A BIBLIOMETRIC REVIEW OF PSYCHOLOGICAL CAPITAL

Benediktus Margiadi [1*], Amin Wibowo[2]

[1] Economic and Business Faculty, Gadjah Mada University
[2] Economic and Business Faculty, Gadjah Mada University

Abstract. Recently psychological capital has become a significant theme of organizational behavior. This paper presents a review of the psychological capital by using bibliometric techniques analysis. The purpose of this article is to guide comprehensive bibliometry analysis by answering questions, how are the psycap articles classified, what are the trends of authentic leadership research, themes that have many publications and what theme opportunities for future research. Several articles found selected with the qualifications of one and two quartile journal categories as well as several other criteria with the period of publication of articles starting January 1, 1997, to March 31, 2019 (22 years).

This paper produces several clusters on the theme of psychological capital, such as performance, employee and organization, commitment, behavior, and HERO. Each emerging cluster will provide information on trends in the research area in the field of psychological capital. Finally, the comprehensive bibliometric analysis provide the reference and advice for the researchers and practitioners interested in psychological capital

Keywords: organizational behavior, leadership research, performance, employement

1. INTRODUCTION

The study of sustainable competitive advantage has become popular based on resource theory. Human resources become popular when supported by evidence of a positive relationship between human resources and organizational performance (Newman, Ucbasaran, Zhu, & Hirst, 2014). Among various kinds of resources, human resources show resources that are universally valuable and cannot be replicated perfectly (Grant, 1996). However, the mechanism that explains this superiority is not yet widely understood (Foss, 2011). Individual development research and personal interactions are needed to provide better knowledge about individual-based excellence. One strategy that is currently supported by literature is psychological capital.

The psychological capital or psycap developed by Luthans and his colleagues based on positive psychological ideas (Seligman & Csikszentmihalyi, 2000), and positive organizational knowledge (Cameron & Caza, 2008). Psycap is an individual psychological positive attitude that can be measured, developed, and useful for performance improvement (Fred Luthans & Youssef, 2004). Psycap distinguished from other forms of human capital, namely human capital and social capital. Human capital refers to knowledge, skills, and abilities that improved through education training and investment. Social capital is related to the number of potential resources connected in a relationship network (Newman, 2014). Human capital is what humans know, social capital is who is known, and psycap is related to who human beings are and will be what they are (Luthans & Youssef, 2004).

Several studies have been conducted to test psycap relations with employee attitudes, behavior, and performance at the individual level (Norman, Avey, Nimnicht, & Pigeon, 2010). Then, research began to be conducted to examine relationships at the group and organizational levels (Walumbwa,

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* Corresponding Author, Email: bmargiadi@gmail.com

International Conference on Rural Development and Entrepreneurship 2019: Enhancing Small Business and Rural Development Toward Industrial Revolution 4.0

Vol. 5 No.1
ISBN: 978-623-7144-28-1

Christensen, & Hailey, 2011). The first meta-analysis review was also carried out by Avey, Reichard, & Luthans, (2011) and psychometric reviews of psychic measurements, namely the psychic questionnaire by Dawkins et al. (2013). However, efforts left the questions about the latest developments in the psycap research and the trend of the research psycap area. This psycap development is attempted to answer with a review of the literature on the bibliometric approach. The bibliometric analysis provides network analysis and can provide identification of the development of themes and the frequency of similar research themes ((Fahimnia, Sarkis, & Davarzani, 2015). This analysis can also help the process of identifying research clusters that show various fields that may experience developments based on institutional characteristics and authors.

We try to contribute to understanding psycap in several ways. First, by examining several articles which are more numerous than Avey et al. (2011), Newman et al. (2014) and psychometric reviews by Dawkins et al. (2013). We tried to do a more comprehensive review involving psycap output, psycap antecedents, the role of the mediator and moderator and review of the meta-analysis of psychotherapy. Second, we try to focus on the bibliometric approach. In particular, how does Psycap relate to other constructs and the psychic research area that has received much attention from researchers? To the knowledge of the author, there is no bibliometric analysis of the term psycap. The purpose of this article is to fill this gap and guide comprehensive bibliometry analysis by answering questions, how are the psycap articles classified, what are the trends of authentic leadership research, themes that have many publications and what theme opportunities for future research

Finally, we try to give a review of the direction of article research-based psychology trends from Google scholar and share them in several clusters. Google scholar used to collect psycap articles through titles, abstracts, and keywords. Restrictions on qualifications for journal rankings Q1 and Q2 from Schimago are used to support valid results. We make a sequence of discussions of psycap definitions, article search results, analysis with bibliometric methods and agendas that used for future research.

2.PSYCHOLOGICAL CAPITAL OR PSYCAP

Psycap is a psychological positive that encourages people to recognize the power that is in themselves. Luthans, Norman, Avolio, & Avey, (2008) describe psycap as the development of the positive state of an individual consisting of four resources, namely self-efficacy, optimism, hope, and tenacity. The four resources criteria are determined based on theory, have valid measurements, are state-like so that they have the potential to be developed through training (Luthas et al., 2008). Psycap is present when there is a change in the psychological paradigm, namely from the individual approach to its weaknesses into a social approach with all its strengths (Luthans, 2002). A positive psychological model is a background to the development of psychotherapy. Positive psychological movements emerge as a paradigm shift in the field of psychology. Previously, research in psychology always began with what was wrong with individuals, human weakness, and fragility. Then a change occurred. Psychological research mostly identifies and maintains the strongest qualities of humans (Luthans, 2002).

This change in paradigm also has implications for organizational behavior and leadership. Luthans (2002) states that the positive strength and capacity of individuals can be developed and managed for performance improvement in the workplace. Criteria that used are capacities that can be measured, can be designed and effectively managed. Organizational positive behavior and psycap have these criteria so that they are open to change and development (Luthans, 2002). Psycap is a combination of state likes of attitude and cognitive resources that have a positive effect on individual performance (Luthans, Avolio, Avey, & Norman, 2007). Psycap's focus is on

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Business and Rural Development Toward Industrial Revolution 4.0

Vol. 5 No.1
ISBN: 978-623-7144-28-1

psychological strength that can be developed and has a positive effect on authentic leadership (Luthans & Youssef, 2004). Thus, Psycap is stated to be able to influence and support authentic leadership.

Dimension criteria that categorized in psycap based on theory and research, have valid measurements, are relatively unique in the field of organizational behavior and state like so that they are potential to developed (Luthans, Avolio, Avey, & Norman, 2007). Psycap is a set of positive psychological statements consisting of, self-confidence in success (optimism), willingness to commit to goals and solutions (hope), ability to always try from failures (tenacity) and self-efficacy ((Luthans, Avolio, Avey, & Norman, 2007). Through a positive perspective, Psycap contributes to a higher level of effectiveness of leadership (Youssef & Luthans, 2007). Empirical evidence from Clap-Smith et al. (2009), not only state the influence of perceptions of authentic group level leadership on outcomes but more broadly, namely the impact of followers' mental performance. This effect can occur because the combination of the psycap component has taken into account variance in output predictions (Luthans, Avolio, Avey, & Norman, 2007). The concept of psycap by Jensen and Luthans (2006) only involves three elements, namely optimism, hope, and tenacity.

Optimism is the content of authentic leadership (Fred Luthans, Avey, Avolio, & Peterson, 2010) and contributes to performance (Clapp-smith, Vogelgesang, & Avey, 2009). Optimism describes how people experience failure and then discover the causes of external factors (not their faults) and because of instability (problems that arise only at that time). When individuals are optimistic, they tend to internalize positive events and externalize adverse events. This tendency will produce more positive expectations on the outside. Optimism is defined by Seligman (1998) (in Luthans et al., 2007) as a cognitive process that contains expectations of positive outcomes and attribution of causes from external, transient and specific in interpreting adverse events and from internal, stable and global to positive events. Optimistic individuals tend to show high work motivation, performance, job satisfaction, morale and diligence when facing difficulties

Hope is another component of the psycap and has met the criteria as the dimensions of the psycap. Luthans and Avolio (2002) state that expectations have a full positive capacity and influence on the process of developing authentic leadership. A person with high hopes will be better at leading, can set goals clearly, be able to explain goals to others and be able to decipher simple intentions to complex goals. Two elements characterize hope, namely will power and a series of pathways (pathways) (Snyder, Feldman, Taylor, Schroeder, & Adams, 2000; Snyder & Lopez, 2002 in Clapp-Smith et al., 2009). The will directs the individual to achieve the goal, and the sequence of actions completes the direction with psychological resources to get an alternative path in achieving the goal. However, a high level of expectations is associated with a more excellent range of actions to complete the objective.

Tenacity is the ability of groups and individuals to turn back from bad situations or stress that occur (Luthans, 2002; Masten, 2001). In changing circumstances, tenacity included in the components that make up authentic leadership. Psycap dimension criteria fulfilled in tenacity constructs that are state-like, measurable, and open for development. Determination is the strength to survive and try again to achieve success when dealing with problems and failures (Luthans & Avolio, 2003; Luthans et al., 2007). Resiliency is a unique form compared to the other three components because it is reactive rather than proactive. Determination is a response to an adverse event of failure or development (Clapp-Smith et al., 2009)

3. METHODOLOGY

A literature review should be carried out comprehensively, openly, and use methods that replicated (Garza-Reyes, 2015). Bibliometric reports are usually used in the field of science and focus on quantitative studies of papers or books (Heersmink, van den Hoven, van Eck, & van Berg, 2011). For this study, climate bibliometric analysis stages, such as those used by Fahimnia et al. (2015), used. The five steps referred to are looking for the keywords psycap or psychological capital in many articles, a collection of articles about psycap or psychological capital will be combined in one list and then selected according to the category. Next, explained the difference in data and data analysis into the next stage

3.1. Keywords

This literature review was carried out since March 2019 by using the term psycap or psychological capital as a keyword. The software in the form of Publish or Perish (PoP) and database from Google Scholar (GS) used in this process. The initial step is to search with conditions boundary for the journal, only the title and all the year of publication. Some that excluded are proceedings, magazines, books, reviews of books, and book sections. From such restrictions, GoogleScholar provides 980 articles from the period 1997-2019 (twenty-two years). This number is close to the maximum number of Google Scholar applications. The number of papers found to be the reason for giving a limit to the minimum number of citations is 10. Article with psycap keywords or psychological capital with citation nine or smaller will exclude.

3.2. Initial Search

At the start of the initial data search, it did not determine during the year of publication in the year that articles, books, and writings were found online about psycap. The concept of psycap in books is more articles from many writers with psycap themes so that not all psycap topics used and it is necessary to do initial data filtering. Several relevant articles and books appear in the initial search. For example, the power of positive psychology: Psychological capital and work engagement, written by Sweetman and Luthans (2010); Psychological capital, written by Youssef and Luthans (2007); Psychological capital: Developing the human competitive edge, written by Luthans (2007); Developing psychological capital in organizations: Cognitive, affective, conative, and social contribution of happiness, written by Story, Youssef, Luthans, Barbuto, & Bovaird, (2013).

3.3. Refinement

Filtering is the next process after the initial data obtained from Google Scholar. The Publish or Perish (PoP) application used to screen the data. Some criteria for the screening process are English-language articles, not books/editorials/proceedings/reviews of books/book sections and have citations above 10. Standards for filtering article data listed in the table, along with the results of initial data screening.

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International Conference on Rural Development and Entrepreneurship 2019: Enhancing Small Business and Rural Development Toward Industrial Revolution 4.0

Vol. 5 No.1
ISBN: 978-623-7144-28-1

No	Screening Criteria	Number article
1	Editorial/book review, chapter, book, proceeding,	37
2	Q3/Q4 or non Schimago list	137
3	Under 9 Cites	645
4	Not in English	1
5	Q1/Q2	160
	Total	980

Table 1. Screening Criteria

From the first 980 articles, 160 articles were collected from reputable journals (Q1 & Q2) according to Schimago criteria. Each section then downloaded and reviewed by the title and abstract

3.4. Data Compilation

A list of 980 articles was then filtered, and the results were 160 papers downloaded into the Mendeley application. Necessary information data is collected, namely title, author's name, abstract, keyword, and journal specifications (publication, year, volume, issue, and page). The data is then analyzed, so that classified according to the year and the publisher. From query data with maximum time, PoP gets 980 total articles from 1997-2019. This data selected for reputation journals according to criteria (table 1)

METRICS DATA	INITIAL DATA	REFINEMENT
QUERY	JOURNAL, PSYCAP (1997-2019)	JOURNAL, PSYCAP (2002-2018)
SOURCE	GOOGLE SCHOLAR	GOOGLE SCHOLAR
PAPERS	980	160
CITATIONS	41.764	28.018
YEARS	1997-2018 22 YEARS	2002-2018 16 YEARS
CITES_YEAR	1.898,36	1.751
CITES_PAPER	42,6	175,11

Table 2 Metrics Comparison

Several article publications are increasing year by year. Figure 1 shows the number of distributions of publication increases per year. The highest number of articles appeared in 2015, namely 30 items.

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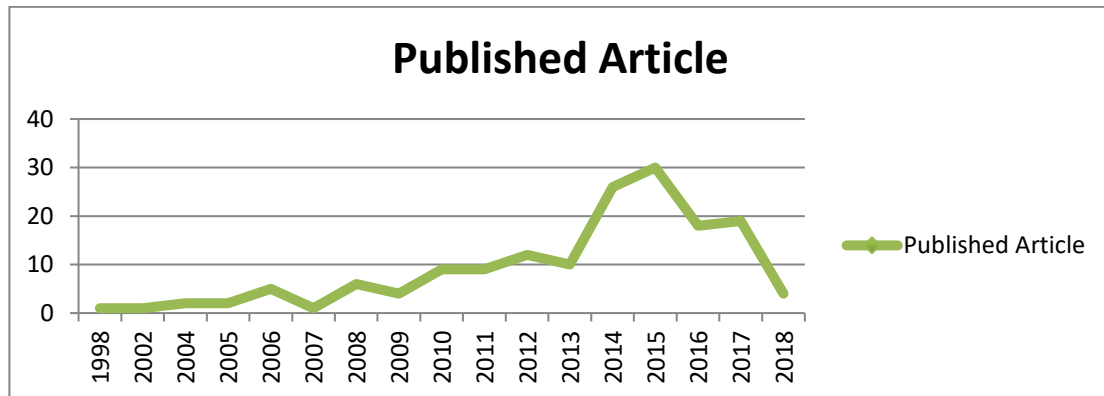ISBN: 978-623-7144-28-1

Figure 1 Publication Trend

Compilation data also shows which groups of publishers, the most common is Sagepub
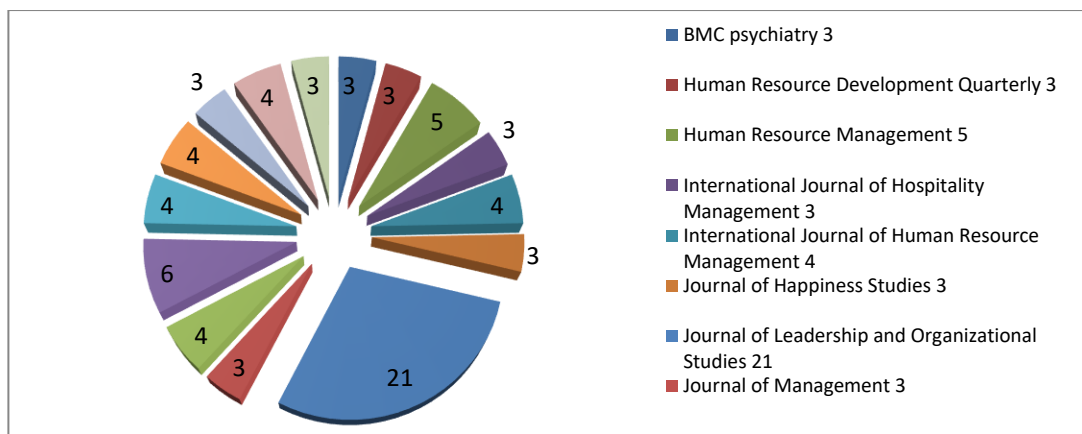

Figure 2 Cited Paper in Journal

Unlike the publisher, several journals have used for the publication of the term psycap. The top ten journals on average publish 3 to 21 journals for the period 2002-2018. Sequentially, namely the Journal of Leadership and Organizational Studies, Journal of Organizational Behavior, Human Resources Management, Leadership, and Organizational Development, Journal of Occupational Health Psychology, Safety Science, International Journal of Human Resources Management and Personnel Review. The rest is a journal with publishing between 3 with the term psycap

3.5. Data Analysis

This paper presents a bibliometric analysis of the term data-based psycap from google scholar. The review process assisted by PoP software developed by Professor Ane Wil Harzing (Harzing, 2011). The data search was carried out using PoP software in March 2019. This software produced 980 papers with 1,898 citations per year and citations per paper an average of 42.6. A total of 16.3% percent of the documents selected for the next process, so the citation data also changed to 1,751 citations per year and significantly increased citation 175.11 per paper. The extensive presentation of changes in quotations shows that top tier journal qualifications (Q1 / Q2) have a significant effect

on citation totals per year. Full results were seen in the metric comparison table before and after article selection (Table 2)

4. RESULT AND DISCUSSION

This bibliometric study shows that the categories Q1 / Q2 have a significant influence on the citation. Table 3 shows the most cited articles and authors. Luthans has dominated the top six articles. The article written by Luthans et al. (2007) was the most cited article, which was 2,823 citations. The title of the article is Positive psychological capital: Measurement and relationship with performance and satisfaction and published by Personnel Review. The next author is the collaboration of Luthans and Youssef (2004) with 1,784 citations through articles entitled Human, social, and now positive psychological capital management: Investing in people for competitive advantages published by Organizational Dynamics. Article Luthans et al. (2004) others also received a lot of citations (1,364), namely Positive psychological capital: Beyond human and social capital. The next most author of the citation-sequence is Avey et al. (2008) with 1,113 citations through an article entitled Can positive employees help positive organizational change? Impact of psychological capital and emotions on relevant attitudes and behaviors.

Table 3 Big ten most cited article

Cites	Authors
2.823	F Luthans, BJ Avolio, JB Avey, et al
1.784	F Luthans, & CM Youssef.
1.364	F Luthans, KW
1.206	F Luthans, SM Norman, BJ Avolio, et
1.178	F Luthans, BJ Avolio, FO Walumbwa, et al.
1.159	F Luthans, JB Avey, BJ Avolio, et al.
1.113	JB Avey, TS Wernsing, et al.
1.051	JB Avey, RJ Reichard, F Luthans, et al.
918	JB Avey, F Luthans, SM Jensen
781	F Luthans, JB Avey, BJ Avolio, et al.

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Title	Year	Source	Publisher
Positive psychological capital: Measurement and relationship with performance and satisfaction	2007	Personnel Psychology	Blackwell Pub
Human, social, and now positive psychological capital management: Investing in people for competitive	2004	organizational dynamics	Elsevier
Positive psychological capital: Beyond human and social	2004	Business	ScienceDirec
The mediating role of psychological capital in the supportive organizational climate—employee performance	2008	Journal of Organizational	Wiley
The psychological capital of Chinese workers: Exploring the relationship with performance	2005	Management and Organization	Blackwell Pub
Psychological capital development: toward a micro-intervention.	2006	Journal of Organizational	Wiley
Can positive employees help positive organizational change? Impact of psychological capital and emotions on relevant attitudes and behaviors	2008	The Journal of applied behavioral	journals.sagepub.com
A Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance	2011	Human Resource Management	Wiley
Psychological capital: A positive resource for combating employee stress and turnover	2009	Human Resource Management	Wiley
The development and resulting performance impact of positive psychological capital	2010	Human Resource Management	Wiley

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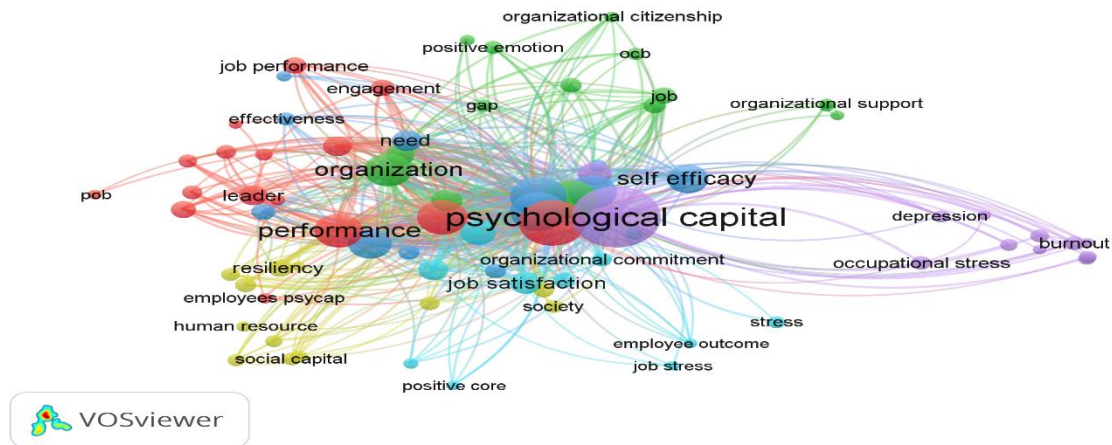
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ISBN: 978-623-7144-28-1

Figure 3 Network Visualisation Mapping

Citation and metric frequency descriptions give a description of the research area in words psycap or psychological capital. Then the output of our improvements is analyzed with the VOSviewer software to determine the words that often occur. The number of times a keyword can be set occurs. VOSviewer is software developed by van Eck and Waltman in 2010 (http://www.vosviewer.com) and is used to provide bibliometric visual cards. This software shows bibliometric mapping with three different visualizations, namely network visualization, overlay visualization, and density visualization. The VOS viewer then classifies it according to keywords in different clusters. Circles in density visualization indicate keyword density. This explanation answers questions about the classification of research with psycap keywords
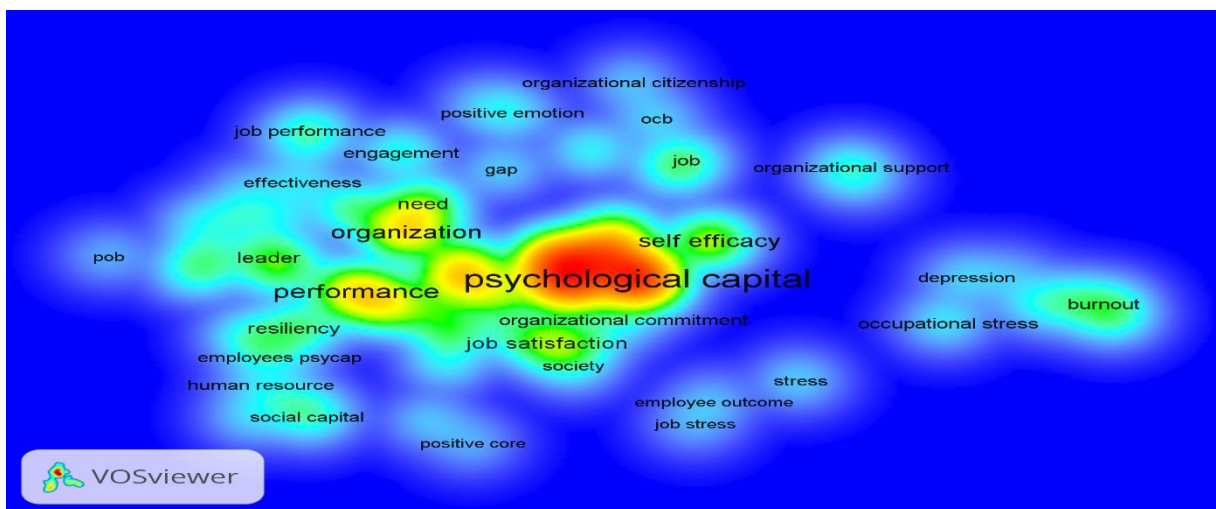

Figure 4 Density Visualisation

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ISBN: 978-623-7144-28-1

VOSviewer extracts based on the title and abstract and taking into account the minimum number of events of 4, 3,223 terms and 255 items match the criteria. The next process is to eliminate several common words that repeatedly appear (for example, the purpose of study, research, findings, random, abstract). Six clusters formed with each number of keywords. The first cluster consists of 12 words with two words that most appear, namely performance and positive psychology. The second cluster has a total of 9 items and consists of employee-related items and organizations. The third cluster consists of 9 items with the most items, namely the psychic dimension (hope, flexibility, resilience, and optimism). The fourth cluster is composed of 10 items with a psycap item as the most appealing item. The last grouping evenly distributed with ten items

Each keyword in the group shows the direction of the research on the psycap. Each cluster shows a trend toward the psychic study. This trend arises from special terms that appear in the VOSviewer analysis. These data answer the question of the direction of research trends. Some words that appear more with various kinds of themes can be developed in further research according to these keywords (Table 3)

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Cluster	Frequent Words	Not Frequent Words
1 st Cluster (12 items)	Performance & Positive Psychology	authentic leadership, empirical evidence, employee psycap, engagement, follower psycap, impact, job performance, leadership, POS, transformational leadership
2 nd Cluster (9 items)	Employee & Organization	Attitude, organizational citizenship behavior, organizational support, POS, positive emotion, resource theory, work engagement
3 rd Cluster (9item)	HERO (Hope, Self Efficacy, Resiliency dan Optimism)	effectiveness, need, organizational behavior, positive organizational behavior, positive psychology
4 th Cluster (10 items)	Commitment	competitive advantage, confidence, human capital, human resources, organizational performance, social capital, society, strenght, workplace
5 the Cluster (10 items)	Psycap	burnout, depersonalization, depression, family conflict, job burnout, occupational commitment, overcommitment, work-family conflict, working factor
6 th Cluster (9 items)	behavior	employee attitude, employee outcome, job satisfaction, job stress, management, organizational commitment, stress, turnover intention

Table 3 Clustering Result

5. CONCLUSION

The This study reviewed 160 articles with themes related to the term psychological capital or psycap. Materials obtained by utilizing PoP software. At the beginning of the search, there were 980 articles with keywords psychological capital or psycap. After going through the screening process, 160 articles were articles that were very significantly influential in citations in the field of authentic leadership. Comparison of preliminary data and after filtered data supports this evidence.

This study did not separate from limitations. The first is the limitation on the ability of Google Scholar to find psychological capital or psycap keywords. It is still possible for articles with psychological capital or psycap themes not to be found. Second, the assessment of subjective researchers becomes a limitation because it is possible to make mistakes even though supported by good software. The next study needs to include all articles that influence citations and also develop keywords other than psychological capital or psycap.

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