



The role of psychological capital in predicting academic achievement among undergraduate students of a Malaysian private university

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Abstract

Psychological resources may have an essential role in explaining students' academic outcomes. The purpose of this study is to examine the influence of psychological capital on academic achievement among undergraduate students. In addition, the correlations of the individual component of psychological capital (hope, self-efficacy, resilience and optimism) and academic achievement were examined as well. The participants of this study are the undergraduate students from different faculties of a private university in Malaysia. The responses from 390 undergraduate students were used for data analysis. Results from Pearson correlation analysis show that hope, self-efficacy, resilience, and optimism were positively correlated with academic achievement. In hierarchical regression analysis, two demographic variables (gender and age) were controlled. The results revealed that psychological capital has a positive influence on undergraduate students' academic achievement. As such, appropriate training interventions that can improve psychological capital among students should be designed.

Keywords: Psychological Capital; Hope; Self-Efficacy; Resilience; Optimism; Academic Achievement.

1. Introduction

In recent years, development of positive organizational behavior drives scholars to pay more attention to the human strengths and psychology capabilities that can be measured, developed, and effectively managed for performance improvement (Luthans, 2002). Consistent with this development, the concept of psychological capital (PsyCap) that comprised of four major components, namely hope, self-efficacy, resilience, and optimism (Luthans, Avolio, Avey, & Norman, 2007) has gained increasing attention in organizational behavior, psychology and education literatures recently. Nevertheless, vast majority of the studies related to the antecedents and consequences of PsyCap to date still focus on employees' work outcomes.

PsyCap is not only important for better attainment of students' academic result, but also serve as important psychological resources for their future career success (Seibert, Crant, & Kraimer, 1999). Academic achievement of the university students is among the major concerns of parents, lecturers and the administrator of the university. Despite the pervasive effect of single dimension of PsyCap, such as self-efficacy on academic achievement have been well documented in the literature (Honicke & Broadbent, 2016), it does not fully capture the concept of PsyCap. Moreover, further analysis is still required in order to explore the impact of PsyCap on academic achievement across different cultural context (Luthans, Luthans, & Avey, 2014). As such, the major aim of this study is to examine the influence of PsyCap on academic achievement among undergraduate students in a Malaysian private university. In addition, the association between the components of PsyCap and academic achievement were determined.

2. Literature review

2.1. Psychological capital and academic achievement

A variety of individual differences, covering both cognitive and non-cognitive factors (e.g. socio-demographic factors, personality traits, motivation, self-regulatory learning strategies, stress and social support) have been recognized as important determinants of academic achievement among students (Komarraju, Ramsey, & Rinella, 2013; Richardson, Bond, & Abraham, 2012). The introduction of PsyCap provides new insight in evaluating students' academic outcomes. PsyCap is a state-like positive psychological resource that can be invested and developed, which contrast to trait-like personality variables, which are relatively stable over time and not susceptible to change (Luthans, Luthans, & Luthans, 2004). Prior studies related to psychology determinants of academic achievement mainly looked into the single or combination components of PsyCap core construct, such as self-efficacy (Komarraju & Nadler, 2013), hope (Snyder, Feldman, Shorey, & Rand, 2002), optimism (Solberg, Evans, & Swgerstrom, 2009) and resilience (Scales, Roehlkepartain, Neal, Kielsmeier, & Benson, 2006).

PsyCap represents "one's positive appraisal of circumstances and probability for success based on motivated effort and perseverance" (Luthans, et al., 2007, p. 550). Luthans et al. (2014) stressed that the study on PsyCap should be extended to the academic setting as the four psychological resources (self-efficacy, hope, resilience and optimism) have critical functions in predicting students' academic success. Overall PsyCap core construct was found to predict outcomes greater than any of its single component (Lu-

thans et al., 2007). Effective development of PsyCap is able to build up students' positive learning behavior and subsequently spur positive students' academic achievement (Wang, Zheng, & Cao, 2014). Studies based on the sample from Bhutan and the United States support the notion that university students with positive PsyCap showed greater academic achievement (Luthans, Luthans, & Jensen, 2012; Jafri, 2013). Henceforth, the following hypothesis is proposed:

H1: PsyCap positively influence academic achievement

Dimensions of PsyCap: Hope, Self-Efficacy, Resilience, and Optimism

Hope is known as "the process of thinking about one's goals, along with the motivation to move towards those goals and the ways to achieve those goals" (Snyder, 1995, p.355). Students with high hope experience low level of anxiety in test-taking situations, they are more likely to set higher goal and attain higher academic achievement (Snyder et al., 2002). Evidence showed that more hopeful college students tend to perform better academically than those students that are less hopeful (Bressler, Bressler, & Bressler, 2010; Day, Hanson, Maltby, Proctor, & Wood, 2010). Therefore, the following hypothesis is developed:

H2a: Hope is significantly correlated with academic achievement

Self-efficacy is described as the person's confidence or belief in his own capabilities in creating the inner motivation, leveraging the cognitive resources and establishing necessary yet relevant action to perform a particular task in a specific context effectively and successfully (Bandura, 1997; Stajkovic & Luthans, 1998). Myriad studies have witnessed the strong positive relationship between self-efficacy and work-related performance.

Meanwhile, individual's academic self-efficacy is portrayed through their confidence in completing academic tasks or to achieve academic goals successfully (Schunk, 1991). Meta-analysis result by Robbins, Lauver, Le, Davis, and Carlstrom (2004) as well as the work of Caprara, Vecchione, Alessandri, Gerbino, & Barbaranelli (2011) and Romle et al. (2015) support the correspondence between self-efficacy and academic performance. Besides, more recent meta-analysis by Richardson et al. (2012) and Honicke and Broadbent (2016) concluded that academic self-efficacy is moderately correlated with academic performance among university students. Thus, the following hypothesis is proposed:

H2b: Self-efficacy is significantly correlated with academic achievement

Resilience is defined as "the process of coping with disruptive, stressful, or challenging life events in a way that provides the individual with additional protective and coping skills than prior to the disruption that results from the event" (Richardson, Neiger, Jensen, & Kumpfer, 1990). Early resilience studies were concentrated on psychopathologies, such as poor parenting, disadvantaged backgrounds, and mental illness (Cicchetti & Garmezy, 1993). Recently, educators have started to refine and identify the factors that describe academic resilience (Finn & Rock, 1997). Academic resilience is the ability of students to cope with chronic adversity that threatens their learning processes (Martin & Marsh, 2009). According to Jew, Green and Kroger (1999), academic resilience could affect academic achievement, and academic achievement is used as a measure of positive adjustment outcomes. Scales et al. (2006) reported that high school students who have higher levels of resilience trait earned higher GPA. Dass-Brailsford (2005) also found that resilient students would get good grades even they were experiencing the adversity of poverty. Hence, the following hypothesis is proposed:

H2c: Resilience is significantly correlated with academic achievement

Optimism refers to the individual's perception of the possibility towards a positive outcome (Thompson, Lemmon, & Walter, 2015). In a study among medical and engineering students, Singh and Jha (2013) revealed that improvement in optimism can reduce the anxiety level of their studies and subsequently improve their academic performance. Identical results were witnessed from Bressler, Bressler and Bressler (2010), Crosno, Rinaldo, Black

and Kelley (2009) as well as Huan, Yeo, Ang and Chong (2006) which indicated that the optimism state is positively associated with students' academic performance or achievement. Based on the above reasoning, the following hypothesis is proposed:

H2d: Optimism is significantly correlated with academic achievement.

3. Methodology

A cross-sectional research design was employed and the data was collected through self-administered questionnaires. Quota sampling approach was adopted. A total of 500 questionnaires were distributed to undergraduate students of different faculties and institutions across two campuses of a private university in Malaysia. A total of 408 questionnaires were returned, eight were discarded due to incomplete information, while another 10 cases of multivariate outliers were detected, and hence the final data consist of 390 cases.

The sample include of female 244 (62.6%) and 146 (37.4%) male students. The average age of the respondents is 21 years old. Majority of the students are from the business and management field (45.4%), the second largest group are students from engineering and science (31.8%) and the balance of 22.8% are students from different faculties. As for year of study, third year students are the majority (34.4%), followed by second year students (31.8%), first year students (29.2%) and fourth year students (4.6%).

3.1. Measures

Academic Achievement. Participants are required to report their latest cumulative grade point average (CGPA).

Psychology Capital. The 24-item PsyCap for academic domain was adapted from Luthans et al. (2012). There are six items for each dimension. Respondents indicate their agreement for each statement based on a 7-point Likert scale, ranging from strongly disagree (1) to strongly agree (7). Sample items for self-efficacy, hope, resilience and optimism dimension are: "I feel confident setting targets/goals on my studies," "At the present time, I am energetically pursuing my academic goals," "I usually take stressful things in calm pace with regard to my studies" and "With regards to my studies, things always work out the way I want them to". In this study, the Cronbach's Alpha values for self-efficacy, hope, resilience and optimism are 0.87, 0.814 0.755 and 0.788 respectively, which are greater than the threshold value of 0.70 (Nunnally, 1978). Meanwhile, the Cronbach's alpha value of academic PsyCap is 0.925. In short, each variable has demonstrated adequate reliability.

4. Results

IBM SPSS Statistics version 23 was used for data analysis. Table 1 demonstrated that PsyCap dimensions, that comprised of self-efficacy ($r = 0.202$, $p < 0.01$), hope ($r = 0.183$, $p < 0.01$), resilience ($r = 0.140$, $p < 0.01$), and optimism ($r = 0.185$, $p < 0.01$) were positively correlated with academic achievement. As such, hypotheses 2a to 2d were supported. Moreover, the correlation between PsyCap and academic achievement is 0.210, which is higher than the correlation of its individual dimension and academic achievement.

Table 1: Mean, Standard Deviation (SD), Internal Consistency and Correlation among Key Variables

	Mean	SD	1	2	3	4	5
Self-efficacy	4.81	.8796	0.870				
Hope	4.65	.7918	.658*	0.814			
Resilience	4.92	.8289	.573*	.649*	0.755		
Optimism	4.73	.8631	.585*	.644*	.654*	0.788	

	4	9	*	*	*		
PsyCap	4.81	.7022	.838*	.866*	.845*	.846*	0.925
	3	8	*	*	*	*	
Academic achievement	2.84	.4910	.202*	.183*	.140*	.185*	.210*
	9	9	*	*	*	*	*

Note. ** $P < 0.01$. Psyscap = Psychological Capital. Figures Typed in Italic Denote the Cronbach's Alpha Values for the Variables in This Study

Table 2: Hierarchical Regression Result

Dependent variable: Overall Academic PsyCap			
	Model 1	Model 2	Collinearity Statistics
	Std β	Std β	VIF
Step 1			
Control Variable			
Gender	.036	.028	1.003
Age	-.381**	-.381**	1.002
Step 2			
PsyCap		.231**	1.002
R2	.146	.199	
R2 Change (ΔR^2)	.146	.053	
Adjusted R2	.141	.193	
F change (ΔF)	33.028**	25.569**	

Note. ** $P < 0.01$. Gender = Dummy Coded (0 = Male, F = Female), Age = Ratio Scale. Std B = Standardized Beta

Hierarchical regression analysis was employed in this study. Table 2 showed that the variance inflation factor (VIF) ranged from 1.002 to 1.003, which is lower than the threshold of 10 (Sekaran & Bougie, 2009), indicating that multicollinearity problem does not exist. Besides, no violation of normality assumption was detected as the inspection of normal probability plot showed that all the points lie along the diagonal line.

The demographic variables (i.e. gender and age) are control variables (Carvalho, 2016; Momanyi, Too, & Simiyu, 2015). In order to determine the influence of overall PsyCap on academic achievement, gender and age were first entered into the regression model as control variables, followed by PsyCap in step 2. Table 2 revealed that the control variables explained 14.6% of the variance in academic achievement ($R^2 = 0.146$, $F = 33.028$, $p < 0.01$) in Model 1. While gender does not exert any significant impact on academic achievement, respondent's age showed inverse relationship with academic achievement ($\beta = -0.381$, $p < 0.01$). In model 2, R^2 increase from 0.146 to 0.199. This means that PsyCap explained additional 5.3% of the variance in academic achievement and the model is statistically significant ($\Delta R^2 = 0.053$, $\Delta F = 25.569$, $p < 0.01$). From the result presented in Table 2, it is apparent that academic PsyCap is positively related to academic achievement ($\beta = 0.231$, $p < 0.01$). Thus, H1 is supported.

The findings of this study was consistent with the earlier study by Luthans et al. (2012) whereby PsyCap is able to enhance the students' academic achievement. In addition, the results depicted that all the four dimensions were significantly correlated with academic achievement. If students with higher hope, high confidence or belief in his own capabilities in creating the inner motivation, able to cope with stress, or challenges and possesses realistic optimism, he would be able to obtain better academic achievement. These empirical findings were supported by past studies (Bressler et al., 2010; Caprara et al., 2011; Scales et al., 2006).

5. Conclusion

In conclusion, the present study provides prospective researchers with a detailed examination of relationship between PsyCap and academic achievement. Appropriate short-term and long-term training interventions that can boost PsyCap among students should be developed. Researchers are encouraged to conduct a multi-group analysis by assessing the year of study in regards to the relationship between PsyCap and academic achievement. This would provide more useful implications to the respective targeted population.

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