

# Research on the Effect of Positive Emotion Intervention on Employees' Psychological Capital

Zhun Gong<sup>1,2</sup>

<sup>1</sup>Department of Psychology, Teachers College, Qingdao University, Qingdao, China

<sup>2</sup>Qingdao Psychological and Mental Health Research Institute, Qingdao University, Qingdao, China

Email: \*gongzhun2001@163.com

**How to cite this paper:** Gong, Z. (2018). Research on the Effect of Positive Emotion Intervention on Employees' Psychological Capital. *Advances in Applied Sociology*, 8, 646-657.

<https://doi.org/10.4236/aasoci.2018.89038>

**Received:** July 18, 2018

**Accepted:** September 25, 2018

**Published:** September 28, 2018

Copyright © 2018 by author and Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

---

## Abstract

This study tries to study employees' positive emotional state intervention, which induces positive emotional state of employees, especially considering the positive emotional states promoting effect on employees' mental health. In this study, 50 employees of a medical institution were selected from the randomized experimental group and the control group. The results show that, using the method of positive emotion diary can significantly enhance the level of employees' positive emotions and can effectively reduce the level of negative emotion, effectively reduce the level of employees' emotional exhaustion. There is a significant positive correlation between the change of employees' positive emotions and the change of employees' psychological capital.

## Keywords

Positive Emotion, Psychological Capital, Positive Emotion Intervention, Emotional Exhaustion

---

## 1. Introduction

Job burnout caused by job stress has become one of the most common problems among enterprise employees. The adverse consequences, such as the decline in employee performance and the increase in turnover rate, are increasingly prominent. Psychological capital refers to the psychological state that can lead employees to positive organizational behavior, to positive psychology and positive organizational behavior (POB). Luthans and Youssef, based on the analysis of the difference between economic capital, social capital and human capital and

characteristics, put forward the concept of PsyCap in organization and management. It is beyond the human capital and social capital, and can have on the cultivation and development of the individual, and will gain a competitive advantage (Luthans et al., 2004).

If employees can improve their “psychological capital” (Luthans et al., 2004) level and work with a sense of self-efficacy and happiness, it can not only alleviate job burnout, but also improve job performance. However, there have been many researches on the definition and structure of the concept of psychological capital, as well as its influence on employees’ job attitude and behavior. There has not been sufficient research evidence and theoretical support for the formation mechanism of employees’ psychological capital. The study uses the Broaden-and-Build theory of positive emotions as the theoretical basis for positive emotions intervention effects on employees’ psychological capital, in order to be the formation mechanism of innovative psychological capital theory. At the same time, this study also has a certain practical significance for continuous improvement of employees’ job burnout and performance.

## 2. Background and Hypotheses

Psychological capital refers to the self-efficacy, hope, optimism and resilience four positive mental abilities, they are all psychological state can be measured, the development and management, and enable the individual to achieve more effective job performance (Luthans et al., 2004; Luthans et al., 2012). Foreign scholars formed some psychological capital impact on employee attitude and behavior of the empirical research results: Luthans et al. (2005), to explore the relationship between psychological capital and job performance, the results show that the employees of hope, optimism and resilience three positive psychological state, all have positive correlation with job performance. Luthans et al. (2006) studied the predictive effect of employees’ psychological capital on their job attitude. The results showed that the psychological capital of employees is positively correlated with their job satisfaction and organizational commitment. Avey (2007) studied the relationship between psychological capital and employee absenteeism through empirical study. The results showed that hope and optimism were negatively correlated with involuntary and voluntary absences. Recent research evidence shows that psychological capital can significantly improve the job performance and quality of life of employees (Baron, Franklin, & Hmieleski, 2013).

Baron et al. found that entrepreneurs with high psychological capital can improve their subjective happiness by reducing pressure (Baron, Franklin, & Hmieleski, 2013). Domestic scholars have also carried out some relevant empirical studies. The above research evidence shows that psychological capital has a positive influence on employees’ job attitude, behavior and performance. What is the mechanism and what factors play a key role in the formation of psychological capital? Research on organizational behavior shows that psychological

capital is closely related to positive emotions in organizations (Avey, Wernsing, & Luthans, 2008). Little et al. (2007) found that positive emotions were significantly correlated with hope (motivation and path), optimism and resilience in psychological capital. Avey's findings such as positive emotions and psychological capital are the employees' attitude and behavior have significant predictive effect, the interaction of the psychological capital and alertness to predict employees' positive emotions (Avey, Wernsing, & Luthans, 2008). Positive emotion is a unique immediate response to something meaningful to an individual, and it is a temporary pleasure (Fredrickson, 2001a & 2001b).

Whether positive emotion can explain the formation mechanism of employees' psychological capital has been partially studied, mainly involving experimental research on individual resilience. Fredrickson in 1998 proposed the broaden-and-build theory of positive emotions. The theory is that positive emotions can build personal resilience, stress response, happiness, trust, mental health and physical health of resources. Through the experimental research, Tugade and Fredrickson (2007) found that positive emotion is an effective factor of mental toughness, high tenacity individuals use positive emotions from the stressful events cheer up and find a positive meaning to get recovered, Anthony (2006), such as the resilience into the study of emotion and stress recovery in daily life, through the study of stress response diary everyday life form, found that positive emotions will enhance in everyday life to find the positive significance of stressful life events, so as to achieve the pressure recovery. The above research evidence seems to show that his broaden-and-build theory of positive emotions provides a theoretical basis for the development and improvement of employees' psychological capital level.

In the workplace, the introduction of the concept of positive emotion of employees' psychological capital formation mechanism, both for organizational behavior and health psychology research has the important value of innovation. The intervention method of positive emotion enriches the research paradigm of psychological capital intervention, which has certain guiding significance for the practice of healthy organization construction and human resource development. Through the method of positive emotions to intervene, this study attempts to effectively improve enterprise employees' positive emotional level, and try to find positive emotions ascending variable is the result of the psychological capital and other employees.

### 3. Methods and Procedures

#### 3.1. Participants

The subjects were nurses who came from a medical institution. Before the survey, the researchers identified the subjects. A total of 50 samples were identified and 50 sets of questionnaires were issued according to the standard of "keeping diary every day for 1 consecutive month after being employed and knowing the purpose of this study". The questionnaire contains two parts: pre-test and

post-test, which happened before and after the experiment. The contents of the pre-test and post-test are consistent, including psychological capital, positive and negative emotions, emotional exhaustion, and stress response scale. 25 subjects in the experimental group were recorded daily positive events. A control group of 25 subjects recorded daily activities. A total of 42 people participated in the one-step analysis, with the recovery rate of 84%. The subjects who did not complete the diary and the subjects who did not complete the questionnaire were excluded, a total of 8 people. The specific information of the subjects is shown in **Table 1**.

### 3.2. Measures

**PsyCap.** PsyCap was measured by the Psychological Capital Questionnaire (PCQ) developed by *Luthans et al. (2007)*. The four scales measuring the four components of PsyCap (resiliency, optimism, hope and self-efficacy) have been validated by confirmatory factor analysis across multiple samples (*Luthans et al., 2007*). The original scale consisted of 24 items. Participants were asked to rate the extent to which each item applied to them over the past 3 months and rate their agreement on a six-point Likertscale (1 = totally disagree, 6 = totally agree). Higher scores for each dimension indicate higher levels of self-efficacy, hope, resiliency and optimism, respectively. The alpha coefficient for pre-test PsyCap

**Table 1.** Descriptive statistics for demographic variables (N = 42).

Variable		Percentage	Variable	Percentage			
Gender	Male	8	19.0	Education	Junior high school or below	0	0
	Female	34	81.0		High school/secondary school	1	2.4
	Missing data	0	0		Junior college	10	23.8
Age	≤25	2	4.8		Undergraduate	23	54.8
	26 - 30	3	7.1		Master or above	8	19.0
	31 - 35	15	35.7		Missing data	0	0
	36 - 40	10	23.8	Marital status	Married	39	92.9
	41 - 45	8	19.0		Single	2	4.8
	46 - 50	4	9.5		Divorced or widowed	1	2.4
	≥51	4	9.5		Missing data	0	0
	Missing data	0	0	Position	General staff	13	31.0
Seniority	1 - 2	1	2.4		Grassroots Leadership	8	19.0
	3 - 4	1	2.4		Operational management	20	47.6
	5 - 10	14	33.3		Department head	1	2.4
	11 - 15	7	16.7		Missing data	0	0
	16 - 20	18	42.9				
	≥21	1	2.4				
Missing data	0	0					

was .87. The alpha coefficient for post-test PsyCap was .88.

**Positive emotions and negative emotions.** Research by Watson et al. Development of positive emotions negative emotion scale (Watson, Clark, & Tellegen, 1988), scale by positive emotions and negative emotions of two subscales, only in positive emotions scale, this study contains 10 mood describe the term project, asked participants to evaluate each within a certain time to experience emotional intensity, using Likert 7 point scale (0 = never, 6 = always). The alpha coefficient for pre-test positive emotions was .86. The alpha coefficient for post-test positive emotions was .89. The alpha coefficient for pre-test negative emotions was .92. The alpha coefficient for post-test negative emotions was .89.

**Emotional exhaustion.** This study use the “emotional exhaustion” subscale developed by Maslach et al. in the Chinese version of the Maslach hands inventory-general Survey by Shi Kan and Li Chaoping. There are five items in the subscale, one of which is: working all day is really stressful for me. Likert seven-point scale (0 for “never” and 6 for “always”) was adopted. The alpha coefficient for pre-test was .87. The alpha coefficient for post-test negative emotions was .92.

**Pressure reaction.** In this study, the working pressure scale prepared by Chen Suzhang (1981) was used as an indicator to measure the pressure response. This scale can measure the pressure of the four dimensions of psychological symptoms, as an indirect measure of the participants work pressure, a total of 15 topics including: Anxiety (4 questions), one of the entries for “my work makes me feel fidget or nervousness.” Fatigue (4 questions), one of the items is “I feel very tired after work every day”. Depressed (4 questions), one of the items is “at work, I feel down and down”. Low self-esteem (3 questions), one of the items in question is “I feel I am extremely successful in my current position”. Likert 5 point scale was adopted (1 is “strongly agree”, 5 is “strongly disagree”). Every subscales were a fraction, and summary the subscales scores into a total score, indirect index to represent the participants work pressure, the higher the score, the said work the greater the impact on their psychological pressure. The alpha coefficient for pre-test was .78. The alpha coefficient for post-test negative emotions was .84.

A back-translation method (Brislin, 1980) was used to translate the scales into Chinese if the Chinese version is not available.

### 3.3. Experimental Procedures

First of all, all subjects were randomized into groups (in practice, the experimental group and the experimental group’s research materials were randomly treated, and the processed materials were distributed to the subjects in order). The subjects were asked to complete various scales in the study materials and then given instructions. Positive emotions intervention group instructions as follows: “please in the next month, in the form of a diary records to make you happy things, including work and life aspects (not less than 5 things). Even if it’s

just a few small details, such as a colleague praising you, buying a good book, having a nice day and meeting a new friend. Simply describe the event and describe how you felt. Control group subjects' instructions are as follows: "in the next month, in the form of a diary records the life that you never notice (not less than 5 things), for example, you what lesson today, do what matter, see what people ...".

After the experiment begun, subjects were asked to keep a diary at 8pm every day. After 1 month, all subjects completed the scales in the materials again. Within one month of the control survey intervention, the task execution of the subjects was investigated. The researchers provided each participant with a pen and diary and sent a text message every two days to remind them to complete the experiment. Subjects who fail to complete the diary as required and fail to submit the questionnaire will be excluded.

## 4. Results

### 4.1. Statistical Analysis

The data analysis in this study mainly includes descriptive statistics, correlation analysis and covariate one-way Anova test, etc., and is mainly completed by SPSS 18.0.

### 4.2. Descriptive Statistics

Descriptive Statistics results are shown in **Table 2** and **Table 3**.

### 4.3. Comparison of Differences between the Experimental Group and the Control Group

The method of single factor covariance analysis of independent samples was used in this study.

1) For positive emotions, the homogeneity of regression coefficient was tested first, as shown in **Table 4**.

The results showed that "the positive emotion pre-test between the groups" indicated that it was consistent with the assumption of homogeneity of regression coefficient  $F_{(1,38)} = .409, p < .005$ , and the subsequent covariance analysis test could be carried out, as shown in **Table 5**.

The results showed that the main effect of the positive emotion intervention on the positive emotion measured after the positive emotion intervention reached the edge when the positive emotion measured before was controlled,  $F_{(1,39)} = 3.22, p < .001$ , It indicates that the intervention method of recording positive emotional events has effectively improved the subjects' positive emotions.

2) To test the homogeneity of regression coefficient for negative emotions, see **Table 6**.

According to the results of a pretest "the negative emotions pre-test between the groups" item of  $F_{(1,38)} = 2.801, p > .05$ , shows that conforms to the regression coefficients of homogeneity assumption, can take the next step of analysis of co-

variance test, as shown in **Table 7**.

The results showed that the main effect of the positive emotion intervention on the negative emotion measurement was significant when the negative emotion was controlled,  $F_{(1,39)} = 30.966$ ,  $p < .001$ , The intervention method that indicated the positive emotion event record significantly reduced the negative emotion of the subjects.

3) For emotional exhaustion, the homogeneity of regression coefficient was first tested, as shown in **Table 8**.

The results showed that “the emotional exhaustion pre-test between the groups” indicated that it was consistent with the assumption of homogeneity of regression coefficient and could be tested by the next covariance analysis,  $F_{(1,38)} = 2.343$ ,  $p > .05$ , as shown in **Table 9**.

The results showed that the main effect of positive emotion intervention on post-test mood failure was significant when the pre-test mood failure was controlled,  $F_{(1,39)} = 7.926$ ,  $p < .01$ , The intervention indicated that the recording of positive emotional events significantly reduced the subjects’ emotional exhaustion.

Under the conditions of this study, the work satisfaction of the pre-test was controlled, and the main effect of positive emotion intervention on the post-test work satisfaction was not significant,  $F_{(1,39)} = .866$ ,  $p = .358$ ; The pre-test stress response was controlled, and the main effect of positive emotional intervention on post-test stress response was not significant,  $F_{(1,39)} = .449$ ,  $p = .507$ .

#### **4.4. Correlation Analysis of the Difference in Test Scores between the Experimental Group and the Test Group before and after the Test**

Considering the positive emotions and other variables in this study to change, namely after the relationship between the measurement result, a pre-test result, closer to Fredrickson put forward the construction of positive emotions, so, this study finally all variables before test after test results did difference processing, trying to make the difference between the variable correlation analysis and regression analysis focuses on the psychological capital amount of change in positive emotions change and other intermediary role between the variable changes, as shown in **Table 10**.

This study found that positive emotions change quantity variables with the results of other jobs had no significant correlation between the amount, so under the condition of this research, to further the psychological capital change quantity in positive emotions and other work test result change the intermediary role between the quantity But we through the correlation coefficient of the inspection, found that positive emotions change and the change of the psychological capital amount related significantly,  $r = .426$ ,  $p < .01$ , It seems that the improvement of employees’ positive emotions can positively predict the improvement of their psychological capital.

**Table 2.** The mean of positive and negative emotions.

Group	Positive emotions		Negative emotions	
	Pre-test	Post-test	Pre-test	Post-test
Experimental group	2.50 (.41)	2.80 (.46)	1.76 (.74)	1.36 (.31)
Control group	2.43 (.93)	2.43 (.87)	2.04 (.79)	1.91 (.64)

**Table 3.** The mean of the dependent variables.

Group	PsyCap		Pressure reaction		Emotional exhaustion	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
Experimental group	4.25 (.58)	4.51 (.45)	2.75 (.51)	2.63 (.39)	2.29 (1.10)	1.79 (.85)
Control group	4.23 (.58)	4.26 (.62)	2.93 (.45)	2.83 (.65)	2.59 (1.36)	2.48 (1.61)

Note: standard deviation in brackets.

**Table 4.** Regression coefficient homogeneity test.

Source of variability	Quadratic sum	Degree of freedom	Mean square	<i>F</i>
Between-group	4.637	2	2.318	6.795**
Pre-test of PE	2.569	1	2.569	7.529**
Between-group × PE Pre-test	.139	1	.139	.409
Intra-group	12.965	38	.341	
Total	309.194	42		

Note: PE = Positive emotions, \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 5.** Variance analysis table of positive emotion.

Source of variability	Quadratic sum	Degree of freedom	Mean square	<i>F</i>
Pre-test of PE	5.713	1	5.713	17.002***
Between-group	1.082	1	1.082	3.220 ( $p = .08$ )
Intra-group	13.105	39	.336	
Total	309.194	42		

Note: PE = Positive emotions, \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 6.** Regression coefficient homogeneity test.

Source of variability	Quadratic sum	Degree of freedom	Mean square	<i>F</i>
Between-group	7.295	2	3.648	22.973***
Pre-test of NE	.807	1	.807	5.080*

**Continued**

Between-group × NE Pre-test	.112	1	.445	2.801
Intra-group	6.034	38	.159	
Total	121.953	42		

Note: NE = Negative emotions, \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 7.** Variance analysis table of positive emotion.

Source of variability	Quadratic sum	Degree of freedom	Mean square	F
Pre-test of NE	.546	1	.546	3.288**
Between-group	10.288	2	5.144	30.966***
Intra-group	6.478	39	.166	
Total	121.953	42		

Note: NE = Negative emotions \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 8.** Regression coefficient homogeneity test.

Source of variability	Quadratic sum	Degree of freedom	Mean square	F
Between-group	.472	2	.236	.766
Pre-test of EE	34.711	1	34.711	112.711***
Between-group × EE Pre-test	.722	1	.722	2.343
Intra-group	11.703	38	.308	
Total	272.120	42		

Note: EE = Emotional exhaustion, \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 9.** Variance analysis table of emotional exhaustion.

Source of variability	Quadratic sum	Degree of freedom	Mean square	F
Pre-test of EE	36.782	1	36.782	115.461***
Between-group	2.525	1	2.525	7.926**
Intra-group	12.424	39	.319	
Total	272.120	42		

Note: EE = Emotional exhaustion, \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 10.** Descriptive statistics of major difference variables.

	Mean	s.d.	1	2	3	4	5
1 $\Delta$ PE	.291	.511					
2 $\Delta$ NE	-.408	.762	.143				
3 $\Delta$ PsyCap	.260	.399	.426*	-.152			
4 $\Delta$ EE	-.500	.568	-.217	.248	-.009	-.589**	
5 $\Delta$ PR	-.121	.460	.206	.329	-.292	-.730**	.657**

Note: n = 22; PR = Pressure reaction, \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ; "  $\Delta$  "denotes the result of post-test - pre-test.

## 5. Discussion

It was found that the intervention of positive emotional event recording method could improve employees' positive emotional level, which was consistent with the previous research results. Research shows that the positive emotion event recording method is an effective intervention method to improve individual positive emotion level.

Positive emotional intervention can effectively reduce the negative emotional level of employees and effectively reduce the emotional exhaustion level of employees. According to the extension and construction theory of positive emotions, positive emotions can effectively undo the undoing effect of negative emotions. Evidence of the cancellation effect of positive emotions suggests that people may respond to negative emotions by acquiring positive emotions, thereby improving psychological well-being and improving physical health. The results of this study verify the hypothesis of the cancellation effect of positive emotions. Although this study did not find the cancellation effect of positive emotion intervention on employees' stress response, the data showed that the stress response of the experimental group also tended to decrease. Experimental group and control group did not reach significant difference, on the one hand may be due to the intervention of the schedule is shorter, on the other hand, based on past evidence of the Broaden-and-Build theory of positive emotions, positive emotions for the cancellation of the negative emotions, in effect, mainly concentrated in the individual physiological reaction and depression on these variables, and the concept of the stress response of employees, its extension is a physiological reaction and depression is more extensive.

The results showed that positive emotional intervention did not improve employee's job satisfaction effectively. According to the previous literature review, some studies have shown that there are five main factors in the structure of job satisfaction, namely, job itself, promotion, salary, managers and working partners. In other words, besides individual factors, organizational factors are also very important in determining job satisfaction. Participants in this study, researchers found, sample, and their job satisfaction level is likely to be affected by the organizational factors, and shows different from previous research results, the employees' positive emotional states can positively predict their job satisfaction level.

The results of this study found that the change of employees' positive emotions was positively correlated with the change of their psychological capital. In other words, the change of positive emotion can positively predict the change of psychological capital. To a certain extent, it verifies that positive emotions can promote employees' psychological capital.

## 6. Conclusion

In positive mood events under the condition of recording intervention for 28 days, this study found that positive emotions intervention can enhance the level

of the employee's positive emotions, and can effectively reduce the staff level of negative emotion, effectively reduce the level of employees' emotional exhaustion.

From the perspective of positive organizational behavior, this study explores the mechanism of positive emotions in organizations. The effect of positive emotion intervention on individual work outcome was investigated. It provides theoretical and practical guidance for hospital staff to improve their job satisfaction and occupational mental health.

This study builds and validates the theoretical model of the broaden-and-build theory of positive emotions in the workplace. The description of individual resources in the theoretical model includes not only psychological resources but also physical resources. The division of resources can also include the resources within the individual and resources outside the individual. Therefore, the future introduction of the individual resources other than psychological capital will greatly enrich the application prospect of this theory in working conditions.

Future studies can further extend the sampling range of the study sample. The survey and research object of this study are relatively fixed in region, occupation and industry, so the improvement of the external validity of the research results needs to be realized by further expanding the sampling range. Although the multivariate statistical method makes up for the insufficiency of sampling to some extent, the generalization of the conclusion needs to be further realized through more investigation and research.

With the progress of positive emotion theory, researchers need to develop more effective positive emotion intervention programs. On the one hand, they can more effectively support the innovation of positive emotion theory; on the other hand, they will have more practical significance for both employees and organizations.

## Acknowledgements

The research is supported by grants from the National Social Science Fund of China awarded to the first author. Project number is 14CGL073.

## Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

## References

- Anthony, J. E. (2006). Functionalized Acenes and Heteroacenes for Organic Electronics. *Chemical Reviews*, 106, 5028-5048. <https://doi.org/10.1021/cr050966z>
- Avey, J. B. (2007). *The Performance Impact of Leader Positive Psychological Capital and Situational Complexity*. Doctoral Dissertation. Lincoln: The University of Nebraska-Lincoln.
- Avey, J. B., Wernsing, T. S., & Luthans, F. (2008). Can Positive Employees Help Positive Organizational Change? Impact of Psychological Capital and Emotions on Relevant

- Attitudes and Behaviors. *The Journal of Applied Behavioral Science*, 44, 48-70. <https://doi.org/10.1177/0021886307311470>
- Baron, R. A., Franklin, R. J., & Hmieleski, K. M. (2013). Why Entrepreneurs Often Experience Low, Not High, Levels of Stress: The Joint Effects of Selection and Psychological Capital. *Journal of Management*, 42, No. 3.
- Brislin, R. W. (1980). Cross-Cultural Research Methods. In *Environment and Culture* (pp. 47-82). Boston, MA: Springer. [https://doi.org/10.1007/978-1-4899-0451-5\\_3](https://doi.org/10.1007/978-1-4899-0451-5_3)
- Fredrickson, B. L. (2001a). The Role of Positive Emotions in Positive Psychology. *American Psychologist*, 56, 218-226. <https://doi.org/10.1037/0003-066X.56.3.218>
- Fredrickson, B. L. (2001b). The Role of Positive Emotions in Positive Psychology: The Broaden-and-Build Theory of Positive Emotions. *American Psychologist*, 56, 218. <https://doi.org/10.1037/0003-066X.56.3.218>
- Little, T. D., Preacher, K. J., Selig, J. P., & Card, N. A. (2007). New Developments in Latent Variable Panel Analyses of Longitudinal Data. *International Journal of Behavioral Development*, 31, 357-365. <https://doi.org/10.1177/0165025407077757>
- Luthans, B. C., Luthans, K. W., & Jensen, S. M. (2012). The Impact of Business School Students' Psychological Capital on Academic Performance. *Journal of Education for Business*, 87, 253-259. <https://doi.org/10.1080/08832323.2011.609844>
- Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological Capital Development: Toward a Micro-Intervention. *Journal of Organizational Behavior*, 27, 387-393. <https://doi.org/10.1002/job.373>
- 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, 541-572. <https://doi.org/10.1111/j.1744-6570.2007.00083.x>
- Luthans, F., Avolio, B., Walumbwa, F. O., & Li, W. (2005). The Psychological Capital of Chinese Workers: Exploring the Relationship with Performance. *Management and Organization Review*, 1, 249-271. <https://doi.org/10.1111/j.1740-8784.2005.00011.x>
- Luthans, F., Luthans, K. W., & Luthans, B. C. (2004). Positive Psychological Capital: Beyond Human and Social Capital. *Business Horizons*, 47, 45-50. <https://doi.org/10.1016/j.bushor.2003.11.007>
- Tugade, M. M., & Fredrickson, B. L. (2007). Regulation of Positive Emotions: Emotion Regulation Strategies that Promote Resilience. *Journal of Happiness Studies*, 8, 311-333. <https://doi.org/10.1007/s10902-006-9015-4>
- 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. <https://doi.org/10.1037/0022-3514.54.6.1063>