

HUOM! Tämä on alkuperäisen artikkelin julkaistun version rinnakkaistallenne. Rinnakkaistallenne saattaa erota alkuperäisestä sivutukseltaan ja painoasultaan.

Käytä viittauksessa alkuperäistä lähdettä:

Brandt, T. (2020). Relationship of Psychological Capital and Transformational Leadership – Comparison of Women and Men Leaders. Teoksessa Griffiths, P. (toim.): Proceedings of the 16th European Conference on Management Leadership and Governance ECMGL 2020, ss. 32–38. Reading: Academic Conferences International Limited.

PLEASE NOTE! This in an electronic self-archived version of the original published article. This reprint may differ from the original in pagination and typographic detail.

Please cite the original version:

Brandt, T. (2020). Relationship of Psychological Capital and Transformational Leadership – Comparison of Women and Men Leaders. In Griffiths, P. (ed.): Proceedings of the 16th European Conference on Management Leadership and Governance ECMGL 2020, pp. 32–38. Reading: Academic Conferences International Limited.

© The Author

COPYRIGHT <u>http://rightsstatements.org/vocab/InC/1.0/</u>

Relationship of psychological capital and leadership - comparison of women and men leaders

Relationship of Psychological Capital and Transformational Leadership – Comparison of Women and Men

Tiina Brandt Haaga-Helia University of Applied Sciences, Helsinki, Finland tiina.brandt@haaga-helia.fi

Abstract: Psychological capital is based on positive psychology and it is regarded as important individual's capacity which helps in multiple ways at working life. It is not regarded as permanent trait, because it can be enhanced. The interest of this study is to see if there are connection between psychological capital and leadership and are there differences between men and women. The results are important when enhancing leadership capabilities with both genders. Altogether 205 respondents filled in the questionnaires. Results indicated that psychological capital has different connection to transformational leadership style with women and men leaders.

Keywords: transformational leadership, psychological capital, gender

1.Introduction

Transformational leadership has been found to be effective leadership style almost at 40 years of studying. The concept was originally found by Burns at 1978 but ever since several researchers have defined transformational leadership (Bass, 1985; Kouzes and Posner, 1985; Tichy and Devanna, 1985) and the topic has been attention of thousands of studies (see meta-analyses e.g by Crede et al., 2019; Dumrum et al., 2013; Harms and Crede, 2010) Even the theory and concept is rather old, it still works, which can be seen by multiple recently done studies which have also confirmed a positive influence of transformational leadership on organizational performance (Noruzy et al., 2013; Wang et al., 2011), leadership performance (Boer et al. 2016; Deinert et al. 2015), followers' satisfaction (Cummings et al. 2010; 1990), optimism and engagement (Tims et al., 2011), and performance (Bass and Riggio 2006; Ng 2016). Transformational leaders increase job satisfaction and job performance by being experts at sharing leadership (Masal, 2015) and by building strong relationships with their subordinates (Ng 2016).

It would be important that organizations would enhance and train their leaders towards transformational leadership style. One way of enhancing transformational leadership could be via positive psychological attitudes. Earlier studies indicate that psychological capital and transformational leadership have been shown to be connected (Toor and Ofori, 2009) and reasoning by Snyder and Shorey (in Peterson and Byron, 2009, 4) states that the psychological capital may have impact on leadership because hopeful leaders are more likely to believe that they can realize change and develop strategies to effect change. Further, Tims et al. (2011, 121-131) argue that this is true because, employees become more engaged to their work when their supervisor is able to boost their optimism through his/her transformational leadership style.

The psychological capital measures positive qualities like optimism, resilience, self-efficacy and hope and the earlier studies indicate that psychological capital can be enhanced via interventions. The interest of this study is to see if there are connection between psychological capital and transformational leadership and are there gender differences between those relations. In order to enhance the leadership, the different development areas may be in focus with men and women. Even there are some studies about gender and transformational leadership (e.g. Brandt and Laiho, 2013; Brandt and Edinger, 2015) as well as psychological capital related to gender, there are no studies of transformational leadership, psychological capital and gender together. Thus, this study tries to fulfil this gap focusing on leaders' self-appraisals.

2. Theories and earlier research

Transformational leadership

Transformational leaders are the ones who stimulate and inspire followers to achieve extraordinary outcomes and, in the process, develop their own leadership capacity. Transformational leaders help followers grow and develop into leaders by responding to individual followers' needs by empowering them and by aligning the objectives and goals of the individual followers, the leader, the group, and the larger organization (Bass and Riggio, 2006, 15). Transformational leadership involves inspiring followers to commit to a shared vision and goals for an organization or unit, challenging them to be innovative problem solvers, and developing followers' leadership capacity via coaching, mentoring, and provision of both challenge and support. Key dimensions of transformational leadership include the following: articulating a vision, fostering the acceptance of group goals, modeling behaviours consistent with the articulated vision, providing individualized support and consideration, setting high performance expectations, and providing intellectual stimulation (Bass, 1985; Kouzes and Posner, 1988).

Several studies indicate that women make better transformational leaders than men (Bass et al., 1996; Doherty, 1997; Eagly et al., 2003; Turner et al., 2004) but there are some contradictory results as well (Wolfram and Mohr, 2010). When looking the dimensions of transformational leaders, women leaders were rated by their subordinates as being more enabling and rewarding than their male counterparts, and men were rated as being more challenging than women (Brandt and Laiho, 2013). Similarly, in case of team leaders, women tend to receive more transformational ratings than men and supporting results in case of enabling and rewarding (Brandt and Edinger, 2015).

Psychological capital (PsyCap)

The psychological capital is relatively new concept. It has been formulized about 15 years ago by Luthans with his colleagues (Luthans et al., 2006). Psychological capital has positive impact on individual's progression at career, performance, satisfaction and well-being (e.g. Badran and Youssef-Morgan 2015; Bergheim et al., 2015; Cole et al., 2009; Järlström and Brandt, 2017; Järlström et al., 2020; Siu et al., 2015). For example, psychological capital predicted better work performance (job performance, injuries at work), better work well-being (job satisfaction, physical/psychological symptoms), and better social well-being (work-life balance, quality of life) (Siu, 2008). According to Lee and Kim (2012) psychological capital had a positive influence on psychological well-being, and negative effects on stress and somatization among nurses.

Psychological capital refers to individual agency with "positive appraisal of circumstances and probability for success based on motivated effort and perseverance" (Luthans et al., 2007, p. 550). It illustrates individuals' positive capacity in terms of the components of *optimism, resilience, self-efficacy, and hope* (Luthans et al., 2006). Duening (2016, 50) defines psychological capital simply "How our people are". Psychological capital capacities are renewable, complementary, and may even be synergistic. Individuals with high psychological capital capital can flexibly and adaptively "act with different capacities" to meet the dynamic demands of their jobs, while their psychological capital at the same time helps them experience higher level of competence and wellbeing. (Luthans, 2006, 24)

The psychological capital dimension *optimism* is associated with a positive, but realistic, outlook and attribution of events (Luthans, 2002; Luthans et al., 2007). *Resilience* indicates the ability to rebound from setbacks, failures, changing circumstances, and also to leverage successful situations (Avey et al., 2010; Gooty et al., 2009; Luthans et al., 2006). *Self-efficacy* reflects an individual's confidence in his or her ability to be successful at completing given tasks (Stajkovic and Luthans, 1998). *Hope* is based on "an interactively derived sense of a) agency (goal-directed behavior) and b) pathways (planning to meet goals)" (Snyder et al., 1991, p. 287). Although the four PsyCap dimensions have each gained research attention, the four constructs together form a resource that exists at a higher level of abstraction (Stajkovic, 2006). According to Luthans et al. (2007), psychological capital is more consistently related to the individual (and organizational) outcomes than its sub-dimensions individually.

Earlier studies of transformational leadership and psychological capital

Leaders' psychological capital may impact in many ways at organizations. For example, according Chen et al. (2019) study the leaders' psychological capital impacts positively on their followers' psychological capital. More

specifically Gupta and Singh (2014) performed that psychological capital fully mediates the relationship between leadership and creative performance behaviours. Leaders who display positive behaviours are more likely to aid the development of their subordinates' positive psychological capacities. Employees with higher psychological capital engage in greater creative behaviours, improving the chances of producing creative outcomes. In addition, such employees will need less supervision and will be less dependent on leadership for directions and day-to-day work.

Vogelgesang et al. (2014) have been researching the relationship between psychological capital and global mindset in the context of global leadership. According to results psychological capital mediates the relationship between global mindset and three relevant global leader competencies: non-judgmental, inquisitiveness and performance. Interesting research of humorous leadership showed that psychological capital indicates for example positive relationship between humorous leadership and employee workplace creativity, which is partially mediated by employee psychological capital (Lin et al., 2019). Mediating effect of psychological capital was found also by Luthans et al (2008) when PsyCap fully mediated the relationship between supportive organizational climate and work performance.

Earlier studies indicate that transformational leadership and psychological capital are connected. For example, McMurray et al. (2009) examined the effects of leadership on organizational climate, employee psychological capital, commitment, and well-being in a religious, church-based non-profit organization. Their findings show strong positive relationships between employee ratings of their immediate supervisor's transformational leadership and organizational climate, wellbeing, employees' commitment and employees' psychological capital. Gooty et al. (2009) find out that there is relationship between followers' perceptions of transformational leadership and positive psychological capital, as well as the relationship between positive psychological capital and performance outcome. According to Lee and Kim (2012) there were positive influences of transformational leadership on positive psychological capital. Additionally, the analysis of the mediating role of the positive psychological capital, transformational leadership was shown to indirectly affect psychological well-being and stress through positive psychological capital.

Based on these studies it can be hypothesis that psychological capital and transformational leadership are connected, however, the gender differences need research which is the topic of this study.

2. Method

Data were collected from 205 Finnish middle-managers during spring 2018. 61% of the respondents were women, 20% men and 19% did not want to identify their gender. The leaders evaluated themselves with the questionnaires of transformational leadership and psychological capital.

Transformational leadership

Transformational leadership was measured with Finnish version of Kouzes and Posner's questionnaire (e.g. Hautala, 2006; Brandt and Uusi-Kakkuri, 2016; Posner and Kouzes, 1988) producing five dimensions: Challenging, Visioning, Enabling, Modelling and Rewarding.

Psychological capital

The Finnish version of Psychological Capital questionnaire was modified by Järlström & Brandt (2017) and producing four dimensions: Hope, Resilience, Self-Efficacy and Optimism. *Here some extra items were included to even make reliabilities better*

3. Results

Firstly, the *t*-test was made comparing men and women in case of transformational leadership and psychological capital. After that the correlation analyses were made of men and women separately to compare the relationships.

3.1 Psychological capital and gender

Concerning psychological capital and gender there was two statistically significant results (see Table 1). In case of Resilience men had higher mean (5,14) than women (4,38) and also in whole construct at *PsyCap-All* men men had higher mean (5,31) than women (5,04).

	Self- Efficacy	Resilience	Optimism	Норе	PsyCap Profile
Women (n=124) Mean	5,28	4,38	5,65	4,89	5,04
Men (n=44) Mean	5,42	5,14	5,64	5,05	5,31
t-value	-0,908	-3,799	0,104	-0,915	-2,073
sig (2-tailed)	0,366	0,000***	0,917	0,362	0,018*

Table 1. Comparison	of genders and psychological capital with	t-test
Table 1. Companson	of genuers and psychological capital with	lest

3.2 Transformational leadership and gender

In case of transformational leadership there were two statistically significant results. Men leaders were more Challenging (men mean=3,60, women=3,34) and female leaders more Enabling (men mean=3,96, women mean=4,15).

Table 2. Comparison of genders and transformational leadership with t-test

	Challenging	Visioning	Enabling	Modelling	Rewarding	Transf. Leadership Profile
Women (n=124) Mean	3,34	3,32	4,15	3,95	3,22	3,60
Men (n=44) Mean	3,60	3,17	3,96	3,78	2,96	3,40
t-value	-2,224	1,121	2,635	1,650	1,208	1,233
sig (2-tailed)	0,021*	0,268	0,005**	0,101	0,229	0,220

3.3 Psychological capital and transformational leadership of women leaders

Here only the female leaders were selected to include into analyses (Table 3). Correlation analyses between transformational leadership and psychological capital indicated several statistically significant results. Self-efficacy correlated with every dimension of TF-leadership, resilience correlated with Challenging, Modelling and TF-Profile. Optimism correlated with Challenging, Rewarding and TF-Profile. Hope correlated with Challenging, Modelling and modelling and TF-Profile. PsyCap Profile correlated all but with Enabling-dimension. Self-Efficacy correlated mostly with female leaders and TF-dimensions.

Table 3. Correlation analyses of psychological capital and transformational leadership of women

	Self-Efficacy	Resilience	Optimism	Норе	PsyCap Profile
Challenging	0,509**	0,343**	0,262**	0,188*	0,420**
Visioning	0,368**	0,125	0,139	0,172	0,279**
Enabling	0,194*	0,069	0,145	0,099	0,181
Modelling	0,307**	0,179*	0,107	0,277**	0,289**
Rewarding	0,242**	0,86	0,244**	0,66	0,204*
Transformational	0,538**	0,271**	0,329**	0,232**	0,452**
Leadership Profile					

3.4 Psychological capital and transformational leadership of men leaders

The correlation analyses psychological capital and transformational leadership of male leaders indicated some statistically significant results (see Table 4). Self-efficacy correlated with Challenging, Enabling, Rewarding and TF-Profile. Resilience correlated with Challenging, Enabling and TF-Profile. In case of Optimism there were no correlations and in case of Hope only one correlation with TF-Profile. As single construct PsyCap-Profile correlated with Challenging, Enabling and TF-Profile. Self-efficacy and Resilience had the most correlations with men leaders' transformational leadership style.

	Self-Efficacy	Resilience	Optimism	Норе	PsyCap Profile
Challenging	0,688**	0,397*	0,163	0,265	0,577**
Visioning	0,273	0,039	-0,120	0,156	0,121
Enabling	0,468**	0,595**	0,025	0,246	0,514**
Modelling	0,106	0,054	-0,159	0,153	0,055
Rewarding	0,348*	0,138	-0,104	0,217	0,220
Transformational	0,606**	0,333*	-0,080	0,336*	0,448*
Leadership Profile					

 Table 4. Correlation analyses of psychological capital and transformational leadership of men

5. Discussion

This study focused on relationship between psychological capital and transformational leadership and compared men and women leaders' relationship.

The first analyses were made when the genders were in comparison firstly in case of psychological capital and then in case of transformational leadership. In psychological capital men reported having higher resilience and overall psychological capital profile. Resilience means ability to bounce back quickly of disappointments as well as from good things, so it seems like men have better coping skills on that way than women. Overall men seem to have higher psychological capital than women.

Concerning transformational leadership men reported having higher Challenging behaviour and women reported having higher Enabling behaviour. These results confirm partially the study of Brandt and Laiho (2013) where men leaders were rated by followers as being more Challenging than women and women were rated by their subordinates as being more Enabling and Rewarding than their male counterparts. This can be due to socially acceptable behaviour of different genders, indicating that men are allowed to challenge others, whereas women are expected to be nurturing (Hoyt et al., 2009).

The idea of the study was to compare male and female leaders' relationship of psychological capital and transformational leadership. The results indicated that psychological capital was correlated to transformational leadership with both genders, but there were more statistically significant correlations with women than men leaders. Women leaders had correlations with Self-efficacy and every dimension of transformational leadership. It seems to be important quality for women leaders to have high Self-efficacy in order them to regard themselves as good leaders. Self-efficacy means belief in own skills even in sudden situations. Self-efficacy was important also to men, but not so strongly. Interestingly, as earlier mentioned, men had higher Self-efficacy than women, thus it may be reason why the Self-efficacy did not produce more correlations in case of men, indicating also that if women regard themselves generally lower at Self-efficacy then those with the higher ones end up at leadership positions.

Resilience correlated quite much equally with both genders, the difference was that women leaders correlated Resilience with Modelling (in addition to Challenging and TF-Profile) and men with Enabling. Thus, when women have high capability to bounce back from disappointments then they regard themselves as leaders by example (ie. Modelling). It is good quality for leaders to show example in for example taking new challenges even there might be risk to lose face and further, show with example how the disappointments are not worth to think too

much. With men the ability to bounce back related to Enabling, which means including all teams and subordinates into planning and projects, it is like open leadership policy. It may be that those men leaders who are good handlers of disappointments have more humanistic perspective to leadership and thus include others more.

Optimism and Hope correlated more with female leaders than male ones. Female leaders with high Optimism and Hope tend to think themselves better leaders, when this was not the case with men. Social pressures may impact so that women leaders feel more pressures towards positiveness and optimistic thinking, when this kind of thinking and behaviour are not so important among men leaders. There were no statistically significant differences concerning genders in case of Optimism and Hope, as it was previously mentioned, thus it seems those qualities matter here only in leadership positions.

Overall with both genders the psychological capital seems to be important in advancing transformational leadership. Psychological capital had even more importance with women leaders, and especially in case of Challenging and Modelling. Maybe those leadership dimension need most courage, self-esteem and positive thinking from women, maybe to behave somehow opposite than its expected from women. Usually women leaders have regarded to be more like nurturing (Enabling and Rewarding). Thus qualities of psychological capital give women leaders the courage to act in their personal way, not fastened to their gender.

It may be that women and men need different attitudes and thinking styles in order to think themselves as good leaders. It could be considered that different emphasizes could be stressed in leadership trainings depending individual psychological capital profile. For example, maybe female leaders could be encouraged towards Challenging (taking challenging steps, out of the comfort-zone, encouraging others also to think in innovative ways) and male leaders toward Enabling (including everybody into discussions, projects and processes).

Some restrictions should be noted. The number of women exceeded the amount of men leaders, and that can have affected to the results. The data was collected during several leadership courses and women are more active participants in those, even the men are more in the leadership and management positions at Finland. Thus, it may be that results would be slightly different if collecting data directly from working places. Self-ratings may cause some different tendencies than compared to followers' leadership ratings, for example earlier studies indicate that the results are not necessarily in accordance in case of leaders themselves and their followers (e.g. Hautala, 2005).

References

Avey, J.B., Luthans, F. and Jensen, S. (2009) "Psychological capital: A positive re-source for combating stress and turnover", *Human Resource Management*, Vol. 48, No.5, pp.677-693

Badran, M.A., and Youssef-Morgan, C.A. (2015) "Psychological capital and job satisfaction in Egypt", *Journal of Managerial Psychology*, Vol. 30, pp. 354–370.

Bass, B. M. (1985). Leadership and performance beyond expectations. New York: The Free Press

Bass, B.M. and Riggio, R.E. (2006) *Transformational Leadership*. Second edition. Lawrence Erlbaum Associates Publishers.

Bass, B.M., Avolio, B.J. and Atwater, L. (1996) "The transformational and transactional leadership of men and women, *Applied Psychology: An International Review*, Vol. 45 No. 1, pp. 5-34.

Bergheim, K., Birkeland, N. M., Mearns, K. and Eid, J. (2015) "The relationship between psychological capital, job satisfaction, and safety perceptions in the maritime industry", *Safety Science*, Vol. 74, pp. 27–36.

Boer, D., Deinert, A., Homan, A. C., and Voelpel, S. C. (2016) "Revisiting the mediating role of leader–member exchange in transformational leadership: the differential impact model", *European Journal of Work and Organizational Psychology*, 1–17.

Brandt, T. and Edinger, P. (2015) "Transformational leadership in teams –Effect of team leader's sex and personality", *Gender in Management: An International Journal*, Vol. 30 No. 1, pp. 44-68.

Brandt, T. and Laiho, M. (2013) "Gender, personality and transformational leadership: An examination of leader and subordinate perspectives", *Leadership & Organization Development Journal*, Vol. 34 No.1, pp. 44-66.

Brandt, T. and Uusi-Kakkuri, P. (2016) "Transformational leadership and communication style of Finnish CEOs", *Communication Research Reports,* Vol. 33 No.2, pp.119-127.

Burns, J.M. (1978) *Leadership*, Harper & Row, New York, NY

Chen Q, Kong Y, Niu J, Gao W, Li J and Li M. (2019) "How leaders' psychological capital influence their followers' psychological capital: Social exchange or emotional contagion", *Front Psychology*, Vol. 10.

Cole, K., Daly, A. and Mak, A. (2009), "Good for the soul: The relationship between work, wellbeing and psychological capital", *The Journal of Socio-Economics*, Vol. 38, pp. 464–474.

Crede, M., Jong, J. and Harms, P. (2019) "The generalizability of transformational leadership across cultures: a meta-analysis", *Journal of Managerial Psychology*, Vol. 34 No. 3, pp. 139-155

Cummings, G. G., MacGregor, T., Davey, M., Lee, H., Wong, C. A., Lo, E., Stafford, E. (2010) "Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review", *International Journal of Nursing Studies*, Vol. 47 No.3, pp.363–385

Doherty, A. (1997) "The effect of leaders characteristics on the perceived transformational/transactional leadership and impact of interuniversity athletic administrators", *Journal of Sports Medicine*, Vol. 11 No. 3, pp. 275-285.

Duening, T.N. (2016) Leading the Positive Organization: Actions, Tools, and Processes. Business Expert Press.

Dumdum, U.R., Lowe, K.B. and Avolio, B.J. (2013) "A Meta-Analysis of Transformational and Transactional Leadership Correlates of Effectiveness and Satisfaction: An Update and Extension", *Transformational and Charismatic Leadership: The Road Ahead 10th Anniversary Edition* (Monographs in Leadership and Management, Vol. 5), Emerald Group Publishing Limited, pp. 39-70.

Eagly, A.H., Johannesen-Schmidt, M.C. and van Engen, M. (2003), "Transformational, transactional, and laissezfaire leadership: a meta-analysis comparing women and men", *Psychological Bulletin*, Vol. 95 No. 4, pp. 569-591. Gooty, J., Gavin, M., Johnson, P.D., Frazier, M.L. and Snow, B. (2009) "In the eyes of the beholder: transformational leadership, positive psychological capital and performance", *Journal of Leadership & Organizational Studies*, Vol. 15 No. 4, pp. 353-367.

Gupta,V. and Singh, S. (2014) "Psychological capital as a mediator of the relationship between leadership and creative performance behaviors: empirical evidence from the Indian R&D sector", *The International Journal of Human Resource Management*, Vol. 25 No.10, pp. 1373-1394.

Harms, P.D and Crede, M. (2010) "Emotional Intelligence and Transformational and Transactional Leadership: A Meta-Analysis", *Journal of Leadership & Organizational Studies*, Vol. 17 No.1, pp. 5-17.

Hautala, T.M. (2005) *Personality and Transformational leadership. Perspectives of Subordinates and Leaders*. Acta Wasaensia, 145. University of Vaasa. (Dissertation).

Hautala, T.M. (2006) "The relationship between personality and transformational leadership", *Journal of Management Development*, Vo. 25 No. 8, pp. 777-794.

Hoyt, C.L. Simon, S. and Reid, L. (2009) "Choosing the best (wo)man for the job: the effects of mortality salience, sex, and gender stereotypes on leader evaluations", *The Leadership Quarterly*, Vol. 20 No. 2, pp. 233-246.

Järlström, M. and Brandt, T. (2017) "Psychological Capital and Psychological Career Mobility among Finnish Business School Graduates", *Journal of Finnish Studies*, Vol. 20 No. 2, pp. 145–171.

Järlström, M., Brandt, T. & Rajala, A. (2020 in print) "The relationship between career capital and career success among Finnish knowledge workers", *Baltic Journal of Management*. https://doi.org/10.1108/BJM-10-2019-0357 Kouzes, J. M. & Posner, B.Z. (2013) *Great Leadership Creates Great Workplaces*. John Wiley & Sons, Incorporated Kouzes, J.M. and Posner, B.Z. (2012) *The Leadership Challenge Workbook*. Third edition. Jossey-Bass.

Lee, M.Y. and Kim, K. (2012) "Influence of head nurses' transformational leadership on staff nurse's psychological well-being, stress and somatization – focused on the mediating effect on positive psychological capital" *Journal of Korean Academic Nurses Administrator*, Vol. 18 No.2, pp. 166-175.

Li Z, Dai L, Chin T. and Rafiq M. (2019) "Understanding the role of psychological capital in humorous leadershipemployee creativity relations", *Front Psychol.*, 10.

Luthans, F., Avey, J.B., Avolio, B.J., Norman, S. and Combs, G. (2006) "Psychological capital development: Toward a micro-intervention", *Journal of Organizational Behavior*, Vol. 27, pp. 387–393.

Luthans, F., Avolio, J.B, Avey, J. and Norman, S. (2007) "Positive psychological capital: measurement and relationship with performance and satisfaction", *Personnel Psychology*, Vol. 60 No. 3, pp. 541–572.

Luthans, F., Norman, S. M., Avolio, B. J. and Avey, J. B. (2008) "The mediating role of psychological capital in the supportive organizational climate–employee performance relationship" *Journal of Organizational Behavior*, Vol. 29, pp. 219-238.

McMurray, A.J., Pirola-Merlo, A., Sarros, J.C. and Islam, M.M. (2009) "Leadership, cli-mate, psychological capital, commitment, and well-being in a non-profit organization", *Leadership & Organization Development Journal*, Vol. 31, No.5, pp. 436-457.

Masal, D. (2015) "Shared and transformational leadership in the police", *Policing: An International Journal of Police Strategies & Management*, Vol. 38 No. 1, pp. 40–55.

Ng, T. W. H. (2016) "Transformational leadership and performance outcomes: Analyses of multiple mediation pathways", *The Leadership Quarterly*.

Noruzy, A., Dalfard, V. M., Azhdari, B., Nazari-Shirkouhi, S., & Rezazadeh, A. (2013). "Relations between transformational leadership, organizational learning, knowledge management, organizational innovation, and organizational performance: an empirical investigation of manufacturing firms", *The International Journal of Advanced Manufacturing Technology*, Vol. 64, No. 5–8, pp. 1073–1085.

Posner, B. Z., & Kouzes, J. M. (1988), "Development and Validation of the Leadership Practices Inventory" *Educational and Psychological Measurement*, Vol. 48 No. 2, pp. 483–496.

Siu, O.-L. (2008), "A measure of psychological capital (PsyCap) and its relationship with work performance, work well-being, and social well-being", Paper presented at *the 29th International Congress of Psychology*, Berlin, Germany.

Siu, O.L., Cheung, F., and Lui, S. (2015) "Linking positive emotions to work well-being and turnover intention among Hong Kong police officers: The role of psychological capital", *Journal of Happiness Studies*, Vol. 16, pp. 367–380.

Snyder, C. R., Irving, L.M., and Anderson, J.R. (1991) Hope and health in C. R. Snyder and D. R. Forsyth (Eds), *Handbook of Social and Clinical Psychology: The Health Perspective*, Elmsford, NY: Pergamon Press, pp. 285–305. Stajkovic, A.D., and Luthans, F. (1998) "Self-Efficacy and work-related performance: A meta-analysis", *Psychological Bulletin*, Vol. 124, pp. 240–61.

Tichy, N. M., & Devanna, M. A. (1986). The Transformational Leader. New York: John Wiley & sons

Tims, M., Bakker, A.B. and Xanthopoulou, D. (2011) "Do transformational leaders enhance their followers' daily work engagement?" The Leadership Quarterly, Vol. 22.

Toor, S., and Ofori, G. (2009) "Positive psychological capital as a source of sustainable competitive advantage for organizations", *Journal of Construction Engineering and Management*, 136, (3).

Turner, N., Barling, J., Epitropaki, O., Butcher, V. and Milner, C. (2004) "Transformational leadership and moral reasoning", *Journal of Applied Psychology*, Vol. 87, pp. 304-311.

Vogelgesang, G., Clapp-Smith, R. and Osland, J. (2014) "The relationship between positive psychological capital and global mindset in the context of global leadership", *Journal of Leadership and Organizational Studies*, Vol. 21, No. 2.

Wang, G., Oh, I.-S., Courtright, S. H., & Colbert, A. E. (2011) "Transformational Leadership and Performance Across Criteria and Levels: A Meta-Analytic Review of 25 Years of Research", *Group & Organization Management*, Vol. 36 No.2, pp. 223–270.

Wolfram, H. and Mohr, G. (2010) "Gender-typicality of economic sectors and gender-composition of working groups as moderating variables in leadership research", *Gender in Management*, Vol. 25 No. 4, pp. 320-339.