Time 1 could also predict changes of positive emotions in Time 2. In Fredrickson’s (2004) study, students who had greater positive emotion gained from daily habit of finding positive meanings showed increases in resilience (Fredrickson, 2004). Besides, the positive

state of mind one month after the bereavement of partners was supported as a common predictor of the recovery from depression and the recovery of positive mood which signified a kind of positive adaptation towards loss (Moskowitz, Folkman, & Acree, 2003). Moreover, similar to pathway thinking, empirical evidence from Fredrickson's (2008) intervention study supported that increment in positive emotions would predict increase of ego-resilience.

Apart from this, there has been some support regarding the correlation between positive emotions and PsyCap. Peterson and his colleagues (2008) conducted a neuroscientific study on the brains of leaders from different professions. Participants with High PsyCap, based on a written measure, were more likely to show greater left-prefrontal cortex activity indicating happiness when compared with the ones who had low PsyCap (Peterson, Balthazard, Waldman & Thatcher, 2008). Considering the happiness reflected by the cortex activity, it is sensible that such happiness was likely to be related to the short-term emotion instead of the long term trait-like happiness. Based on all these supporting evidence, it would be reasonable to propose that:

Hypothesis 2: Positive emotions will have a positive relationship with PsyCap.

### **3.3 The Mediating Role of Psychological Capital between Positive Emotions and Work Outcomes**

In recent years, Youssef and Luthans (2009) have proposed an integral conceptual framework using a broader perspective to assess different aspects of

performance at various levels in the organization. They suggested the inclusion of both desirable and undesirable work-related outcomes such as attitudinal outcomes and behavioural intentions instead of solely relying on in-role performance as the indicators for organizational effectiveness. On top of this, they offered that the study of criterion for PsyCap should include other factors such as contextual performance and behavioural outcomes (Youssef & Luthans, 2009). It was sensible that a construct meeting the criteria of POB which aimed at improving performance also exerted impacts on other work-related outcomes including job attitudes and job intentions which could finally attribute to the performance of the whole organization. Grounded with the evidence in past research studies, the relationships of PsyCap and different work-related variables were supported.

Despite the fact that PsyCap is primarily aimed at enhancing performance, job attitudes like job satisfaction have been shown to be related to job performance (Judge, Thoresen, Bono, & Patton, 2001). Thence, it is possible that PsyCap may exert its impact to performance through influencing job attitudes. In general, people with high self-efficacy would set challenging goals for actualizing their abilities, which provided meanings to their work, whereas hope would act as the motivational force and the capability to plan for overcoming hurdles or blockages towards their goals. Perhaps, employees who exhibited a higher level of optimism might be more likely to have a positive view towards work and interpersonal relationships with supervisors and colleagues. Also, optimism might allow individuals to see adversity faced in the workplace as only temporal events or even challenges for self-improvement and learning opportunities instead of threat with the junction of the hope components. Resilience would help promoting favorable responses to setbacks



rather than falling into grievance, and engaged in active coping to the problems faced. When taken these components together, it would be possible that employees were more capable to tackle challenges in their job and to have a positive perception towards their work, of whom finally turned out to enjoy an even higher job satisfaction. Therefore, it would be likely that PsyCap, as a construct meeting the POB criteria, is related to job satisfaction. Besides, Luthans and his colleagues provided empirical evidence demonstrating the relationship between PsyCap and job satisfaction. In his study for validation of the PsyCap scale, results from employees of both hi-tech manufacturing industry and insurance service firm were demonstrating a positive correlation between PsyCap and job satisfaction (Larson & Luthans, 2006; Luthans, Avolio, Avey, & Norman, 2007; Luthans, Norman, Avolio, & Avey, 2008). Thus, a hypothesis is proposed as below:

Hypothesis 3a: Psychological capital will be positively related to job satisfaction.

Concerning stress, Lazarus and Folkman (1984) proposed that people suffered stress when they perceived that they did not have enough resources to cope with difficult events. On top of this, Hobfoll (1989) further provided a more comprehensive understanding of stress with the consideration of environmental factors by introducing the conservation of resources theory. In his theory, it was suggested that stress appeared when there were potential or actual net loss of resources or individual failure in retrieving resources following resources investment. Moreover, Hobfoll also identified personal characteristics as potential factors of stress resistance resources. Later, Hobfoll (2002) examined different resource theories and identified several underlying factors of PsyCap including self-efficacy,

optimism and goal pursuit, similar to goal-directed energy which is a component of the concept of hope, and resilience as key resources. Individuals who were enjoying a high level of any one of the key resources would be able to facilitate development and make good use of other resources to accommodate stressful demands. Indeed, several research studies supported the stress resistance effect of the underlying factors of PsyCap. Negative association between self-efficacy and stress symptoms was demonstrated among Chinese employees (Siu, Spector & Cooper, 2005; Liu, Siu & Shi, 2010). Apart from this, employees in the call-center with a higher level of optimism were found to have lower perceived stress (Tuten & Neidermeyer, 2004). In addition, Totterdell et al. (2006) had found that portfolio workers who were having a higher level of optimism were less likely to have stress symptoms in their workplace. Besides, Siu and her colleagues (2009) had provided evidence supporting that health care workers in Hong Kong and China with a higher level of resilience tended to have less symptoms reported. All in all, PsyCap as a whole was found to have negative relationship with stress symptoms from the study conducted by Avey, Luthans and Jensen (2009) in exploring the effect of PsyCap as the resource for combating stress and turnover. Therefore, the following hypothesis is proposed:

Hypothesis 3b: Psychological capital will be negatively related to stress symptoms.

For turnover intentions, Avey, Luthans and Youssef (2010) had suggested several reasons of how PsyCap was possible to reduce the intentions of job turnover. To begin with, individual with a higher level of self-efficacy would have greater confidence in their ability to tackle difficult situations and would be more likely to engage and persevere to achieve their goal when confronting obstacles and

challenges (Bandura, 1997). Besides, considering the nature of optimism as a kind of explanatory style in which attributing negative events to external, unstable and specific causes whereas having internal, stable and global attribution to positive events (Seligman, 1998), individuals would be more likely to devote continuing effort when dealing with adversity due to the expectation of positive outcomes in the future. In addition, resilience allowed individuals to bounce back when facing adversity in work and performed positive coping and adaptation to workplace environment instead of quitting. Finally, the component of hope helped widen one's capacity in thinking of the pathways to achieve individual work goals successfully and reduced the needs to leave the present job. From their study on the effect of PsyCap to work attitudes and work behaviours, it was supported that PsyCap was negatively correlated with turnover intentions across a wide range of occupations and positions in the organizations (Avey, Luthans, & Youssef, 2010). Accordingly, I hypothesize:

Hypothesis 3c: Psychological capital will be negatively related to turnover intentions.

Based on the evidence supporting the relationships among positive emotions, PsyCap and work outcomes as mentioned above, it would be possible that the reason of why positive emotions would make people being more satisfied with their job, less affected by the adverse effect of stress and less likely to withdraw from the job, is through the encouraging development of individual personal resources to overcome the challenges and adversities faced in the work environment. Thus, I would like to propose the following hypotheses:

Hypothesis 4a: PsyCap will mediate the association between positive emotions and job satisfaction

Hypothesis 4b: PsyCap will mediate the association between positive emotions and stress symptoms.

Hypothesis 4c: PsyCap will mediate the association between positive emotions and turnover intentions.

### **3.4 The Mediating Role of Work well-being between Psychological Capital and Turnover Intentions**

From previous research studies and theoretical models for turnover, it seemed that the influence of PsyCap towards turnover intentions was not as simple as a direct effect, and there were probably some mediation of other variables in between. As mentioned in chapter 2, work well-being consists of two components — job satisfaction and stress symptoms. From the past studies, these two variables were possibly acting the mediating role between PsyCap and turnover intentions.

Job satisfaction was one of the core mechanisms in the literature relating to turnover. From a review of Steel and Lounsbury (2009) on turnover models, job satisfaction appeared in sixteen turnover models and coexisted with intention to quit in nine of these models. So, it is clear that its effect towards turnover intentions has been examined in a great variety of studies and different theoretical models of turnover. For example, in the turnover model devised by Mobley et al. (1979), job satisfaction was considered as one of the antecedents of turnover intentions.

Moreover, there was also a large amount of empirical evidence supporting the influence of job satisfaction towards turnover intentions across different occupations. Lambert, Hogan and Barton (2001) provided evidence illustrating job satisfaction as a crucial antecedent of turnover intentions which was far more important than demographic variables, like age and tenure, in a large scale study. For example, Brough and Frame (2004) had found that job satisfaction was correlated to turnover intentions among 400 police officers from New Zealand Police (Brough & Frame, 2004). Besides, Coomber & Barriball (2007) summarized different studies about nurses and found that job satisfaction had great influence on the turnover intentions of nurses at the ward level. Accordingly, it is hypothesize that:

Hypothesis 5a: Job satisfaction will have a negative relationship with turnover intentions.

Stressful employees would be unlikely to experience homeostasis when the stress level far exceeded the normal level (Avey, Luthans & Jensen, 2009). On top of this, as a reflection of the overall impact of stress to individuals, it would be possible that stress symptoms might signify a lack of resources to cope with stressors. Hence, according to Hobfoll (2002), people were motivated and strived to acquire and protect their resources. In order to prevent further loss of resources, it would be an expected outcome for employees to use different means such as the removal from the job to relieve from the stress which threatened their reservoirs of resources. Consequently, it seemed to be possible for stress symptoms to be correlated with turnover intentions. Kirchmeyer and Cohen (1999) provided empirical evidence reflecting a direct moderate correlation between stress symptoms and turnover

intentions among the employees working at schools. Besides, this correlation was also found among retail salespeople (Firth, Mellor, Moore & Loquet, 2004). Based on these evidences, I propose the following hypothesis:

Hypothesis 5b: Stress symptoms will have a positive relationship with turnover intentions.

In addition, there is empirical evidence supporting the mediating role of stress symptoms of the relationship between PsyCap and turnover intentions. Based on the literature support of the strong positive relationships among stress symptoms, turnover intentions and actual turnover from Sak and Ashforth (1997) longitudinal study, Avey et al. (2009) proposed that stress symptoms partially mediated the relationship between PsyCap and turnover intentions as well as job searching behaviours. Their result strengthened the idea that PsyCap might help buffer individuals from the dysfunctional effect of stress so that they would rather stay in the work rather than quitting (Avey, et al., 2009). Following the above evidence and the findings concerning the relationships among positive emotions, PsyCap, job satisfaction as well as stress symptoms in the literature, it seems that the influence of positive emotions and PsyCap towards turnover intentions might be mediated through these two key antecedents of turnover intentions and correspondingly I propose the following hypotheses:

Hypothesis 6a: Job satisfaction will act as a mediator between PsyCap and turnover intentions.

Hypothesis 6b: Stress symptoms will be the mediator between PsyCap and turnover intentions.

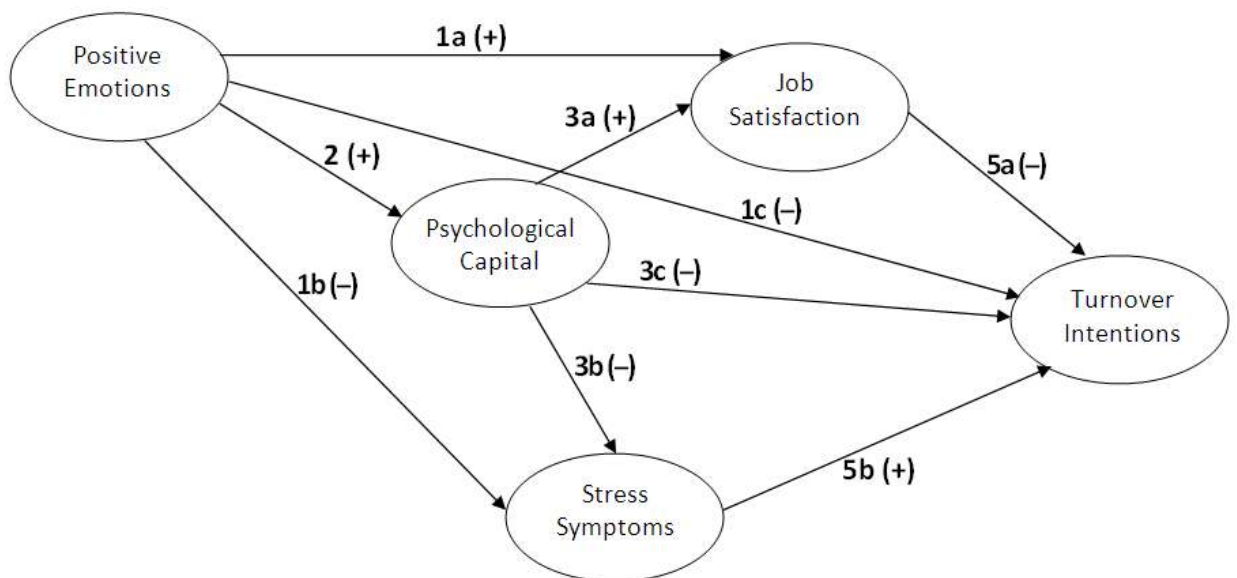
Hypothesis 6c: Job satisfaction will be the mediator between positive emotions and turnover intentions.

Hypothesis 6d: Stress symptoms will be the mediator between positive emotions and turnover intentions.

### 3.5 Summary

**Figure 3.5**

*The Proposed Theoretical Model of the Study*



By integrating all the aforementioned hypotheses in this chapter, Figure 1 depicts a proposed model for the study. The major purpose of this study was to examine a possible mechanism linking positive emotions and the work outcomes. In

view of the turnover problems in the Hong Kong Police Force, this study also aimed at exploring how positive emotions influenced the turnover intentions by the inclusion of psychological capital and work well-being as the mediation process. Following the broaden-and-build theory (Fredrickson, 2001), positive emotions might help develop psychological resources that are useful in the work environment such as PsyCap, while this resource would mediate the influence of positive emotions towards work-related outcome. Moreover, the critical antecedents of turnover intentions including job satisfaction and stress symptoms might further mediate the influence of positive emotions and PsyCap to the intention to quit of employees. To reiterate, the purpose of this study focuses on the direct and indirect effect of positive emotions and PsyCap towards different work outcomes. By undertaking an empirical investigation of the effectiveness of positive emotions and PsyCap in a reasonably large sample of officers in the Hong Kong Police Force from the broaden-and-build perspective, the current study will offer a significant contribution on the application of Fredrickson's theory and provide insights on alleviating the problem of voluntary turnover in this specific occupation.



## CHAPTER 4 METHODOLOGY

A self-administered questionnaire survey method was adopted for the study. The major advantage of using questionnaire as the mean for data collection is collecting a large amount of data with low cost. Despite the fact that causal relationship is not possible to be deduced by using this method, I think questionnaire is an acceptable method as one of my aim is to test the applicability of the western scale of PsyCap. The data collection was conducted from June to December 2010. Purposive sampling was employed in two ways. Part of the data was collected through distributing self-administered surveys in a half-day workshop for police officers before the workshops. Completed questionnaires were returned immediately on site. In total, 41 filled questionnaires were collected. Another part of the data was collected from a designated person working in the Hong Kong Police Force and distributed to participants through his personal connections. The designated person is a mentor in the Police College in the Headquarter. His major duty was providing training for the police constables who had been working as police officers from 2 months to 3 years. This designated person was requested to pass the questionnaires to another trustworthy third party for the delivery of the questionnaires. The purpose of this approach is to reduce the experimental effect as the designated person was an authority figure to the respondents and may have certain influence to their answers. Completed questionnaires from this source were collected on site by the trustworthy third party. The filled questionnaires were passed to that designated person and eventually to the author. Finally, 270 filled questionnaires were collected from this source.

## 4.1 Samples

In total, 320 questionnaires were distributed, and 311 questionnaires returned which resulted in a response rate of 97.19 percent. Age was measured as age range since some participants may not feel comfortable to indicate their exact age though the questionnaire was explicitly anonymous. The age of the whole sample ranged from 20 to 54 years (Refer to Table 4.1). In line with the predominantly masculine nature of this occupation, most participants were male (80.4 % were male, n=250; 19.3 % were female, n=60; missing data, 0.3%, n=1). Concerning marital status, 78.1% (n=243) of the respondents were single whereas 21.2% (n=66) were married or cohabitating and 0.6% (n=2) were divorced or separated. Concerning education level, 35.4% (n=110) of the respondents were graduated from secondary education, 21.2 % (n=66) were from graduated from the sixth form, 28.3 % (n=88) had an associate degree or higher diploma certificates, 15.1% (n=47) had a university degree or above. The participants had 0.5 to 40 (Mean=7.59years, SD=7.79) years of work experience and their tenure in the present organization ranged from 2 months to 35 years (Mean=4.70 years, SD=7.08). The number of working days per week ranged from 2 to 6 days (Mean=5.42 days, SD=0.49) and the number of working hour per week ranged from 30 to 84 hours (Mean=49.01 hours, SD=4.56). Table 1 summarized the demographic features of the samples.

**Table 4.1***Descriptive Statistics for Demographic Variables*

<b>Variable</b>				<b>Percentage</b>
<i>Age</i>				
20-24				37.6
25-29				42.8
30-34				6.4
35-39				2.9
40-44				2.9
45-49				4.8
50-54				2.6
<i>Gender</i>				
Male				80.4
Female				19.3
Missing data				0.3
<i>Education</i>				
Secondary school graduate				35.4
Sixth form				21.2
Associate degree or higher diploma certificates				28.3
University degree or above				15.1
<b>Variable</b>	<b>Mean</b>	<b>S.D.</b>	<b>Range</b>	
<i>Work experience</i>	7.59 years	7.79	0.5-40 years	
<i>Tenure in the present organization</i>	4.70 years	7.08	2 months -35 years	
<i>Number of working days per week</i>	5.42 days	0.49	2-6 days	
<i>Number of working hours per week</i>	49.01 hours	4.56	30-84 hours	

**4.2 Procedures**

Participants' gender, age range, marital status, education level, tenure in the Hong Kong Police Force, work experience, number of working days and working hours per week were asked. The original English items for measuring PsyCap were translated into Chinese with the endorsement by an assistant professor in translation in order to ensure the readability of the item set. The survey booklet contained a cover page indicating the purpose of the study, instructions for completing the questionnaire, measures used in this study and the demographic details. Anonymity and confidentiality of the responses of the participants were ensured.

## **4.3 Measurements**

### **4.3.1 Psychological Capital**

PsyCap was measured with the 24-item Psychological Capital Questionnaire (PCQ) developed by Luthans and his colleagues (Luthans, Youssef, & Avolio, 2007). It contained 6 items for each of the 4 components of PsyCap (resilience, optimism, hope and self-efficacy) and was validated by confirmatory factor analysis across multiple samples beforehand (Luthans, Avolio, Avey, & Norman, 2007). However, when this questionnaire was used in this study, the alpha coefficient of the sub-scales of optimism and resilience were too low to be acceptable with the presence of the reverse items. After deleting the reverse items, the reliability of the self-efficacy, hope, resilience and optimism were .88, .82, .82 and .80 respectively. Indeed, the short version of this measurement was adopted in a study on the psychological capital of Chinese factory workers in the past and the reliability was marginally acceptable (Luthans, Avey, Clapp-Smith, & Li, 2008). There might be a possibility that reverse items was the cause of exacerbation of the reliability at that time. For the reliability of PsyCap as a whole after deleting the reverse items, it was .92 which demonstrated a strong internal reliability in this study. All the items for PsyCap were rated on a six-point Likert scale (1= totally disagree, 6= totally agree) by considering the conditions of the participants in the past 3 months. Higher scores for each dimension indicated higher self-perceived self-efficacy, hope, resilience and optimism according to the corresponding items. Sample items were as follows: self-efficacy—"I feel confident analyzing a long-term problem to find a solution;"; hope—"If I should find myself in a jam at work, I could think of many ways to get out of

it;” resilience—“I usually manage difficulties one way or another at work;” and optimism—“When things are uncertain for me at work, I usually expect the best.” (For the details of the translated version and the original version of the PCQ, refer to Appendix II)

#### **4.3.2. Positive Emotions**

Positive emotions were measured by five items from the study of Siu et al. (2006). The reliability of this scale applying in a Chinese context was supported in Siu’s research studies. The alpha coefficient in this study was .89 which demonstrated adequate reliability. Participants used a six-point Likert scale (1=never, 6=very often) to indicate their frequency of experiencing positive emotions in the past 3 months. Higher score indicated a higher frequency of experiencing positive emotions. A sample item was “In the past 6 month, how frequently do you feel happy?”

#### **4.3.3. Job satisfaction**

Job satisfaction was assessed with the three items as adopted from Cammann, Fichman, Jenkins, and Klesh (1979) job satisfaction subscale originated from the Michigan Organizational Assessment Questionnaire. High internal consistency had been demonstrated in cross-cultural studies (e.g. Spector, et al., 2002) and the Chinese version of these items were used and found reliable in Siu, et al. studies (Siu, et al., 2005; Siu, Lu, & Spector, 2007). Participants rated on a five-point Likert scale (1=strongly disagree, 5=strongly agree) in which higher scores indicated a higher

level of job satisfaction. The alpha coefficient for job satisfaction was .82. One item was negatively worded as “In general, I don’t like my job” whereas the other two positively worded items were “All in all, I am satisfied with my job” and “In general, I like working here” respectively.

#### **4.3.4. Stress Symptoms**

Stress symptoms were measured by six items originating from the Psychological Well-Being Scale of An Organizational Stress Screening Tool (ASSET) (Cartwright & Cooper, 2002). Construct validity of this scale has been demonstrated in earlier research (Johnson & Cooper, 2003) and the reliability of the short version which consisted of six items from this scale was demonstrated among Hong Kong employees (Siu, Chow, Phillips, & Lin, 2006). In this study, this short scale obtained a good reliability of alpha coefficient of .87. In the questionnaire, participants were asked to indicate how frequent they were confronted with the corresponding symptoms in the past month. Items were rated on a six-point Likert scale (1= never, 6= very often). Higher scores indicated lower well-being and higher frequency of self-perceived physiological and psychological stress symptoms. Three items were used to measure each facet. A sample item for physical symptoms was “insomnia” and for psychological symptoms, “depressed mood”.

#### **4.3.5. Turnover Intentions**

Turnover intentions were measured by the scale from Brough and Frame (2004) which consisted of three items. Adequate reliability and construct validity was

illustrated in the police force in Australia (Brough & Frame, 2004). Participants responded to the items on a five-point Likert scale (1=never, 5=very often) in which higher score implied greater turnover intentions. A sample item was “How frequently have you seriously considered leaving your job in the past six months?”

#### **4.3.6. Demographics**

In the present study, several demographic variables were reported. Demographic variables included were age range (1 = 20-24, 8= 55 or above), gender (1 = male, 2 = female), marital status (1 = single, 2= married/ cohabitating, 3= divorced/separated, 4 = widowhood), education level, tenure for the present organization, work experience, number of working days and working-hours. In general, most of the demographic variables did not have any significant association with the variables concerned in this study. Only the time-related variables including age, work experience and number of years working in the organization have significant between-group differences in PsyCap. As PsyCap is a kind of developable resources, it is likely that it accumulates throughout the time.

#### **4.4 Analysis**

To examine the construct validity of PsyCap measure, confirmatory factor analysis was performed by using AMOS Version 17.0. Chi-square ( $\chi^2$ ) value of the models was used for the comparison of fitness. Apart from this, other fit indexes including Comparative Fit Index (CFI), Standard Root Mean Square Residual (SRMR), Non-normed Fit Index (NNFI) and Root Mean Square Error of

Approximation (RMSEA) were employed to assess the model fit. Values of .90 or above for CFI (Bentler, 1990) and NNFI (Tucker & Lewis, 1973) whereas .08 or below for RMSEA (Browne & Cudeck, 1993) and SRMR (Hu & Bentler, 1999) were regarded as an acceptable fit.

As PsyCap was suggested to be a higher-order construct according to Luthans and his colleagues (2007), it is not appropriate to use hierarchical regression as this method cannot examine the influence of PsyCap as a higher-order construct towards the dependent variables. In addition, my study involved testing of several mediation processes. Using standard Baron and Kenny (1986) model for mediation testing will involve many independent regression analyses. On the contrary, using structural equation modeling (SEM) has the advantage of carrying out all the regression analyses simultaneously. Therefore, SEM was used to examine prospective models of psychological capital serving as the mediator between positive emotions and the work-related outcomes namely job satisfaction, stress symptoms and turnover intentions. Amos Version 17.0 was used in order to perform analysis for structural models. For the analysis covariance matrices, maximum likelihood methods were used. Fit indices were reported and compared according to the criteria that had been listed above.



## CHAPTER 5 RESULTS

Before reporting the results, to reiterate, a summary of the hypotheses was provided as follows:

H1a. Positive emotions will be positively related to job satisfaction.

H1b. Positive emotions will be negatively related to stress symptoms.

H1c. Positive emotions will be negatively related to turnover intentions.

H2. Positive emotion will be positively related to PsyCap

H3a. PsyCap will be positively related to job satisfaction.

H3b. PsyCap will be negatively related to stress symptoms.

H3c. PsyCap will be negatively related to turnover intentions.

H4a. PsyCap will be the mediator between positive emotions and job satisfaction

H4b. PsyCap will be the mediator between positive emotions and stress symptoms

H4c. PsyCap will be the mediator between positive emotions and turnover intentions

H5a. Job satisfaction will be negatively related to turnover intentions.

H5b. Stress symptoms will be positively related to turnover intentions.

H6a. Job satisfaction will be the mediator between PsyCap and turnover intentions.

H6b. Stress symptoms will be the mediator between PsyCap and turnover intentions.

H6c. Job satisfaction will be the mediator between positive emotions and turnover intentions.

H6d. Stress symptoms will be the mediator between positive emotions and turnover intentions.

## 5.1 Assessment of the Psychometric Properties of the Measurements

**Table 5.1.1**

*Comparison of Different Factor Structures of PsyCap*

Model	CFI	NNFI	SRMR	RMSEA	AIC
Higher-order model (M1)	.89	.88	.067	.076	606.719
Four-factor model (M2)	.90	.88	.064	.075	590.048

*Notes:* SRMR= standard root mean square residual; NNFI=non-normed fit index; CFI=comparative fit index; RMSEA= root mean square error of approximation, AIC=Akaike's Information Criterion.

In order to examine the construct validity of Luthans' PsyCap measure in the current study, confirmatory factor analysis (CFA) was conducted. In past research on PsyCap, Luthans, Avolio et al. (2007) has only compared the factor structures of PsyCap to examine the number of factors under the higher order construct of PsyCap. For instance, they compared the model fit of the factor structure of PsyCap which consisted of four factors with another factor structure which consisted of three factors by combining the items of hope and self-efficacy into one factor. As the discriminant validity of these four underlying factors of PsyCap has already been demonstrated across multiple samples (Bryant & Cvengros, 2004; Carifio & Rhodes, 2002; Magaletta & Oliver, 1999), it is expected that these four factors are distinct constructs. In this study, validity of PsyCap was assessed in another way by examining whether a higher-order model of PsyCap (M1) or a single order model of PsyCap which consisted of four inter-correlated factors (M2) had a better model fit. Since these two models are not nested, I would like to use Akaike's Information Criterion (AIC) instead of chi-square difference test to compare the model fit. Concerning AIC, a lower value indicates a better model fit. The result of the CFA depicted in Table 5.1.1 showed that M2 had a lower value of AIC when compared with M1. Besides, higher value of CFI and NNFI whereas lower value of RMSEA

and SRMR also provided some support suggesting M2 enjoyed a better model fit. This result suggested that M2 had a better fit with the data than M1. Nevertheless, M1 had a marginal fit to a second-order model ( $\chi^2$  [185]=514.72, CFI=.89, NNFI=.88, SRMR=.068, RMSEA=.075). Although the CFI and NNFI were slightly lower than the suggested values of .90 according to Bentler (1999) as well as Tucker and Lewis (1973), the values of SRMR and RMSEA were acceptable and the validity of PsyCap as a higher-order construct has been supported by Luthans, Avolio and his colleagues (2007). The following analyses were based on a higher-order model of PsyCap.

**Table 5.1.2**

***Comparison of Different Factor Structures of Work Well-being***

Model	$\chi^2$	Df	P	CFI	NNFI	SRMR	RMSEA
Work well-being as two sub-constructs (M3)	117.591	26	.000	.93	.91	.060	.107
Work well-being as a whole construct (M4)	420.428	27	.000	.71	.61	.144	.217
Model Comparison	$\Delta\chi^2$	$\Delta df$	P				
(M4-M3)	302.837	1	.000				

*Notes:* SRMR= standard root mean square residual; NNFI=non-normed fit index; CFI=comparative fit index; RMSEA= root mean square error of approximation.

Apart from PsyCap, the factor structure of work well-being is also examined through CFA. The model fit of model of work well-being as two sub-constructs (M3) was compared with the model of work well-being as a whole construct (M4) and had significantly better fit to the data ( $\Delta df=1$ ,  $\Delta\chi^2=302.837$ ,  $p<.001$ ) (see Table 5.1.3). Therefore, the following analyses were based on two sub-constructs of work well-being.

In order to assess the distinctiveness of the variables in the current study, CFA was conducted in order to compare the fit of the hypothesized measurement model

with another alternative model. Considering the length of the PsyCap scale and the sample size of this study, the mean scores of each dimension of PsyCap were used as the four manifest indicators of this construct (“parceling”; Kishton, & Widaman, 1994). In fact, several researchers suggested that parceling would help reduce bias in structural parameters than using individual items as long as the factor structures of the items were well-understood and unidimensional (Bandalos, 2002; Little, Cunningham, Shahar & Widaman, 2002). Additionally, since the relations among the four underlying factors for the higher order construct of PsyCap were not the main focus of this study and the items of the PCQ have been used in a lot of research studies, the adoption of parceling was justified. For other variables, all items were used as observed indicators. Thus, there were in total 21 observed indicators used in the analysis. Since the data were all collected from the participants at the same time, there might be inflation of correlations as the measures for the predictor and criterion variables were obtained from the same source (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Harman’s one-factor test was used to address the potential common method/source bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The basic assumption of this test is that: should there be an obvious common method/source bias, either (a) a single factor appeared from the factor analysis, or (b) be it a general factor, explain the majority of covariance among the variables used in the study. First, an exploratory factor analysis was performed based on the principal components extraction. Results indicated the presence of eight factors with the first factor explaining only 29.62% of the variance whereas the six factors explained 66.04% of the variance in total.

**Table 5.1.3*****Model Fit Summary of Measurement Model of the Proposed Model (N=311)***

Model	$\chi^2$	df	P	CFI	NNFI	SRMR	RMSEA
Hypothesized model (M5)	450.809	179	.000	.92	.91	.061	.070
One-factor model (M6)	2127.836	192	.000	.44	.39	.183	.180
Model Comparison	$\Delta\chi^2$	$\Delta df$	P				
(M4-M3)	1677.027	13	.000				

*Notes:* SRMR= standard root mean square residual; NNFI=non-normed fit index; CFI=comparative fit index; RMSEA= root mean square error of approximation.

The hypothesized model (M5) was also compared with a one-factor measurement model (M6) and had significantly better fit to the data ( $\Delta df=13$ ,  $\Delta\chi^2=1677.027$ ,  $p<.001$ ) as shown in Table 5.1.3. Although this technique cannot completely eliminate the possibility of common method/source bias, the result suggested the common method/source bias was not prominent in this study. In addition, according to Table 5.1.3, the results of CFA showed that both the CFI and NNFI were higher than .90 while RMSEA and SRMR were below .08 which indicated acceptable fit for the measurements of the hypothesized model.

**Table 5.1.4*****Range of Factor Loadings for the Indicators of the Constructs (N=311)***

Construct	Range of factor loadings
Positive emotions	.69—.85
Psychological Capital	.67—.85
Resilience	.68—.74
Optimism	.49—.84
Hope	.37—.82
Self-efficacy	.59—.84
Job satisfaction	.70—.84
Stress symptoms	.57—.89
Turnover intentions	.73—.84

*Notes:* Factor loading for each item was significant at  $p<.001$

The ranges of the factor loadings for each underlying indicators for each construct are shown in Table 5.1.4. Although some of the items had lower factor loadings to the constructs, all the factor loadings of the indicators for each construct were significant at  $p < .001$ . With the above evidence, it was acceptable to use the measurements as suggested afore to perform analysis of the pathways.

## 5.2 Testing of Hypotheses

**Table 5.2.1**

*Means, Standard Deviations, Correlations, and Cronbach's Alphas Among Variables (N=311)*

	Mean	SD	1	2	3	4	5	6	7	8	9
1. Positive emotions	3.78	0.86	(.89)								
2. PsyCap	4.27	0.57	.50***	(.92)							
3. Self-efficacy	4.19	0.73	.37***	.82***	(.88)						
4. Hope	4.22	0.68	.48***	.85***	.61***	(.82)					
5. Optimism	4.36	0.73	.40***	.78***	.45***	.62***	(.82)				
6. Resilience	4.34	0.68	.37***	.79***	.58***	.54***	.46***	(.80)			
7. Job satisfaction	3.66	0.82	.36***	.50***	.33***	.50***	.46***	.31***	(.82)		
8. Stress symptoms	2.64	0.95	-.34***	-.32***	-.24***	-.24***	-.30***	-.27***	-.29***	(.87)	
9. Turnover intentions	1.79	0.88	-.19***	-.26***	-.13*	-.25***	-.28***	-.20***	-.44***	.38***	(.84)

*Notes:* \* $p < .05$ ; \*\*\* $p < .001$ . Cronbach's alphas are in diagonals

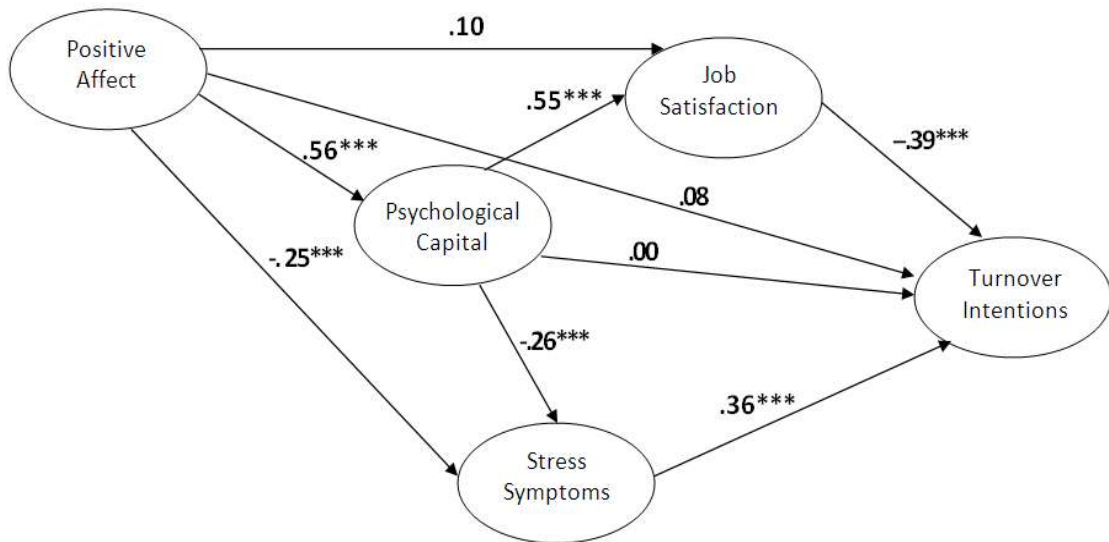
Table 5.2.1 depicts the means, standard deviations and correlations among variables. Correlations between positive emotions and job satisfaction ( $r = .37$ ,  $p < .001$ ), stress symptoms ( $r = -.35$ ,  $p < .001$ ), and turnover intentions ( $r = -.19$ ,  $p < .001$ ) provided preliminary support to hypotheses 1a, 1b and 1c. Positive emotions was positively correlated with PsyCap ( $r = .50$ ,  $p < .001$ ) and PsyCap was positively

correlated with job satisfaction ( $r=.50, p<.001$ ), negatively correlated with stress symptoms ( $r=-.32, p<.001$ ) and turnover intentions ( $r=-.26, p<.001$ ). Hypotheses 2, 3a, 3b and 3c were preliminarily supported. Apart from this, job satisfaction was negatively correlated with turnover intentions ( $r=-.44, p<.001$ ) whereas stress symptoms was positively correlated with turnover intentions ( $r=.38, p<.001$ ). Therefore, hypotheses 5a and 5b were preliminarily supported.

In order to perform a more comprehensive assessment on the relationships among the variables in the current study especially the mediation effect of PsyCap as a higher order construct, structural equation modeling was conducted for this purpose. Figure 5.2.1 demonstrated the paths and parameter estimates of the proposed model for this study which represented a partial mediation model.

**Figure 5.2**

***Path Diagram and Standardized Estimates of the Proposed Model***



Notes: \* $p<.05$ ; \*\*  $p<.01$ ; \*\*\* $p<.001$ .

From Figure 5.2.1, positive emotions were positively correlated with psychological capital ( $\beta=.56, p<.001$ ). Thus, hypothesis 2 was supported. On the other hand, psychological capital was positively correlated with job satisfaction

( $\beta=.55$ ,  $p<.001$ ), and negatively correlated with stress symptoms ( $\beta=-.26$ ,  $p<.001$ ). Hence, hypotheses 3a and 3b were supported. Although psychological capital did not have any direct association with turnover intentions ( $\beta=.00$ ,  $p=.969$ ), it was actually negatively related to turnover intentions indirectly. In fact, there was an indirect association between psychological capital and turnover intentions ( $\beta=-.311$ ,  $p=.043$ ). Therefore, the linkage between psychological capital and turnover intentions was explained by the two mediators of which were job satisfaction and stress symptoms. With the absence of the direct association but the presence of the indirect association between psychological capital and turnover intentions, job satisfaction and stress symptoms were supported to be the full mediator between psychological capital and turnover intentions. Hence, hypotheses 6a and 6b were supported.

Referring to Figure 5.2.1, positive emotions were found to be negatively related to stress symptoms ( $\beta=-.25$ ,  $p<.001$ ) but had no significant relationship with job satisfaction ( $\beta=.10$ ,  $p=.157$ ). However, though not shown in Figure 5.2.1, positive emotions had an indirect association with job satisfaction ( $\beta=.31$ ,  $p=.030$ ). Considering the significance on the paths from psychological capital to stress symptoms and job satisfaction, the relationship between positive emotions and job satisfaction were fully explained by psychological capital. Thence, psychological capital was a full mediator between positive emotions and job satisfaction, and a partial mediator between positive emotions and stress symptoms as the path from positive emotions to stress symptoms was significant. Hence, hypotheses 4a and 4b were supported. Concerning the influence of positive emotions to turnover intentions, the direct path from positive emotions to turnover intentions was not significant ( $\beta=.08$ ,  $p=.312$ ). Nevertheless, positive emotions had an indirect association with



turnover intentions ( $\beta=-.30$ ,  $p=.026$ ). According to Figure 5.2.1, positive emotions were indirectly related to turnover intentions in two ways. First, positive emotions were related to turnover intentions through stress symptoms. Second, positive emotions would be linked up to turnover intentions from the pathways going through psychological capital and further passing through job satisfaction and stress symptoms to associate with turnover intentions. Therefore, 6c and 6d were supported.

Next, in the interest of parsimony the proposed model (M7), which hypothesized that positive emotions and psychological capital would have both direct and indirect effect towards turnover intentions, was compared with another model. In reviewing the structural parameter of Figure 5.2.1, there were insignificant three parameters according to the test statistic of critical ratio (C.R.). Critical ratio operates under the principle of z-statistic and parameters with value of C.R. within  $\pm 1.96$  would be considered as insignificant. Given adequate sample size, non-significant parameters should be deleted from the model for scientific parsimony (Byrne, 2001). Those insignificant parameters represented the paths from positive emotions to job satisfaction (C.R.=1.414); positive emotions to turnover intentions (C.R.=1.011); psychological capital to turnover intentions (C.R.=.039). Removal of these parameters implied that there would be no direct effect of psychological capital on turnover intentions and positive emotions would also have no direct effect to job satisfaction and turnover intentions. Their effect towards those outcomes would be fully mediated by other variables. Based on these changes, M8 was formed and compared with M7.

**Table 5.2.2*****Model Fit Summary and Nested Model Comparison (N=311)***

Model	$\chi^2$	df	P	CFI	NNFI	SRMR	RMSEA
Proposed model (M7)	453.947	180	.000	.92	.91	.063	.069
Modified model (M8)	457.000	183	.000	.92	.91	.065	.069
Model Comparison	$\Delta\chi^2$	$\Delta df$	P				
(M8-M7)	3.053	3	.384				

*Notes:* SRMR= standard root mean square residual; NNFI=non-normed fit index; CFI=comparative fit index; RMSEA= root mean square error of approximation.

Table 5.2.2 demonstrated the model fit summary of the two models. Results showed that M7 did not produce a significantly better fit to the data when compared to M6 ( $\Delta df=3$ ,  $\Delta\chi^2=3.053$ ,  $p=.384$ ). Finally, M8 was accepted as it had greater degree of freedom than M7. With reference to other fit indexes, the absolute values of NNFI and CFI of M8 were well above .90 whereas those for SRMR and RMSEA were below .08 which indicated a reasonable fit of the model. Therefore, it was concluded that M8 provided the most parsimonious fit to the data.

**Table 5.2.3*****Comparison of Alternative Models Using Different Mediators***

Model	$\chi^2$	df	P	CFI	NNFI	SRMR	RMSEA
Model using PsyCap as the full mediator (M9)	466.962	183	.000	.92	.91	.070	.071
Model using positive emotions as the full mediator (M10)	514.592	183	.000	.91	.89	.088	.076

*Notes:* SRMR= standard root mean square residual; NNFI=non-normed fit index; CFI=comparative fit index; RMSEA= root mean square error of approximation.

Previous research done by Avey, Wernsing and Luthans (2008) supported an alternative model viewing positive emotions as the mediator between PsyCap to work-related outcome variables. It seems to be valuable to compare the hypothesized model which suggested PsyCap as the mediator between positive emotions and outcome variables in the current study with this alternative model. Nevertheless, the

current study was using a cross sectional design and therefore not able to examine causal relationships. If the two variables are viewed as partial mediators in these two alternative models, there will be no differences in the model fit indexes as the structure of the paths are nearly identical except for the directions of the paths. In order to make a comparison for these two models, PsyCap and positive emotions were treated as full mediators in the two models. M9 which suggested PsyCap as the full mediator between positive emotions and outcome variables was compared with M10 which suggested positive emotions as the full mediator between PsyCap and outcome variables. As both models were having same degree of freedom, M9 which had a lower value of chi-square and better fit indexes including CFI, NNFI, SRMR and RMSEA was suggested to have a better fit with the data in the current study. Therefore, it seems that the hypothesized model (Figure 3.5.1) is having better support from the data when compared with the alternative model in this study. However, interpretation of this result should be cautious. It only provided preliminary support for the idea which PsyCap mediate the relationship between positive emotions and work-related outcome variables but not rejecting the possibility of the alternative model. Future studies using a longitudinal design or experimental design should be done for the sake of better assessment on the causal relationship between positive emotions and PsyCap.

**Table 5.2.4**

*Squared Multiple Correlations of the Variables*

<b>Variable</b>	<b>Squared Multiple Correlations (<math>r^2</math>)</b>
Psychological Capital	.329
Job Satisfaction	.379
Stress Symptoms	.204
Turnover Intentions	.306

The squared multiple correlations of the variables indicating the percentage of variance explained by the predictors were reported in Table 5.2.4. In the final model, 32.9% of the variance of psychological capital was explained by positive emotions whereas 37.9% of the variance of job satisfaction was explained by psychological capital and positive emotions. Finally, 20.4 % of the variance of stress symptoms was explained by positive emotions and psychological capital whereas 30.6 % of the variance of turnover intentions would be explained by positive emotions, psychological capital job satisfaction and stress symptoms.

## **CHAPTER 6 DISCUSSION**

### **6.1 Summary of Findings**

The main purpose of this study was to explore how positive emotions would influence turnover intentions which were suggested to be the terminal cognitive step towards the final decision of quitting the job. In addition, the applicability of broaden-and-build theory of positive emotions in the workplace was examined by testing whether PsyCap would be the mediator between positive emotions and the work outcomes (job satisfaction, stress symptoms and turnover intentions). The second purpose of this study was to explore potential resources that may relieve voluntary turnover of police officers. Considering job satisfaction and stress symptoms as potential antecedents of turnover intentions, the mediation effect of these two factors in the pathways from positive emotions as well as PsyCap towards turnover intentions were also assessed.

From the positive association between positive emotions and PsyCap as found in this study, the building hypothesis of positive emotions according to Fredrickson's (2001) broaden-and-build theory in the workplace was supported to a certain extent. Moreover, the inclusion of PsyCap as a mediator between positive emotions and work outcomes has extended the applicability of broaden-and-build theory in work settings. This study provided empirical evidence suggesting that the function of positive emotions might not just end at development of enduring resources but could go further to promote desirable work outcomes like job satisfaction and reduction in unfavourable work outcomes such as stress symptoms and turnover intentions. Therefore, the building hypothesis of positive emotions might be a potential

mechanism explaining how frequent experience of positive emotions would attribute to success in the domain of work life as demonstrated in different studies (Lyubomirsky et al., 2005).

Furthermore, this study has also provided some insights by proposing a potential mechanism in explaining the process of turnover through a more detailed assessment of the effect of positive emotions to turnover intentions. In short, positive emotions may help develop useful psychological resources that would in turn attribute to work-related well-being of individuals. Therefore, when employees experience a positive state frequently, they should be less likely to think of leaving their current job.

As mentioned in previous chapters, though there was a wide range of studies on the underlying components of PsyCap including self-efficacy, hope, resilience and optimism on the Chinese population, only few research studies have explored the effectiveness of PsyCap as a whole among Chinese respondents (Luthans, Avey, Clapp-Smith, & Li, 2008; Luthans, Avolio, Walumbwa, & Li, 2005) especially in Hong Kong (Siu & Lin, 2007). Thus, the current study has provided some support to the applicability of the concept of PsyCap in a sample of police officers which is a stressful occupation in Hong Kong as mentioned in the first chapter.

In general, the findings of this study corroborate those of earlier research. For instance, similar to studies on the benefits of positive emotions, the positive association between positive emotions and job satisfaction (e.g. Connolly & Viswesvaran, 2000; Tait, et al., 1989; Weiss, Nicholas, & Daus, 1999) as well as the

negative association between positive emotions with turnover intentions (Van Katwyk, Fox, Spector, & Kelloway, 2000) were also found in this study though both associations were not direct. Besides, as found in previous studies in Western societies, PsyCap was also found to be related to job satisfaction (Larson & Luthans, 2006; Luthans, Avolio, Avey, & Norman, 2007; Luthans, Norman, Avolio, & Avey, 2008), stress symptoms (Avey, Luthans, & Jensen, 2009) and turnover intentions (Avey, Luthans, & Jensen, 2009; Avey, Luthans, & Youssef, 2010) in the current study, yet the relationship with turnover intentions was shown to be fully mediated by job satisfaction and stress symptoms.

It is worthwhile to discuss the similarities and differences between my work with several studies in more detail. Fredrickson and her colleagues (2008) conducted a study with a longitudinal and experimental design in assessing the building hypothesis of positive emotions among employees working in the field of software and information technology in United States. From the result of their study, change in positive emotions of the participants was able to predict increment in several resources including resilience and pathway thinking. Besides, change in positive emotions itself could not predict the increase in life satisfaction. However, changes in the level of resources were associated with the change in life satisfaction which is a global and general satisfaction with own lives. In other words, the resources built from promotion of positive emotions fully mediate the relationships between positive emotions and life satisfaction. Though my study was using a cross sectional design and not comparable to Fredrickson's longitudinal study, my findings resembled the results of Fredrickson to some extent when applying the broaden-and-build theory in the workplace. In my study, positive emotions were positively related to PsyCap

which was considered as a developable individual resource. Further, positive emotions did not have any direct effect to job satisfaction, a more domain-specific satisfaction towards the work life. Nevertheless, positive emotions have indirect association with job satisfaction through the full mediation of PsyCap. To reiterate, both studies demonstrated that resource generated from positive emotions played an important mediating role in bridging positive emotions with individual satisfaction of different domains. These findings provided empirical evidence supporting the idea that resources built from positive emotions are likely to be the mechanism behind those beneficial effects of positive emotions across a variety of life domains. Hence, this study has extended the applicability of the broaden-and-build theory from a more general view of life towards a more specific domain which is work life. Apart from this, this study has also provided support to the generalizability of this theory to Chinese societies and the occupation group of police force.

Avey and his colleagues (2009) found that stress symptoms acted as a partial mediator between PsyCap and intention to quit among employees from a wide spectrum of jobs and industries in the United States. In this study, when stress symptoms and job satisfaction were both considered as the mediators between PsyCap and turnover intentions, PsyCap had no direct relationships with turnover intentions. In fact, Avey et al. (2010) conducted a study on the direct association between PsyCap and intention to quit. They considered turnover intentions as a function of job satisfaction as well as future expectancies in the current job versus alternatives (Mobley et al., 1979). Since past research evidence supported the positive relationship between PsyCap and job satisfaction (e.g. Luthans, Avolio, et al., 2007), they propose a negative relationship between PsyCap and turnover



intentions (Avey et al., 2010). In line with the past research studies and theoretical model of turnover, this study furnished empirical evidence in demonstrating the importance of job satisfaction and stress symptoms in explaining the influence of PsyCap and turnover intentions. Future research studies on the effectiveness of PsyCap intervention in related to turnover may also need to consider job satisfaction and stress symptoms to examine their mediating effect to turnover intentions.

Lastly, Avey, Wernsing and Luthans (2008) suggested positive emotions as the mediator of the relationships between PsyCap and employee attitudes and behaviours. By contrast, this study used another perspective by proposing positive emotions as the antecedent of PsyCap. According to Lazarus' (2006) cognitive mediation theory, thoughts and appraisals are viewed as the mechanisms that elicit emotions. Therefore, it is sound and sensible to propose that PsyCap which may help direct employees to a more positive way to circumstances triggers positive emotions of individuals and affect their action tendency. Nevertheless, with respect to Fredrickson's (2001) broaden-and-build theory, we should not neglect the possibility that positive emotions may also contribute to the development of personal resources which generate beneficial effects to both employees and organization. From this study, the results demonstrated the presence of mediation effect of PsyCap between positive emotions and work outcomes. Additionally, the mediation effect of PsyCap was found to be especially strong for the association between positive emotions and work outcomes. This finding preliminarily supported the possible mediating role of PsyCap. Hence, it is necessary to use a longitudinal design in future studies for exploring the directions of the cause and effect between PsyCap and positive emotions.

## **6.2 Practical Implications**

The major practical implication of this research is that interventions for promoting positive emotions and PsyCap might help save the potential cost inflicted by the turnover of employees who are the valuable human resources. From the results obtained from this study, the promotion of positive emotions may help develop psychological capital, an individual psychological resource which can further buffer the employees from the adverse effect of stress symptoms and make them more satisfied with their jobs. Hence, when the employees achieve the work well-being which may reflect a kind of optimal individual state in the work domain, they are likely to have lower turnover intentions. Eventually, this may help relieve the potential cost driven by the act of voluntary turnover such as time and money for training a new police officer and the reduction of productivity caused by the loss of manpower. From this study, it seems that promotion of positive emotions among the employees and intervention programme by boosting PsyCap are possible practices to ease the likelihood of employee voluntary turnover.

Fredrickson (2005) suggested various relaxation practices which induced the key components of contentment are a possible first step to produce conditions for experiencing this positive emotion. For example, progressive muscle relaxation can help release tension in a way similar to intense laughter which produces relaxed contentment. In addition, Fredrickson (2008) also empirically demonstrated the usefulness of a mind-training practice called “loving-kindness mediation” in promoting positive emotions and further development of long-lasting resources.

For developing PsyCap, Luthans and his colleagues had designed a PsyCap Intervention training model (Luthans, Avey, Avolio, Norman, & Combs, 2006) and its effectiveness on working adults was tested in a 2-hour online exercise which suggested that PsyCap could be developed within a short period of time. Luthans and his colleagues (2010) have provided a brief description of their “Positive Psychological Capital Training”. For instance, in hope development intervention, participants first practised setting up work-related goals which were valuable to themselves, reasonably challenging, and consisted of clear starting and ending point for nurturing agency. Then, they received training for generating multiple ways to achieve their goals and identifying potential obstacles in their plans. After the completion of the exercise individually, every participants obtained feedback from other group members related to additional pathways and other possible obstacles expected. This practice aimed at enhancing pathway thinking and capability to plan for obstacles in order to reduce the adverse effect of obstacles which could undermine agency of individuals. Details of the intervention could be found in several works of Luthans (Luthans, Avey, et al., 2006; Luthans, Avey, Avolio, & Peterson, 2010; Luthans, Youssef et al., 2007).

### **6.3 Limitations and Directions for Future Study**

As in any empirical research, this study has a number of limitations and interpretation of the results should be undertaken with caution. First, the casual directions of the relationships could not be drawn as this study used a cross-sectional design. Since the relationships among the variables in this study were associations only, only a longitudinal research design should be adopted for a more accurate

examination of the direction of causality. It is also important that this study was using the perspective of broaden-and-build theory to explore the relationships among positive emotions, PsyCap and work-related outcomes. There would also be possibilities on the variation of the pathways explaining the relationships of those variables. In studying the relationships among these variables in future, it would be more comprehensive to look into this topic from different perspectives. For instance, Avey and his colleagues (2008) conducted a cross-sectional study and suggested positive emotions as a mediator between PsyCap and employees attitudes and behaviours. Therefore, it would be valuable for researchers to conduct longitudinal studies or undertake experimental designs to explore whether positive emotions build up cognitive resources or PsyCap would affect the cognitive appraisal of individuals and promote positive emotions. Besides, it would be even more valuable for future studies to examine the effectiveness of the interventions for boosting positive emotions and PsyCap of employees to work outcomes for assessing the feasibility of these potential remedies that would benefit both employees and the organization.

Second, since the data were collected through purposive sampling but not a random sampling method, there might be potential bias that would make the results unrepresentative for the whole Hong Kong Police Force. Nevertheless, considering the work nature of police officers of the Hong Kong Police Force, it seemed that my sampling method was reasonable. For constables in the operational teams of the uniform branch, one of the main duties was patrolling and it would be almost impossible to request them to fill in a questionnaire when they are on duty. The samples collected in this study were from the constable level in the Hong Kong

Police Force. As they usually work on different shifts, it was difficult to collect data from a larger sample simultaneously.

Third, given that the participants in this study were mainly constables in the Hong Kong Police Force and most were aged from 20 to 29 years, there may be a possibility that the relationships between variables measured in this study are different in other populations and older or younger age groups. More research studies on this issue should be undertaken in the population working in different positions in the Hong Kong Police Force and also in other professions in order to explore the generalizability of findings, namely the mediating role of psychological capital, job satisfaction as well as stress symptoms between positive emotions and turnover intentions.

As mentioned earlier, the reliability of Luthans' PsyCap scale was a little bit low in previous research studies (Luthans, Avey, Clapp-Smith, & Li, 2008; Luthans, Avolio, Walumbwa, & Li, 2005). From my study, it seemed that reverse items might pollute the reliability of the scales. So, it may be a possible solution to convert the reversed items into items expressing the original meanings of the items directly in future research studies on PsyCap of Chinese.

Regarding common method bias, future studies may consider the methods for alleviating the influence of this bias according to the techniques suggested by Podsakoff and his co-authors (2003). For instance, Podsakoff and his colleagues (2003) suggest that obtaining measures of the independent and dependent variables from different sources is one of the ways to control common method bias. In this

case, future studies may include supervisory rating of positive emotions and PsyCap as an alternative to self-report data from the employees. Temporal or proximal separation of measurement is another potential remedy towards this bias. For, example, researchers may create a time lag between the measurement of independent variables and dependent variables for temporal separation. Proximal separation may be undertaken through separation of the locations for responding to the measures of these two types of variables (For the details of these techniques, see Podsakoff, et al., 2003).

#### **6.4 Conclusion**

Despite the limitations mentioned above, this study makes a significant contribution to the literature on positive emotions, PsyCap and turnover. This study is one of the very few research studies assessing the possible underlying processes between positive emotions and turnover with the application of Fredrickson's (2001) broaden-and-build theory. In this study, significant associations between positive emotions and PsyCap provided support to the applicability of Fredrickson's theory in the workplace in building up resources aimed at performance improvement. In addition, a potential mechanism for the process between positive emotions and turnover intentions was developed by suggesting a potential mediation process of PsyCap and work well-being as the bridges linking up positive emotions and turnover intentions. This may bring some insights to the turnover literature in further exploring possible ways in reducing intention to quit of employees. However, due to the limitation of a cross sectional design in this study, it is important for future studies wishing to further develop a longitudinal or experimental design when

exploring the casual relationships among these factors and examine the effectiveness of practices that aim at nurturing PsyCap and positive emotions to reduce voluntary turnover.

Finally, although there are many studies on the effectiveness of the four individual components of PsyCap in the workplace (e.g., Siu, Hui, Phillips, Lin, Wong, & Shi, 2009; Siu, Lu, & Spector, 2007), my study is one of the very few to have examined the relationships of work outcomes and PsyCap as a whole construct in Hong Kong (Siu & Lin, 2007) and specifically focusing on the occupational group of police officers. Therefore, it can tentatively be concluded that PsyCap is functional in both Western and Chinese societies while its application is not limited to Chinese factory workers (Luthans, Avey, Clapp-Smith, & Li, 2008; Luthans, Avolio, Walumbwa, & Li, 2005). To extend this, studies on PsyCap among Chinese in the future should be carried out among employees from different professional or occupational groups.

## **APPENDIX I SAMPLE OF THE QUESTIONNAIRE**

本問卷的目的是為本人呂俊樂的碩士畢業論文收集數據，研究心理資本如何影響個人情緒及工作表現。全問卷包括封面在內**共四頁**。

在調查中將**不會**收集任何個人辨識資料（除了一般性的人口統計學變數和工作相關資訊）。所有的參與者都是自願的，其內容將完全保密，而有關資料將於畢業後(即一年後)銷毀。



選擇對你適用的答案，並圈出相應的數字。

1. 從不 2. 極少 3. 有時 4. 較多 5. 經常 6. 非常頻密

在過去 3 個月內，你有幾經常						
A1. 快樂。	1	2	3	4	5	6
A2. 精力充沛。	1	2	3	4	5	6
A3. 對每事也感到興趣。	1	2	3	4	5	6
A4. 對某些事感到開心。	1	2	3	4	5	6
A5. 興高采烈。	1	2	3	4	5	6

請根據你過往 **3 個月內** 的情況，選擇對你適用的答案，並圈出相應的數字。

1. 非常不同意 2. 不同意 3. 有點不同意 4. 有點同意 5. 同意 6. 非常同意

對於以下說法，你的同意程度是？						
B1. 工作上遇到挫折時，我很難克服，並繼續前進。	1	2	3	4	5	6
B2. 我通常可以用不同方法處理工作上的難題。	1	2	3	4	5	6
B3. 如有需要，我能獨立完成工作。	1	2	3	4	5	6
B4. 我能從容面對工作壓力。	1	2	3	4	5	6
B5. 因為我曾經歷過逆境，所以能跨越工作上的難關。	1	2	3	4	5	6
B6. 在現時的崗位，我覺得自己能夠在同一時間處理大量工作。	1	2	3	4	5	6

請根據你過往 **3 個月內** 的情況，選擇對你適用的答案，並圈出相應的數字。

1. 非常不同意 2. 不同意 3. 有點不同意 4. 有點同意 5. 同意 6. 非常同意

對於以下說法，你的同意程度是？						
C1. 工作上遇到未知數時，我時常期望有圓滿的結果。	1	2	3	4	5	6
C2. 如果工作上有些地方可能出錯，很難避免不出錯。	1	2	3	4	5	6
C3. 工作方面，我總是看到好的一面。	1	2	3	4	5	6
C4. 工作方面，我對未來抱樂觀的心態。	1	2	3	4	5	6
C5. 工作中，事情總是不如我所願。	1	2	3	4	5	6
C6. 我以「凡事總有好的一面」的態度對待我的工作。	1	2	3	4	5	6

請根據你過往 **3 個月內** 的情況，選擇對你適用的答案，並圈出相應的數字。

1. 非常不同意 2. 不同意 3. 有點不同意 4. 有點同意 5. 同意 6. 非常同意

對於以下說法，你的同意程度是？						
D1. 任何問題總有很多種解決方法。	1	2	3	4	5	6
D2. 工作上遇到障礙時，我總能想到解決辦法。	1	2	3	4	5	6
D3. 此時此刻，我正積極追求自己的工作目標。	1	2	3	4	5	6
D4. 此刻，我覺得自己在事業方面頗為成功。	1	2	3	4	5	6
D5. 我能想到很多達成當前工作目標的方法。	1	2	3	4	5	6
D6. 現在我即將達成自己所訂立的工作目標。	1	2	3	4	5	6

請根據你過往 **3個月內**的情況，選擇對你適用的答案，並圈出相應的數字。

1.非常不同意 2.不同意 3.有點不同意 4.有點同意 5.同意 6.非常同意

對於以下說法，你的同意程度是？						
E1. 我有信心能針對長遠問題找到一個的解決方案。	1	2	3	4	5	6
E2. 我有信心代表自己的工作範疇與管理層面談。	1	2	3	4	5	6
E3. 我有信心能在討論警隊政策時作出貢獻。	1	2	3	4	5	6
E4. 我有信心協助訂立自己工作範疇的目標。	1	2	3	4	5	6
E5. 我有信心與警隊以外的人(例如服務對象)協商難題。	1	2	3	4	5	6
E6. 我有信心向一群同事傳達資訊。	1	2	3	4	5	6

請根據你的情況，選擇對你適用的答案，並圈出相應的數字。

1.從不 2.很少 3.有時 4.經常 5.非常頻密

F1. 在過去 6 個月內你認真考慮離職的頻率是多少？	1	2	3	4	5
F2. 在隨後的 6 個月中你離職的可能性有多大？	1	2	3	4	5
F3. 你是否經常積極尋找現職警隊之外的職位空缺？	1	2	3	4	5

選擇對你適用的答案，並圈出相應的數字。

1.從不 2.極少 3.有時 4.較多 5.經常 6.非常頻密

在過去一個月內，你有幾經常出現以下症狀、行為變化、或情緒變化？						
G1. 因為擔憂而失眠。	1	2	3	4	5	6
G2. 頭痛。	1	2	3	4	5	6
G3. 肌肉緊張或疼痛。	1	2	3	4	5	6
G4. 心境時好時壞。	1	2	3	4	5	6
G5. 感到悶悶不樂。	1	2	3	4	5	6
G6. 感到抑鬱。	1	2	3	4	5	6

請根據你的情況，選擇對你適用的答案，並圈出相應的數字。

1.非常不同意 2.不同意 3.沒有同意也沒有不同意 4.同意 5.非常同意

N1. 一般來說，我不喜歡我的工作。	1	2	3	4	5
N2. 總體來說，我對我的工作感到滿意。	1	2	3	4	5
N3. 一般來說，我喜歡在這裏工作。	1	2	3	4	5

## 背景資料

**1. 年齡:**

1.  20-24      2.  25-29      3.  30-34      4.  35-39  
5.  40-44      6.  45-49      7.  50-54      8.  55 或以上

**2. 性別:**

1.  男      2.  女

**3. 婚姻狀況:**

1.  未婚      2.  已婚/同居      3.  離婚/分居      4.  喪偶

**4. 教育程度:**

1.  中學      2.  高中      3.  副學士/高級文憑      4.  大學或以上

5. 你在現在的公司工作了多久? \_\_\_\_\_年

6. 你的工作經驗的年期: \_\_\_\_\_年

7. 你每週的工作天數: \_\_\_\_\_天

8. 你每週的工作時數: \_\_\_\_\_小時

## **APPENDIX II TRANSLATED VERSION AND THE ORIGINAL VERSION OF PSYCHOLOGICAL CAPITAL QUESTIONNAIRE (PCQ)**

### **Self-efficacy**

1. I feel confident analyzing a long-term problem to find a solution.  
我有信心能針對長遠問題找到一個的解決方案。
2. I feel confident in representing my work area in meetings with management.  
我有信心代表自己的工作範疇與管理層面談。
3. I feel confident contributing to discussions about the company's strategy.  
我有信心能在討論公司政策時作出貢獻。
4. I feel confident helping to set targets/goals in my work area.  
我有信心協助訂立自己工作範疇的目標。
5. I feel confident contacting people outside the company (e.g., suppliers, customers) to discuss problems.  
我有信心與公司以外的人(例如供應商及顧客)協商難題。
6. I feel confident presenting information to a group of colleagues.  
我有信心向一群同事傳達資訊。

### **Hope**

7. If I should find myself in a jam at work, I could think of many ways to get out of it.  
工作上遇到障礙時，我總能想到解決辦法。
8. At the present time, I am energetically pursuing my work goals.  
此時此刻，我正積極追求自己的工作目標。
9. There are lots of ways around any problem.  
任何問題總有很多種解決方法。
10. Right now I see myself as being pretty successful at work.  
此刻，我覺得自己在事業方面頗為成功。
11. I can think of many ways to reach my current work goals.  
我能想到很多達成當前工作目標的方法。
12. At this time, I am meeting the work goals that I have set for myself.  
現在我即將達成自己所訂立的工作目標。

## **Resilience**

13. When I have a setback at work, I have trouble recovering from it, moving on. (R)  
工作上遇到挫折時，我很難克服，並繼續前進。
14. I usually manage difficulties one way or another at work.  
我通常可以用不同方法處理工作上的難題。
15. I can be “on my own”, so to speak, at work if I have to.  
如有需要，我能獨立完成工作。
16. I usually take stressful things at work in stride.  
我能從容面對工作壓力。
17. I can get through difficult times at work because I’ve experienced difficulty before.  
因為我曾經歷過逆境，所以能跨越工作上的難關。
18. I feel I can handle many things at a time at this job.  
在現時的崗位，我覺得自己能夠在同一時間處理大量工作。

## **Optimism**

19. When things are uncertain for me at work, I usually expect the best.  
工作上遇到未知之數時，我時常會期望有圓滿的結果。
20. If something can go wrong for me work-wise, it will. (R)  
如果工作上有些地方可能出錯，很難避免不出錯。
21. I always look on the bright side of things regarding my job.  
工作方面，我總是看到好的一面。
22. I’m optimistic about what will happen to me in the future as it pertains to work.  
工作方面，我對未來抱樂觀的心態。
23. In this job, things never work out the way I want them to. (R)  
工作中，事情總是不如我所願。
24. I approach this job as if “every cloud has a silver lining.”  
我以「凡事總有好的一面」的態度對待我的工作。

## REFERENCES

- Adams, V. H., Snyder, C. R., Rand, K. L., King, E. A., Sigmon, D. R., & Pulvers, K, M. (2002). Hope in the workplace. In R. Giacalone & C. Jurkiewicz (Eds.), *Handbook of workplace spirituality and organizational performance* (pp. 367-377). New York: Sharpe.
- Avey, J. B., Luthans, F., & Jensen, S. (2009). Psychological capital: A positive resource for combating stress and turnover. *Human Resource Management*, 48, 677–693.
- Avey, J. B., Wernsing, T. S., & Luthans, F. (2008). Can positive employees help positive organization change? Impact of psychological capital and emotions on relevant attitudes and behaviors. *Journal of Applied Behavioral Science*, 44:48–70.
- Avey, J. B., Luthans, F., & Youssef, C. M. (2010). The additive value of positive psychological capital in predicting work attitudes and behaviors. *Journal of Management*, 36(2), 430-452.
- Bandalos, D. L. (2002). The effects of item parceling on goodness-of-fit and parameter estimate bias in structural equation modeling. *Structural Equation Modeling*, 9, 78–102
- Bandura, A. (1997). *Self-efficacy: The Exercise of Control*. New York: Freeman.
- Baron, R. A. (1990). Environmentally induced positive affect: Its impact on self-efficacy, task performance, negotiation, and conflict. *Journal of Applied Social Psychology*, 20, 368–384.
- Baron, R.M. and Kenny, D.A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations, *Journal of Personality and Social Psychology*, 51(6), pp.1173-1182.
- Barrick, M.R., & Mount, M.K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44(1), 1-26.
- Bentler, P. M. (1990). Comparative fit indices in structural models. *Psychological Bulletin*, 107, 238-246.
- Block, J., & Kremen, A. M. (1996). IQ and ego-resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology*, 70, 349-361.
- Bonanno, G. A. (2004). Loss, trauma and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, 59: 20-28.

- Boyd, N. G., & Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice*, 18, 63-77.
- Bradbury, H., & Lichtenstein, B.M.B. (2000). Relationality in organizational research: Exploring the space between. *Organization Science*, 11(5), 551–564.
- Brief, A.P., & Weiss, H.M. (2002). Organisational behavior: Affect in the work place. *Annual Review of Psychology*, 53, 279-307
- Brough, P., & Frame, R. (2004). Predicting police job satisfaction and turnover intentions: The role of social support and police organisational variables. *New Zealand Journal of Psychology*, 33, 8-16.
- Brown, J. (1984). Effects of induced mood on causal attributions for success and failure. *Motivation and Emotion*, 8,343–353.
- Brown, J.M., & Campbell, E.A. (1990). Sources of occupational stress in the police. *Work & Stress*, 4, 305-318
- Brown, J. M., & Campbell, E. A. (1994). *Stress and policing: Sources and strategies*. New York: Wiley.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Thousand Oaks, CA: Sage.
- Bryant, F. B., & Cvengros, J. A. (2004). Distinguishing hope and optimism. *Journal of Social and Clinical Psychology*, 23, 273-302.
- Byrne, B. M. (2001). *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Cacioppo, J. T., Gardner, W. L. & Berntson, G. G. (1999). The affect system has parallel and integrative processing components: form follows function, *Journal of Personality and Social Psychology*, 76, 839–855.
- Cameron, K. S., & Caza, A. (2004). Contributions to the discipline of positive organizational scholarship. *American Behavioral Scientist*, 47,731-739.
- Camman, C., Fichman, M., Jenkins, D., & Klesh, J. (1979). *The Michigan Organizational Assessment Questionnaire*. Unpublished manuscript, University of Michigan, Ann Arbor.
- Carifio, J., & Rhodes, L. (2002). Construct validities and the empirical relationships between optimism, hope, self-efficacy, and locus of control. *Work*, 19, 125-136.
- Cartwright, S., & Cooper, C. L. (2002). *ASSET: An Organizational Stress Screening Tool, The Management Guide*. Manchester, UK: RCL Ltd.

- Carver, C. S. (2003). Pleasure as a sign you can attend to something else: Placing positive feelings within a general model of affect. *Cognition & Emotion*, 17, 241–261
- Carver, C. S. & Scheier, M. F. (1990). Origins and functions of positive and negative affect: a control–process view. *Psychological Review*, 97, 19–35.
- Carver, C., & Scheier, M. (2005). Optimism. In C.R. Snyder & S. Lopez (Eds.), *Handbook of positive psychology*, 231-243. Oxford, UK: Oxford University Press.
- Cascio, W. F. (2003). *Managing human resources: Productivity, quality of life, profits* (6th ed.). New York: McGraw-Hill.
- Chandler, G. N., & Jansen, E. (1997). Founder self-efficacy and venture performance: A longitudinal study. *Academy of Management Proceedings*, 98-102.
- Chemers, M. M., Watson, C. B., & May, S. T. 2000. Dispositional affect and leadership effectiveness: A comparison of self-esteem, optimism, and efficacy. *Personality and Social Psychology Bulletin*, 26: 267-277.
- Chung, T.Y., Pang, K.L., & Tong, Y.W. (2010). Work Life Balance Survey of the Hong Kong Working Population 2010. Retrieved 19 April, 2011 from <http://hkupop.hku.hk/english/report/WLB10/content/resources/report.pdf>
- Clore, G. C. (1994). Why emotions are felt. In P. Ekman, & R. J. Davidson (Eds.), *The nature of emotion: Fundamental questions* (pp. 103–111). New York: Oxford University Press.
- Collins, L. M., Graham, J. W., & Flaherty, B. P. (1998). An alternative framework for defining mediation. *Multivariate Behavioral Research*, 33, 295–312.
- Conner, D. (1993). *Managing at the speed of change: How resilient managers succeed and prosper where others fail*. New York: Villard.
- Connolly, J. J., & Viswesvaran, C. (2000). The role of affectivity in job satisfaction: A meta-analysis. *Personality and Individual Differences*, 29, 265–281.
- Coomber, B., & Barriball, K. L. (2007). Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: A review of the research literature. *International Journal of Nursing Studies*, 44(2), 297–314.
- Cropanzano, R., James, K., & Konovsky, M. A. (1993). Dispositional affectivity as a predictor of work attitudes and job performance. *Journal of Organizational Behavior*, 14, 595–606.
- Credé, M., Chernyshenko, O. S., Stark, S., & Dalal, R. S. (2007). The relationship of job satisfaction to personological and environmental antecedents and volitional workplace behavior. *Journal of Occupational and Organizational Psychology*, 80 (3), 515-538



- Danna, K., & Griffin, R.W. (1999) Health and well-being in the workplace: A review and synthesis of the literature, *Journal of Management*, 25(3), 357-384.
- Dantzer, M.L. (1987). Police-related stress: a critique for future research, *Journal of Police Criminal Psychology*, (3),43-48.
- Davidson, R.J. (1993). The neuropsychology of emotion and affective style. In M. Lewis & J.M. Haviland (Eds.), *Handbook of emotion* (pp. 143–154). New York: Guilford Press.
- DeLuga, R. J., & Mason, S. (2000). Relationship of resident assistant conscientiousness, extraversion, and positive affect with rated performance. *Journal of Research in Personality*, 34, 225–235.
- Diener, E. (2000). Subjective well-being: the science of happiness and a proposal for a national index. *American Psychologist*, 55, 34-43.
- Diener, E., Suh, E.M., Lucas, R.E., & Smith, H.L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125, 276–302.
- Epel, E. S., McEwen, B. S., & Ickovics, J. R. (1998). Embodying psychological thriving: Physical thriving in response to stress. *Journal of Social Issues*, 54, 301-322.
- Estrada, C. A., Isen, A. M., & Young, M. J. (1997). Positive affect facilitates integration of information and decreases anchoring in reasoning among physicians. *Organizational Behavior and Human Decision Processes*, 72, 117–135.
- Erez, A., & Isen, A. M. (2002). The influence of positive affect on the components of expectancy motivation. *Journal of Applied Psychology*, 87, 1055–1067.
- Feldman, D.B., & Synder, C.R. (2000). The State Hope Scale. In J. Maltby, C.A. Lewis, & A. Hill (Eds.), *Handbook of Psychological Tests* (Vol. 1, pp. 240-245). Lampeter UK: Edwin Mellen Press.
- Firth, L., Mellor, D.J., Moore, K.A. and Loquet, C. (2004), “How can managers reduce employee turnover intentions?”, *Journal of Managerial Psychology*, 19, 170-87.
- Fisher, V.E., & Hanna, J.V. (1931). *The dissatisfied worker*. New York: Macmillan
- Folkman, S. & Moskowitz, J. T. (2000) Positive affect and the other side of coping. *American Psychologist* , 55, 647–654.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and build theory of positive emotions. *American Psychologist*, 56, 218-226.
- Fredrickson, B. L. (2003). Positive emotions and upward spirals in organizations. In K. S. Cameron, J. E. Dutton, & R. E., Quinn (Eds.), *Positive organizational scholarship* (pp. 163–175), San Francisco: Berrett-Kohler.

- Fredrickson, B.L. (2004). The broaden-and-build theory of positive emotions, *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, 359, 1367-1377.
- Fredrickson, B.L. (2005). Positive emotions. In C.R , Snyder,. & S.J., Lopez. *Handbook of Positive Psychology* (Eds.), pp.106-134, Oxford, UK: Oxford University Press.
- Fredrickson, B.L, & Branigan, C.(2005). Positive emotions broaden the scope of attention and thought-action repertoires, *Cognition and Emotion*, 19(3), 313-322
- Fredrickson, B. L., & Cohn, M. A. (2008). Positive Emotions. In M. Lewis & J. M. Haviland-Jones, & L.F .Barrett. *Handbook of emotions*, (3rd ed., pp. 777-796). New York: Guilford.
- Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: Positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of Personality and Social Psychology*, 95, 1045–1062.
- Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science*, 13, 172–175.
- Fredrickson, B. L., & Levenson, R. W. (1998). Positive emotions speed recovery from the cardiovascular sequelae of negative emotions. *Cognition and Emotion*, 12, 191–220.
- Fredrickson, B.L., & Losada, M.F. (2005). Positive affect and the complex dynamics of human flourishing. *American Psychologist*, 60, 678–686.
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. (2003). What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, 84, 365–376.
- Fishbem, M, & Ajzen, I (1975) *Belief, attitude, intention and Behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley
- Frijda, N.H. (1993). Mood, emotion episodes, and emotions. In M. Lewis & J.M. Haviland (Ed.), *Handbook of emotions* (pp. 381-403). New York: Guilford Press
- Frijda, N.H. (1994) Emotions are functional, most of the time. In P. Ekman & R.J., Davidson, (Eds.), *The nature of emotion: fundamental questions* (pp.112–122) New York: Oxford University Press.
- George, J.M., & Brief, A.P. (1992) Feeling good-doing good: A conceptual analysis of the mood at work-organisation spontaneity relationship. *Psychological Bulletin*, 112, 310-329

- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management*, 26, 463–488.
- Harland, L., Harrison, W., Jones, J., & Reiter-Palmon, R. (2005). Leadership behaviors and subordinate resilience. *Journal of Leadership and Organizational Studies*, 11(2), 2-14.
- Harvey, P., Stoner, J., Hochwarter, W., & Kacmar, C. (2007). Coping with abusive supervision: The neutralizing effects of ingratiation and positive affect on negative employee outcomes. *Leadership Quarterly*, 18, 264–280.
- Hersey, R.B. (1932). *Workers' emotions in shop and home: A study of individual workers from the psychological and physiological standpoint*. Philadelphia: University of Pennsylvania Press
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513–524.
- Hobfoll, S. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6, 307-324
- Hom, P. W., Griffeth, R. W., & Sellaro, L. (1984). The validity of Mobley's model of employee turnover. *Organizational Behavior and Human Performance*, 34, 141-171.
- Hong Kong Police Force (2009) Hong Kong Police Review 2009, Retrieved from [http://www.police.gov.hk/info/review/2009/tc/pdf/TC\\_E\\_p48.pdf](http://www.police.gov.hk/info/review/2009/tc/pdf/TC_E_p48.pdf)
- Hu, L., & Bentler, P.M. (1999) . Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Isen, A. M. (2000). Positive affect and decision making. In M. Lewis & J. M. Haviland-Jones, *Handbook of emotions*, (2nd ed., pp. 417–435). New York: Guilford.
- Isen, A. M., & Daubman, K. A. (1984). The influence of affect on categorization. *Journal of Personality and Social Psychology*, 47, 1206–1217.
- Izard, C. E. (1993). Four systems for emotion activation: Cognitive and noncognitive processes. *Psychological Review*, 100, 68-90.
- Jensen, S. M., & Luthans, F. (2006). Relationship between entrepreneurs' psychological capital and their authentic leadership. *Journal of Managerial Issues*, 18, 254-273.
- Johnson, S., & Cooper, C.L. (2003). The construct validity of the ASSET stress measure. *Stress and Health*, 19, 181-185
- Jones, C., & Vagg, J. (2007) *Criminal justice in Hong Kong*. London: Routledge-Cavendish

- Judge, T.A., & Bono, J.E. (2001). Relationship of core self-evaluation traits - self-esteem, generalized self efficacy, locus of control, and emotional stability - with job-satisfaction and performance: A meta-analysis. *Journal of Applied Psychology*, 86, 80-92.
- Judge, T.A., Thoreson, C.J., Bono, J.E., & Patton, G.K. (2001). The job satisfaction-job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, 127, 376-407.
- Jung, C. (1933). *Modern man in search of a soul*. New York: Harcourt.
- Karademas, E.C. (2007). Positive and negative aspects of well-being: Common and specific predictors. *Personality and Individual Differences*, 43(2), 277-287.
- Kahn, B. E., & Isen, A. M. (1993). The influence of positive affect on variety-seeking among safe, enjoyable products. *Journal of Consumer Research*, 20, 257-270.
- Kalliath, T., Brough, P., O'Driscoll, M., Manimala, M.J., & Siu, O.L.(2010) *Organizational behavior: A psychological perspective for the Asia-Pacific*. New South Wales: McGraw-Hill
- Kirchmeyer, C. and Cohen, A. (1999). Different strategies for managing the work/non-work interface: a test for unique pathways to work outcomes. *Work and Stress*, 13, 59-73.
- Kishton, J.M., & Widaman, K.F. (1994). Unidimensional versus domain representative parceling of questionnaire items: An empirical example. *Educational and Psychological Measurement*, 54(3), 757-765.
- Lam, S., Chen, X., & Schaubroeck, J. (2002). Participative decision making and employee performance in different cultures: The moderating effects of allocentrism/ idiocentrism and efficacy. *Academy of Management Journal*, 45, 905-914.
- LaMarch, J. (1997). The resilient worker: Employees who can cope with change. *Hospital Material Management Quarterly*, 19(2), 54-58.
- Lambert, E. G., Hogan, N. L., & Barton, S. M. (2001). The impact of job satisfaction on turnover intent: A test of a structural measurement model using a national sample of workers. *The Social Science Journal*, 38, 233-250.
- Larson, M., & Luthans, F. (2006). Potential added value of psychological capital in predicting work attitudes. *Journal of Leadership and Organization Studies*, 13, 75-92.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Lazarus, R. S., Kanner, A. D., & Folkman, S. (1980). Emotions: A cognitive-phenomenological analysis. In R. Plutchik & H. Kellerman (Eds.), *Theories of emotion* (pp. 189-217). New York: Academic Press.

- Lazarus, R. S. (2006). Emotions and interpersonal relationships: Toward a person-centered conceptualization of emotions and coping. *Journal of Personality*, 74, 9-46.
- Little, T. D., Cunningham, M. A., Shahar G., and Widaman, K. F. (2002) To parcel or not to parcel: Exploring the question, weighing the merits, *Structural Equation Modeling*, 9(2), 151-173.
- Liu, J., Siu, O. & Shi, K. (2010). Transformational leadership and employee well-being: The mediating role of trust in the leader and self-efficacy. *Applied Psychology: An International Review*, 59, 454-479.
- Locke, E.A. (1976) The nature and causes of job satisfaction. In M.D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp.1297-1350). Chicago, IL: Rand McNally
- Lord, R.G., & Kanfer, R. (2002). Conceptual and empirical foundations for the study of affect at work. In R. G. Lord, R. J. Klimoski, & R. Kanfer (Eds.), *Emotions in the workplace* (pp. 5–19). San Francisco: Jossey-Bass.
- Luthans, F. (2002a). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, 23, 695-706
- Luthans, F. (2002b). Positive organizational behavior: developing and managing psychological strengths. *Academy of Management Executive*, 16, 57-72.
- Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. J. (2006). Psychological capital development: Toward a micro-intervention. *Journal of Organizational Behavior*, 27, 387–393
- Luthans, F., Avey, J.B., Avolio, B.J., Peterson, S.J. (2010). The development and resulting performance impact of psychological capital. *Human Resource Development Quarterly*, 21, 41–67.
- Luthans, F., Avey, J.B., Clapp-Smith, R., & Li, W. (2008). More evidence on the value of Chinese workers' psychological capital: A potentially unlimited competitive resource? *The International Journal of Human Resource Management*, 19, 818-827.
- Luthans, F., Avey, J.B., & Patera, J.L. (2008). Experimental analysis of a web-based training: Intervention to develop positive psychological capital, *Academy of Management Learning & Education*, 7(2), 209-221
- Luthans, F., & Avolio, B.J. (2009). The “point” of positive organizational behavior. *Journal of Organizational Behavior*, 30, 291-307.
- Luthans, F., Avolio, B.J., Avey, J.B., & Norman, S.M. (2007) Positive psychological capital measurement and relationship with performance and satisfaction, *Personnel Psychology*, 60(3), 541-572

- Luthans, F., Avolio, B.J., Walumbwa, F.O., & Li, W. (2005). The psychological capital of Chinese workers: exploring the relationship with performance. *Managerial and Organization Review*, 1, 247-269.
- Luthans, F., & Ibrayeva, E. S. (2006). Entrepreneurial self-efficacy in Central Asian transition economies: Quantitative and qualitative analyses. *Journal of International Business Studies*, 37, 92-110.
- Luthans, F., & Jensen, S. M. (2002). Hope: A new positive strength for human resource development. *Human Resource Development Review*, 1: 304-322.
- Luthans, F., Norman, S. M., Avolio, B. J., & Avey, J. B. (2008). The mediating role of psychological capital in the supportive organizational climate-employee performance relationship. *Journal of Organizational Behavior*, 29: 219–238.
- Luthans, F., Van Wyk, R., & Walumbwa, F. O. 2004. Recognition and development of hope for South African organizational leaders. *Leadership and Organizational Development Journal*, 25: 512-527.
- Luthans, F., Vogelgesang, G. R., & Lester, P. B. (2006). Developing the psychological capital of resiliency. *Human Resource Development Review*, 5(1), 25-44.
- Luthans, F. & Youssef, C.M. (2007). Emerging positive organizational behavior, *Journal of Management*, 33, 321-349
- Luthans, F., Youssef, C.M., & Avolio, B. J. (2007). *Psychological Capital: Developing the Human Competitive Edge*. New York: Oxford University Press.
- Luthans, F., Zhu, W., & Avolio, B. J. (2006). The impact of efficacy on work attitudes across cultures. *Journal of World Business*, 41, 121-132.
- Lyubomirsky, S., King, L., & Diener, E. (2005) The benefits of frequent positive affect: does happiness lead to success?, *Psychological Bulletin*, 131(6), 803-855
- Masten, A. S., & Reed, M. G. J. (2002). Resilience in development. In C. R. Snyder & S. Lopez (Eds.), *Handbook of positive psychology* (pp. 74-88). Oxford, UK: Oxford University Press.
- Maurer, T. J., & Pierce, H. R. (1998). A comparison of Likert scale and traditional measures of self-efficacy. *Journal of Applied Psychology*, 83: 324-329.
- Miller, L. (2006). *Practical police psychology: Stress management and crisis intervention for law enforcement*. Springfield, IL: Charles C. Thomas.
- Mobley, W. H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, 62, 237-240.

- Mobley, W. H., Griffeth, R. W., Hand, H. H., & Meglino, B. M. (1979). Review and conceptual analysis of the employee turnover process. *Psychological Bulletin*, 86, 493-522.
- Moskowitz, J. T., Folkman, S., & Acree, M. (2003). Do positive psychological states shed light on recovery from bereavement? Findings from a 3-year longitudinal study. *Death Studies*, 27, 471-500
- Murray, N., Sujan, H., Hirt, E. R., & Sujan, M. (1990). The influence of mood on categorization: A cognitive flexibility interpretation. *Journal of Personality and Social Psychology*, 59, 411-425.
- Neck, C. P., Neck, H. M., Manz, C. C., & Godwin, J. (1999). "I think I can; I think I can": A self leadership perspective toward enhancing entrepreneurial thought patterns, self-efficacy, and performance. *Journal of Management Psychology*, 14, 477-501.
- Ostrov, E. (1986). Police/law enforcement and psychology. *Behavioral Sciences & The Law*, 4, 353-370
- Parker, S. (1998). Enhancing role breadth self-efficacy: The roles of job enrichment and other organizational interventions. *Journal of Applied Psychology*, 6: 835-852.
- Patterson, B (1992), "Job experience and perceived job stress among Police, Correctional , and probation/Parole Officers", *Criminal Justice and Behavior*, 19, 260-285.
- Peterson, C. (2000). The future of optimism. *American Psychologist*, 55, 44-55.
- Peterson, S.J., Balthazard, P.A., Waldman, D.A., & Thatcher, R.W. (2008). Neuroscientific implications of psychological capital: Are the brains of optimistic, hopeful, confident, and resilient leaders different, *Organizational Dynamics*, 37(4), 342-353
- Peterson, S., & Luthans, F. (2003). The positive impact of development of hopeful leaders. *Leadership and Organization Development Journal*, 24, 26-31.
- Podsakoff, P. M., MacKenzie, S. C., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879-903.
- Rand, K.L., & Cheavens, J.S. (2009) In S.J., Lopez & C.R., Snyder. *Oxford Handbook of Positive Psychology* (2nd ed., pp.106-134, Oxford, UK: Oxford University Press
- Reivich, K., & Shatte, A. (2002). *The resilience factor: 7 essential skills for overcoming life's inevitable obstacles*. New York: Random House.
- Robbins, T.L., & DeNisi, A.S. (1998). Mood vs. interpersonal affect: Identifying process and rating distortions in performance appraisal. *Journal of Business Psychology*, 12, 313-25

- Saks, A. M., & Ashforth, B. E. (1997). A longitudinal investigation of the relationship between job information sources, applicants' perceptions of fit and work outcomes. *Personnel Psychology*, 50(2),395–426.
- Savery, L., Soutar, G., & Weaver, J. (1993). Stress and the police officer: Some Western Australian evidence, *The Police Journal*, 227-290
- Samson, D., & Rachman, S. (1989). The effect of induced mood on fear reduction. *British Journal of Clinical Psychology*, 28, 227–238.
- Scheier, M., & Carver, C. (1987). Dispositional optimism and physical well-being: The influence of generalized outcome expectancies on health. *Journal of Personality*, 55, 169-210.
- Scheier, Michael F.; Matthews, Karen A.; Owens, Jane F.; Magovern, George J.; Lefebvre, R. Craig; Abbott, R. Anne; Carver, Charles S. (1989) Dispositional optimism and recovery from coronary artery bypass surgery: The beneficial effects on physical and psychological well-being., *Journal of Personality and Social Psychology*, 57(6), 1024-1040.
- Scherer (1994) Emotion serves to decouple stimulus and response. In P.Ekman & R.J. Davidson (Eds.), *The nature of emotion: Fundamental questions* (pp.127-130). New York: Oxford University Press
- Schneider, S. L. (2001). In search of realistic optimism. *American Psychologist*, 56, 250-263.
- Schuettler, D., & Kiviniemi, M. T. (2006). Does how I feel about it matter?: The role of affect in cognitive and behavioral reactions to an illness diagnosis. *Journal of Applied Social Psychology*, 36 (11), 2599-2618
- Schulman, P. (1999). Applying learned optimism to increase sales productivity. *Journal of Personal Selling and Sales Management*, 19, 31-37.
- Seligman, M.E.P. (1998). *Learned optimism*. New York: Pocket Books.
- Seligman, M., & Csikszentmihalyi, M. (2000). Positive Psychology: An introduction. *American Psychologist*, 55, 5–14.
- Selye, H. (1984). Police stress. *Police Stress Magazine*, 1, 2-5
- Shifren, K., & Hooker, K. (1995). Stability and change in optimism: A study among spouse caregivers, *Experimental Aging Research*, 21, 59-76
- Siu, O. L. (2007). Exploring Psychological Capital to Face New Challenges of Global Business: Evidence from Chinese employees. Paper presented at AIB conference held in Hangzhou, China from 6-8 Dec 2007.
- Siu, O.L. (2009 a) A Three-Day Training Programme on Crisis Management, Advanced Communication, Counseling and Post-incident Support Skills. Unpublished report submitted to Hong Kong Hospital Authority.



- Siu, O.L. (2009b). Psychological approach to effective strategies in handling students' challenging behavior. Unpublished report submitted to Education Bureau, HKSAR.
- Siu, O. L., Chow, S. L., Phillips, D. R., & Lin, L. (2006). An exploratory study of resilience among Hong Kong employees: Ways to happiness. In L.S. Ho and Y.K. Ng (Eds.), *Happiness and public policy: Theory, case studies, and implications* (pp. 209-220). Palgrave Macmillan.
- Siu, O. L., Hui, H. C., Phillips, D. R., Lin, L., Wong, T. W., & Shi, K. (2009). A study of resiliency among Chinese health care workers: Capacity to cope with workplace stress. *Journal of Research in Personality*, 43, 770-776
- Siu, O. L., & Lin, L. (2007, December). *Exploring Psychological Capital to Face New Challenges of Global Business: Evidence from Chinese employees*. Paper presented at AIB conference, Hangzhou, China
- Siu, O.L., Lu, C.Q., & Spector, P.E. (2007) Employee's well-being in Greater China: The direct and moderating effects of general self-efficacy, *Applied Psychology: An International Review*, 56(2), 288-301
- Siu, O.L., Spector, P.E., Cooper, C.L. & Lu C.Q. (2005). Work stress, self-efficacy, Chinese Work Values, and Work Well-being in Hong kong and Beijing. *International Journal of Stress Management*, 12(3), 274-288
- Siu, O.L., Spector, P.E., & Cooper, C. L. (2006). A three-phase study to develop and validate Chinese coping strategies scales in Greater China. *Personality and Individual Differences*, 41, pp.537-548.
- Smith, P.C., Organ, D.W. and Near, J.P. (1983) Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, 68, 653-663
- Snyder, C. R. (2000). *Handbook of hope*. San Diego, CA: Academic Press.
- Snyder, C.R., Feldman, D.B., Taylor, J.D., Schroeder, L.L., & Adams, V.H. (2000). The role of hopeful thinking in preventing problems and enhancing strengths, *Applied and Preventative Psychology*, 9, 249-270
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., et al.(1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology*, 60, 570-585.
- Snyder, C. R., Rand, K.L., & Sigmon, D.R. (2005). Hope theory. In C. R. Snyder & S. Lopez (Eds.), *Handbook of positive psychology* (pp. 257-276). Oxford, UK: Oxford University Press.
- Snyder, C. R., Sympson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the state hope scale. *Journal of Personality and Social Psychology*, 70, 321-335.

- Spector, P.E., Cooper, C.L., Sanchez, J.I., O'Driscoll, M., Sparks, K., Bernin, P., et al. (2002) A 24-nation/territory study of work locus of control in relation to well-being at work: How generalizable are Western work findings. *Academy of Management Journal*, 45, 453-466
- Spector, P. E., Cooper, C. L., Poelmans, S., Allen, T. D., O'Driscoll, M., Sanchez, J. I., Siu, O. L., Dewe, P., Hart, P., & Lu, L., DeMoraes, L. F. R., Ostrogray, G. M., Sparks, K., Wong, P., Yu, S. F. (2004). A cross-national comparative study of work-family stressors, working hours, and well-being: China and Latin America versus the AngloWorld. *Personnel Psychology*, 57(1): 119-142.
- Stajkovic, A.D. (2006). Development of a core confidence – Higher order construct. *Journal of Applied Psychology*, 91, 1208-1224.
- Stajkovic, A.D., & Luthans, F. (1998a). Self-self efficacy and work-related performance: A meta-analysis. *Psychological Bulletin*, 44, 580-590.
- Stajkovic, A. D., & Luthans, F. (1998b). Social cognitive theory and self-self efficacy: Going beyond traditional motivational and behavioral approaches. *Organizational Dynamics*, 26, 62-74.
- Standard Committee on Disciplined Services Salaries and Conditions of Service (2008) *Report on the Grade Structure Review of the Disciplined Services*. Hong Kong: Government Logistics Department
- Staw, B. M., & Barsade, S. G. (1993). Affect and managerial performance: A test of the sadder-but-wiser vs. happier-and-smarter hypotheses. *Administrative Science Quarterly*, 38, 304-331.
- Staw, B. M., Sutton, R. I., & Pelled, L. H. (1994). Employee positive emotion and favorable outcomes at the workplace. *Organization Science*, 5, 51–71.
- Steel, R. P. (2002). Turnover theory at the empirical interface: Problems of fit and function. *Academy of Management Review*, 27, 346–360.
- Steel, R. P., & Lounsbury, J. W. (2009). Turnover process models: Review and synthesis of a conceptual literature. *Human Resource Management Review*, 19 (4), 271 – 282.
- Steel, R. P., & Ovalle, N. K. (1984). A review and meta-analysis of research on the relationship between behavioral intentions and employee turnover. *Journal of Applied Psychology*, 69, 673–686.
- Steers, R. M., & Mowday, R. T. (1981). Employee turnover and post-decision justification. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational Behavior* (Vol. 3, pp. 235-282). Greenwich, CT: JAI Press.
- Tait, M., Padgett, M. Y., & Baldwin, T. (1989). Job and life satisfaction: A reevaluation of the strength of the relationship and gender effects as a function of the date of the study. *Journal of Applied Psychology*, 74, 502–507.

- Terman, L. M., Bittenwieser, P., Ferguson, L. W., Johnson, W. B., & Wilson, D. P. (1938). *Psychological factors in marital happiness*. New York: McGraw-Hill.
- Tierney, P., & Farmer, S. (2002). Creative self-efficacy: Its potential antecedents and relationship to creative performance. *Academy of Management Journal*, 45: 1137-1148.
- Toch, H. (2002). *Stress in Policing*, American Psychological Association, Washington: DC
- Tucker, L.R., & Lewis, C. (1973) The reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38, 1-10.
- Tuten, T.L. & Neidermeyer, P.E. (2004) Performance, satisfaction and turnover in call centers: The effects of stress and optimism, *Journal of Business Research*, 57(1), 26-34.
- Totterdell, P., Wood, S., & Wall, T. (2006). An intra-individual test of the demands-control model. *Journal of Occupational and Organizational Psychology*, 79(12), 63–85.
- Vandenberg, R.J., & Nelson, J.B. (1999). Disaggregating the motives underlying turnover intentions: When do intentions predict turnover behavior? *Human Relations*, 52, 1313–1336.
- Van Katwyk, P. T., Fox, S., Spector, P. E., & Kelloway, E. K. (2000). Using the Job-Related Affective Well-being Scale (JAWS) to investigate affective responses to work stressors. *Journal of Occupational Health Psychology*, 52, 219–230.
- Vickers, M. H., & Kouzmin, A. (2001). Resilience in organizational actors and rearticulating voice. *Public Management Review*, 3(1), 95-119.
- Violanti, J. M. (1984). The police stress process. *Journal of Police Science and Administration*, 11, 112-117.
- Violanti, J. M. (1985). Stress, coping, and alcohol use: The police connection. *Journal of Police Science and Administration*, 13, 106-110.
- Violanti, J. M. (1988). Operationalizing police stress management. In J.T. Reese & J.M. Horn (Eds.), *police psychology: Operational assistance* (pp.422-435). Washington, DC: Federal Bureau of Investigation
- Vroom, V. H. (1964). *Work and motivation*. New York: Wiley.
- Wagnild G.M., & Young, H.M. (1993). Development and psychometric evaluation of the resilience scale. *Journal of Nursing Management*, 1(2), 165–178.
- Waite, P., & Richardson, G. (2004). Determining the efficacy of resiliency training in the work site. *Journal of Allied Health*, 33, 178-183.

- Walumbwa, F.O., Peterson, S.J., Avolio, B.J., & Hartnell, C.A. (2010) An investigation of the relationships among leader and follower psychological capital, service climate, and job performance, *Personnel Psychology*, 63(4), 937-963
- Warr, P.(1987). *Work, unemployment, and mental health*. Oxford, England: Clarendon Press
- Warr, P.(1999). Well-being and the workplace. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp.392-412). New York: Russell Sage
- Warr, P.(2006). Differential activation of judgments in employee well-being. *Journal of Occupational and Organizational Psychology*, 79(2), 225-244
- Waterman, R. H., Waterman, J. A., & Collard, B. A. (1994). Toward a career-resilient workforce. *Harvard Business Review*, 72(4), 87-95.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063–1070.
- Wegge, J., van Dick, R., Fisher, G. K., West, M. A., & Dawson, J. F. (2006). A test of basic assumptions of affective events theory (AET) in call centre work. *British Journal of Management*, 17, 237-254.
- Weiss, H. M. (2002). Conceptual and empirical foundations for the study of affect at work. In R. G. Lord, R. J. Klimoski, & R. Kanfer (Eds.), *Emotions in the workplace* (pp. 20–63). San Francisco: Jossey-Bass.
- Weiss, H.M. & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in Organizational Behavior*, 18, 1-74.
- Weiss, H. M., Nicholas, J. P., & Daus, C. S. (1999). An examination of the joint effects of affective experiences and job beliefs on job satisfaction and variations in affective experiences over time. *Organizational Behavior and Human Decision Processes*, 78, 1–24.
- Wright, T. A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied Psychology*, 83, 486–493.
- Wright, T. A., & Cropanzano, R. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of Occupational Health Psychology*, 5, 84–94.
- Wright, T.A. & Staw, B.M. (1999) Affect and favorable work outcomes: two longitudinal tests of the happy-productive worker thesis,. *Journal of Organizational Behaviors*, 20, 1-23

- Wunderley, L. J., Reddy, W. P., & Dember, W. N. (1998). Optimism and pessimism in business leaders. *Journal of Applied Social Psychology*, 28, 751-760.
- Youssef, C. M., & Luthans, F. (2006). Time for positivity in the Middle East: Developing hopeful Egyptian organizational leaders. In W. Mobley & E. Weldon (Eds.), *Advances in global leadership*, (Vol 4, pp. 283-297). Oxford, UK: Elsevier Science/JAI.
- Youssef, C. M. & Luthans, F. (2007). Positive organizational behavior in the workplace: The impact of hope, optimism and resiliency, *Journal of Management*, 33(5), 774-800
- Youssef, C.M., & Luthans, F. (2009). An integrated model of psychological capital in the workplace. In A. Linley (Ed.), *Handbook of positive psychology and work*. New York: Oxford University Press.
- 梁曙光 (2009, August16) 警隊基層精英爆跳槽潮 為升職轉投其他紀律部隊 數字急升5 倍, *Mingpao*, p.A06
- 督察跳槽增 前線歸咎強積金 55歲退休60歲領款「呢5年食乜」(2011, February 14), *Mingpao*, p.A09