

Research Article

A Meta-Analysis Of Psychological Capital Research With Implications For Sustainable Management.

Cng-Hug Tsai, Fu-Sng Tai.

Department- Sharif University of Technology..

Abstract

This work aims to perform a comprehensive meta-analytic review of empirical psychological capital research in the field of management. We gathered publications from the ProQuest and EBSCOhost databases and performed a meta-analysis on them. We also looked through and contrasted the Journal Citation Report to find the journals that cited the most cited publications (e.g., Journal of Organizational Behavior, Academy of Management Journal, etc.) in order to provide thorough and wide literature coverage. Eighty-one published research kinds were carefully chosen and examined. The findings showed that organizational atmosphere, organizational justice, authentic leadership, leader-member exchange, and occupational stress are significant determinants of psychological capital, with varying weighting.

Keywords : *psychological capital; meta-analysis; influencing and influenced factors; sustainability.*

INTRODUCTION

The positive mental state that appears during individual phases of growth and development is known as psychological capital (PC) [1]. Thus far, Luthans and colleagues [2–5] have identified it theoretically as consisting of resilience [6], efficacy, optimism, and hope. Because it affects management sustainability, this accelerates the requirement to comprehend the influencing and affected aspects for psychological capital in relation to employees and organizations.

In this field of study, which has witnessed the publishing of several publications on the topic in recent years, it was necessary to stop waiting for diseases to arise, which is why PC was reviewed using meta-analysis. We were compelled to present a comprehensive quantitative analysis of both published and unpublished research done in the past ten years, given the issues brought up by the major authors in the area. We choose the meta-analysis approach due to its capacity to detect abnormalities in the field and appropriately treat them by identifying weak points. The impact that such problems may have on employee outcomes was recognized by the study. The requirement to assess whether PC as a moderator may be used to account for the variability of the size effects that have been reported and found from individual studies was another justification for analyzing PC using meta-analysis.

REVIEW OF LITERATURE

Prior research indicates a robust relationship between psychological capital and employee results. According to Bergheim et al. [7], PC affects 10–12% of workers' perceptions of safety in three Norwegian shipping businesses. According to the authors, there is a positive association, which means that when it rises, so does employees' opinion of their safety. Due to the correlation between employees' well-being measurements and PC, Avey et al. [8] have demonstrated that PC can be used to account for variations in the measures over time. On their part, Joya and Edan [9] have demonstrated that PCs can be used to control employee stress, workplace misbehavior, and turnover intention.

The many aspects of psychological capital mentioned above can be measured, improved, and altered to improve productivity at work [11]. Hope is regarded as a positive motivational condition that arises from feelings of accomplishment based on goals and energy focused on reaching them. Conversely, optimism is viewed in positive psychology in particular as an explanatory behavior that interprets unpleasant occurrences as situation-specific, external, and transient, as well as a hopeful expectation for the future that is subject to growth [12]. On its part, efficacy is defined as an individual's innate belief in their capacity to mobilize the mental resources, actions, and motivation necessary to complete a planned task within specific conditions.

***Corresponding Author:** Fu-Sng Tai, Department- Sharif University of Technology.

Received: 07-Jan-2025, ; **Editor Assigned:** 08-Jan-2025 ; **Reviewed:** 20-Jan-2025, ; **Published:** 28-Jan-2025,

Citation: Fu-Sng Tai. A Meta-Analysis of Psychological Capital Research with Implications for Sustainable Management. Journal of Climate Research. 2025 January; 1(1).

Copyright © 2025 Fu-Sng Tai. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

PC is a second-order factor based on the aforementioned characteristics, which means that a deeper understanding of it may be achieved by assessing the aforementioned characteristics. In actuality, PC has a substantial impact on a number of important workplace outcomes nowadays, including employee attitudes, behaviors, satisfaction, and organizational performance [10]. Even though the characteristics have been demonstrated to be inherently discriminatory, Avey et al. [5] asserted that they share many characteristics that can be used to explain PC. We contribute by providing relevant and up-to-date meta-analysis-based information about the evolution of psychological capital research as a dynamic scientific area against this backdrop, which is built with the help of current academic literature and real-world observations.

MATERIALS AND PROCEDURES

Approach

The main determinants of psychological capital and its ramifications were identified using the meta-analysis test. As a research methodology, it attempts to make meaning of the findings of several empirical studies by statistically assembling those results [13]. Because meta-analysis techniques help to overcome the research articles that occur in all of the different experimental investigations to draw accurate academic conclusions, meta-analysis is essential for the advancement of science in terms of information gathering [14].

By using this approach in this study, we hope to precisely describe and pinpoint the elements that have the greatest influence on and effect psychological capital.

Information Set

We began by entering the term “psychological capital” into ProQuest Advanced and the EBSCOhost database (1889–present) in order to acquire a thorough and exhaustive literature search for the term.

Next, we looked through the Journal Citation Report to find the journals—including the Academy of Management Journal, Journal of Organizational Behavior, and Journal of Occupational and Organizational Psychology—that cited the most frequently cited articles in the literature on organizational capabilities. We wanted to collect as many studies as possible, therefore we didn't set a deadline. A number of criteria were taken into consideration when choosing the studies and research for this meta-analysis. First, the researcher selected empirical studies that addressed the primary component and met the previously established criteria of psychological capital. Second, even if psychological capital was not the primary focus of the studies, we chose those that had a significant connection to it. Finally, we distinguished between research that solely examined psychological capital and the

four fundamental components of psychological capital—optimism, resilience, hope, and self-efficacy. This is to guarantee the actual importance of psychological capital as a whole in relation to the key components taken separately. Our thorough search yielded 202 results from the database at the end of the procedure, however only 145 items are considered to be on the list because of a database search engine error. There are only 116 real results out of 145. Nevertheless, six of the 145 journals are likewise worthless due to a topical mismatch (for example, having both “psychological” and “capital” on the title but not “psychological capital”), and 29 journals are not included in the Journal Citation Report. Only 81 literature studies in all are accessible through the database and could be helpful for this investigation.

We only decided to include the 77 quantitative studies out of all of these since qualitative studies lack the information—such as coefficients—that we need to get the results we want. We used the steps described in a recent meta-analysis of the marketing literature (e.g., Lim 2010) to create our final table. To determine the ratio of correlation variance linked to the sample and sampling error, we computed the sample weighted correlation for every sample (Hunter and Schmidt, 2004). The degrees of freedom (dr) and predicted frequency counts were also computed by the researcher. Along with the Chi-square value for the research, Fisher's Zr was also calculated for a transformation of the sample correlation coefficient.

Findings and Conversations

Meta-Analysis to Find Important Precursors

Table 3 presents the meta-analytic estimates of the factors of the suggested antecedent factors toward psychological capital based on the statistics gathered. Based on the sample-weighted mean correlation ($r = 0.502$), the data shows a significant, positive association between psychological capital and organizational climate. The Q statistics were determined to be significant ($X^2 = 14.067$, $p < 0.05$) after the measurement reliability and sampling error were corrected, which explained 2.14% of the effect-size variance across studies. The 95% CI excluded zero. Similarly, a sample-weighted mean correlation ($r = 0.633$) showed a significant, positive link between psychological capital and organizational fairness. Once more, the 95% CI excluded zero and the Q statistics were determined to be significant ($X^2 = 11.07$, $p < 0.05$) following the correction of measurement reliability and sampling error, which accounted for 2.21% of the effect-size variance. A sample-weighted mean correlation ($r = 0.397$) showed a substantial, positive association between leader-member interchange and psychological capital. Following the correction of measurement reliability and sampling error, which were responsible for 2.42% of the effect-size variance, the Q statistics were determined to be significant ($X^2 = 7.815$,

$p < 0.05$), and the 95% CI excluded zero. According to the sample-weighted mean correlation, psychological capital and authentic leadership were significantly positively correlated ($r = 0.637$). Following the correction of measurement reliability and sampling error, which were responsible for 2.92% of the effect-size variance, the Q statistics were determined to be significant ($X^2 = 9.488$, $p < 0.05$) and the 95% CI excluded zero. Finally, a sample-weighted mean correlation ($r = 0.338$) revealed a significant positive association between psychological capital and occupational stress. Following the correction of measurement reliability and sampling error, which were responsible for 2.71% of the effect-size variance, the Q statistics were determined to be significant ($X^2 = 5.991$, $p < 0.05$), and the 95% CI excluded zero. The aforementioned findings support earlier research showing that employee performance is significantly impacted by organizational atmosphere. They illustrate how a supervisor's leadership style has a direct impact on the rapport they build with their subordinates and, in turn, how they carry out their responsibilities. It is crucial to remember that organizational climate and organizational culture are very distinct. Consequently, it acts as a mediator in the interaction between PC and the methods used by lower-level personnel to carry out their tasks [15]. Organizational justice, on the other hand, refers to how equitable work results are viewed by employees. While interactional justice is concerned with the fairness of relationships between coworkers or between employees, procedural justice is concerned with the fairness of the processes used to decide how results are distributed. Based on the findings above, organizational justice has been shown to have a substantial positive link with PC, indicating that employees are more inclined to identify with a company if they believe it to be just, and vice versa.

It has also been discovered that PC and leader-member exchange (LMX), which is characterized as a system of elements and their interactions involving dyad members and interdependent behavior patterns, are significantly related. Several types of leadership, including transformative and self-leadership, have been shown in earlier research to be successful in raising staff performance and fostering unity and self-efficacy. Therefore, even if the correlation is somewhat weak, it makes sense that it corresponds well with PC. According to Walumbwa et al. [16], they illustrate four categories of behaviors,

By doing this, they make it possible for workers to perform better and be happier in their positions. Due to extended workdays, ambiguous job objectives, and excessive workloads, the majority of employees for a long time cited their workplaces as the main sources of stress in their lives. The occupational stress that comes from workplaces may make workers more prone to sickness and lower their level of wellbeing, claims Head [17]. According to the studies analyzed

in this analysis, work-related stress significantly affects psychological capital, which may lead to depression and its associated symptoms. Contrary to what we had anticipated, there was a weak but positive association between it and PC. Additionally, we gathered data regarding the effects of psychological capital.

Table 4 shows the meta-analytic estimates of the psychological capital toward the suggested repercussions components based on the statistics gathered. A sample-weighted mean correlation ($r = 0.533$) revealed a strong, positive association between psychological capital and job satisfaction.

Following the correction of measurement reliability and sampling error, which explained 0.75% of the effect-size variance, the Q statistics were determined to be significant ($X^2 = 26.296$, $p < 0.05$) and the 95% CI excluded zero. Similarly, sample-weighted mean correlation ($r = 0.326$) showed a significant, positive association between psychological capital and job performance. Following the correction of measurement reliability and sampling error, which explained 0.68% of the effect-size variance, the 95% CI excluded zero.

Conversely, the sample-weighted mean correlation ($r = -0.376$) revealed a substantial negative association between psychological capital and undesirable behavior. Following the correction of measurement reliability and sampling error, which contributed 0.3% of the effect-size variance, the Q statistics were determined to be significant ($X^2 = 24.996$, $p < 0.05$), and the 95% CI excluded zero. Consistent with the aforementioned findings, earlier research has demonstrated a favorable correlation between PC and job satisfaction [8,18]. It is understandable why some research suggests that PC predicts contentment more accurately than personality qualities like conscientiousness and extraversion [6]. It is said that PCs increase workers' dedication to their companies and occupations in general.

Therefore, managers can use PC to alter how employees view and carry out their jobs because of its openness to development [19]. On the other hand, job performance is a multifaceted concept made up of several acts and behaviors. Nonetheless, it has a positive correlation with PC, which means that workers perform better at work when they believe their companies are welcoming to them. Because of this, the study has shown that attitudes that workers acquire toward their employment and bosses in general have a significant impact on job performance and management sustainability. It affects their persistence and effective commitment, claim Lee and Chen [20]. There is a linear association between work attitude and PC.

Previous research has demonstrated that because organizational citizenship behavior (OCB) is not directly enforceable, it necessitates additional effort. Therefore, rather than trying to impose them, management teams have an obligation to promote them. Lastly, it has been discovered

that undesirable behaviors have a negative correlation with PC; that is, when PC is lacking, undesirable behaviors arise, but when PC is growing, undesirable behaviors vanish from organizations. However, workplace stressors should be reduced or removed as they may contribute to the development of such behaviors.

DISCUSSIONS AND CONCLUSIONS

In order to provide an integrative analysis and results that might provide more references for theoretical and practical development, this study sorted the statistics gathered from several but closely connected studies of psychological capital. Important conclusions follow. Based on scattered statistics from those various empirical studies, confirmative reexaminations were conducted of the following: job satisfaction, attitude, and performance; organizational climate; organizational justice; leader-member exchange; authentic leadership as antecedents; and employee's organizational citizenship behavior and undesirable behavior as outcomes of psychological capital. Their impacts that are pertinent to psychological capital have been verified and reviewed, as was covered in the section above. The findings particularly highlight how the leader-member relationship would have a significant impact on the workers' [21] and Gardner et al. [22] are the candor and clarity of the actions they exhibit toward staff members, particularly by sharing the information needed to make important decisions, giving prompt feedback to staff members, and welcoming suggestions from others, particularly lower-level staff members. Furthermore, it has been demonstrated that psychological capital influences organizational citizenship behavior both favorably and unfavorably. Not all organizational capital has the capacity to both promote and inhibit undesirable conduct at the same time. Our findings demonstrated the effectiveness of psychological capital as an intangible yet potent instrument for influencing organizational behavior.

The limitations of the study may inspire other research in the future. First, gathering information from a database is essential because this study employs meta-analysis. Although the researchers only looked at statistics from articles that were indexed by the Social Science Citation Index (SSCI) in EBSCOHOST and ProQuest, several studies were still found in other databases. By employing the meta-analysis approach to gather pertinent literature from earlier psychological capital research, this study has produced compelling data. However, the study only used two databases; ideally, literature from additional databases would be included in future studies that carried on this investigation. In addition to strengthening the findings for the antecedent and consequence elements of psychological capital, this would broaden the body of literature already in existence.

REFERENCES

1. Liu, L.; Xu, X.; Wu, H.; Yang, Y.; Wang, L. Associations of psychological capital, demographic and occupational factors with cigarette smoking among Chinese underground coal miners. *BMC Public Health* 2015, 15, 20. [CrossRef] [PubMed]
2. Luthans, F. The need for and meaning of positive organizational behavior. *J. Organ. Behav.* 2002, 23, 695–706. [CrossRef]
3. Luthans, F.; Youssef, C.M. Human, social, and now positive psychological capital management. *Organ. Dyn.* 2004, 33, 143–160. [CrossRef]
4. Youssef, C.M.; Luthans, F. Positive Organizational Behavior in the workplace: The Impact of Hope, Optimism, and Resilience. *J. Manag.* 2007, 33, 774–800. [CrossRef]
5. Avey, J.B.; Reichard, R.J.; Luthans, F.; Mhatre, K.H. Meta-Analysis of the Impact of Positive Psychological Capital on Employee Attitudes, Behaviors, and Performance. *Hum. Resour. Dev. Q.* 2011, 22, 127–152. [CrossRef]
6. Luthans, F.; Avolio, B.; Avey, J.B.; Norman, S.M. Positive Psychological Capital: Measurement and relationship with performance and satisfaction. *Pers. Psychol.* 2007, 60, 541–572. [CrossRef]
7. Bergheim, K.; Eid, J.; Hystad, S.W.; Nielsen, M.B.; Mearns, K.; Larsson, G.; Luthans, B. The Role of Psychological Capital in Perception of Safety Climate among Air Traffic Controllers. *J. Leadersh. Organ. Stud.* 2013, 20, 232–241. [CrossRef]
8. Luthans, F.; Avey, J.B.; Avolio, B.J.; Peterson, S.J. The Development and Resulting Performance Impact of Positive Psychological Capital. *Hum. Resour. Dev. Q.* 2010, 21, 41–67. [CrossRef]
9. Joya, A.I.; Edan, M.A. Psychological Capital as a Moderator between Justice Types and Outcomes. *J. Bus. Manag. Econ. Stud.* 2016, 1, 14–32.
10. Luthans, F.; Youssef, C.M.; Avolio, B.J. *Psychological Capital*; Oxford University Press: New York, NY, USA, 2007.
11. Ding, Y.; Yang, Y.; Yang, X.; Zhang, T.; Qiu, X.; He, X.; Wang, W.; Wang, L.; Sui, H. The Mediating Role of Coping Style in the Relationship between Psychological Capital and Burnout among Chinese Nurses. *PLoS ONE* 2015, 10, e0122128. [CrossRef] [PubMed]

12. Seligman, M.E. *Learned Optimism*; Pocket Books: New York, NY, USA, 1998.
13. Sanchez-Meca, J.; Martin-Martinez, F. Meta-analysis in Psychological Research. *Int. J. Psychol. Res.* 2010, 3, 151–163. [CrossRef]
14. Hamilton, M.A.; Hunter, J.E. A framework for understanding: Meta-analysis of the persuasion literature. In *Persuasion: Advances through Meta-Analysis*; Allen, M., Priess, R.W., Eds.; Hampton Press: New York, NY, USA, 1998.
15. Qadeer, F.; Hina, J. Mediation of Psychological Capital between Organizational Climate and Organizational Citizenship Behavior. *Pak. J. Commer. Soc. Sci.* 2014, 8, 452–470.
16. Walumbwa, F.O.; Avolio, B.J.; Gardner, W.L.; Wernsing, T.S.; Peterson, S.J. Authentic leadership: Development and analysis of a multidimensional theory-based measure. *J. Manag.* 2008, 34, 89–126.
17. Head, J.K. Effort-reward imbalance and relational injustice at work predict sickness absence. *J. Psychosom. Res.* 2007, 63, 433–440. [CrossRef] [PubMed]
18. Luthans, F.; Norman, S.M.; Avolio, B.J.; Avey, J.B. The mediating role of psychological capital in the supportive organizational climate-employee performance relationship. *J. Organ. Behav.* 2008, 29, 219–238. [CrossRef]
19. Fu, J.S. Improving job satisfaction of Chinese doctors: The positive effects of perceived organizational support and psychological capital. *Public Health* 2013, 127, 946–951. [CrossRef] [PubMed]
20. Lee, C.C.; Chen, C.J. The Relationship between Employee Commitment and Job attitude and Its Effect on Service Quality in the Tourism Industry. *Am. J. Ind. Bus. Manag.* 2013, 3, 196–208. [CrossRef]