

Psychological capital in conditions of entrepreneurship: Do we really need this capital?

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Abstract

In recent years, the challenge of developing psychological capital for entrepreneurs has been raised. This leads to the issue of whether it is indeed necessary. The aim of this article is to explore the literature synergizing psychological capital with entrepreneurship through a bibliometric review approach and in combination with content analysis. The state of empirical knowledge was investigated in 145 articles from the Web of Science database between 2000 and 2025. The research focused on findings regarding the impact of psychological capital on entrepreneurs. The results indicate a positive influence of this mediator on entrepreneurial success, as this capital helps entrepreneurs overcome crises, improve business performance, and prevent later psychological problems related to their activities. In light of these findings, it is for entrepreneurs to decide if this capital is really required.

Keywords: Entrepreneurship, Performance, Psychological capital, Psychology

JEL Classification: I31, L26, M21

1. Entrepreneurship and psychological capital

Entrepreneurs face a very challenging environment characterized by risks and high workload (Roche et al., 2014; Kiefl et al., 2024). Meanwhile, psychological capital acts as a key intangible resource (Tsai et al., 2020) that helps entrepreneurs cope with these challenges. It contributes to their mental well-being (Baron et al., 2016) and enhances their ability to make informed decisions (Zhang & Xu, 2024), creatively combine limited resources (Iga et al., 2025), and communicate effectively with others (Yalap et al., 2020). Issues of mental health and well-being are no longer a distant memory, and the recent Covid-19 pandemic in particular has contributed to an understanding of what it means to be human (Luthans & Broad, 2024). Well-being is related to workplace stress levels, absenteeism, motivation, innovation and satisfaction (Kun & Gadanecz, 2022) which has implications for performance (Peck & Levashina, 2017) and

burnout (Kim et al., 2019). Psychological capital, on the other hand, represents not as broad a notion and is thus more amenable to research (Paul et al., 2023).

The concept of psychological capital, or PsyCap, is relatively rarely used in entrepreneurship research (Welter & Scrimshire, 2021), although in recent years Nguyen et al. (2024) have identified a growing global interest in this aspect of research. This is not an unfamiliar type of capital, although it was introduced as a holistic concept at the turn of this millennium (Luthans & Youssef, 2004). Meanwhile, its individual components have been investigated through various psychological research. For this reason, specifically, it has been the focus of the study in positive psychology. Longitudinal studies of PsyCap are in progress, particularly in occupational, clinical and school psychology (Dudášová et al., 2021). However, economists remain with studies of financial (Agoraki et al., 2024), human (Arshed et al., 2024) or intellectual (Alkhatib & Valeri, 2024) capital. Following PsyCap, research is limited to its applicability to managers (Nolzen, 2018), where its most common application. Its applicability can be found also in the context of entrepreneurship education (Haddoud et al., 2024) especially in entrepreneurship intentions (Villanueva-Flores et al., 2023), as well as social entrepreneurship (Tam et al., 2024).

Referred to by Luthans et al. (2007a, 2007b), PsyCap represents the motivational propensity to succeed, which is a positive psychological state of an individual's development (Luthans et al., 2015). It is a higher-order and formative construct (Slåtten et al., 2019) that consists of four distinct core constructs: hope, self-efficacy, resilience, and optimism. The same individual can have a well-developed PsyCap in relation to work and at the same time a poorly developed PsyCap in relation to family. This person is ambitious at work and handles any work difficulties very well, whilst having little confidence in close relationships and struggling to cope with any difficulties (Avey, 2014).

Consequently, when entrepreneurs participate in entrepreneurial activities they exhibit entrepreneurial behaviour. This should be monitored and evaluated in order to be correct and produce appropriate results (Kang & Busser, 2018; Obschonka et al., 2020). Entrepreneurs have a great influence on entrepreneurial performance, which is one of the most important indicators in entrepreneurship theory (Miller et al., 2019; Desai & Dearmond, 2021). Describing entrepreneurship in a general sense is difficult with stable personal characteristics, so many researchers transform these characteristics (Wang et al., 2022). Research on the entrepreneur personality paradigm is widespread in related fields, however, there are few consistent findings (Arias et al., 2018; Zhou et al., 2019). Unlike personality traits, PsyCap is more amenable to change (Dudášová et al., 2021) and contributes to the survival and growth of enterprises (Wang et al., 2022). A high PsyCap provides individuals with the mental toughness to manage job demands effectively and reduces stress levels, with founding entrepreneurs reporting stress levels equivalent to or lower than those in other occupations or careers (Baron et al., 2016).

Considering the fact that PsyCap has been researched for many years in the positive psychology context opens a research gap in its use in the conditions of entrepreneurship. The research aims to explore the literature synergizing PsyCap with

entrepreneurship through a bibliometric review approach (Passas, 2024) and in combination with content analysis (Krippendorff, 2019). This analysis includes articles indexed in the Web of Science database (Clarivate Analytics, 2025) for the entire historical period from inception until July 1st when data extraction was performed. To achieve this, the main research question was asked, "*What is the current state of empirical knowledge on the relationship between PsyCap and entrepreneurship on international indexed journals published from 2000 to 2025?*".

The study provides an overview of the penetration of PsyCap into different parts of the entrepreneurship and how it has developed, identifies the most significant authors as well as institutions focusing on the topic and highlights the key journals publishing the most important papers. This leads to sub-research questions (1) *Who are the most important authors, influential institutions, articles and journals addressing this topic?* and (2) *What are the key research trends in the field of PsyCap in entrepreneurship?*

2. Research Methodology

To investigate the research questions, a literature search was conducted that included a search of the Web of Science (WoS) database (Clarivate Analytics, 2025), which included relevant studies from the holistic beginning of PsyCap in 2000 to 2025. Data were extracted as of July 1, 2025. Different keywords used in database included (1) entrepreneurship, business, enterprise, venture; (2) psychological capital, PsyCap. The keywords were matched through the Boolean operators AND or OR. This database contains a total of 2,559 articles. In the process, 787 articles constituting duplicate records were removed. To be included in the content analysis, the article had to meet the requirement of linking PsyCap to entrepreneurship. This condition was not met by 1,554 articles, which were then not included in the analysis. An additional criterion was the requirement for a peer-reviewed article in a scientific journal in English. Consequently, the reason for exclusion was that it was not a peer-reviewed article, rather another type of publication. Categories of publications such as an essay, book review, letter, opinion, anecdotal article, or scientific papers found in a specialized book were excluded in this way. In this case, a total of 73 publications were found. The final step was to exclude articles that did not feature entrepreneurs. A total of 36 articles were selected for subsequent content analysis. The PRISMA flow chart (Figure 1) illustrates the counts of articles included and excluded in the steps.

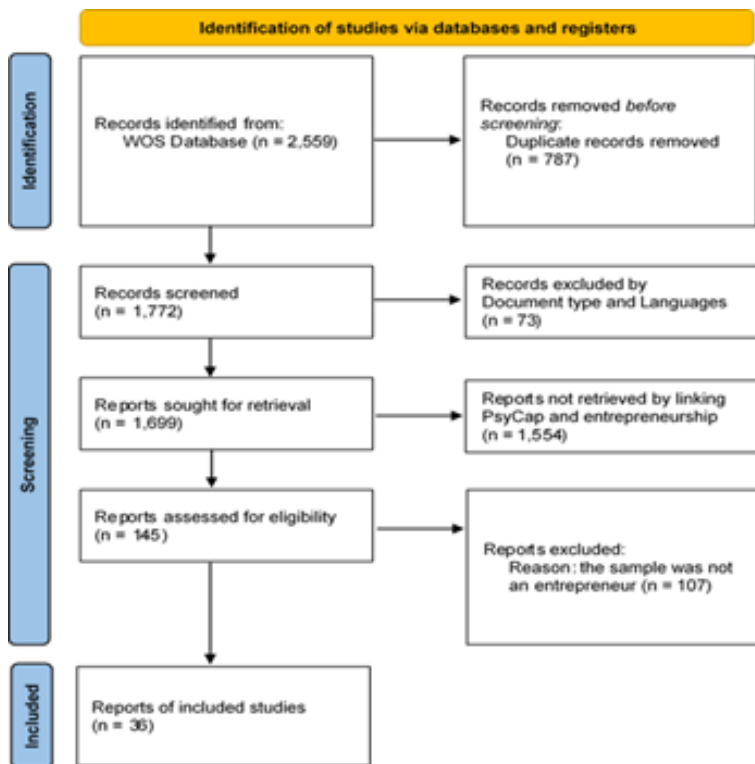


Figure 1. PRISMA flow diagram (source: PRISMA figure adapted from Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*. 2021;372:n71.)

This study combined bibliometric review (Passas, 2024) and content analysis (Krippendorff, 2018), where the Crowe Critical Appraisal Tool (CCAT), developed by Crowe to assess the quality of the included research, was used as it allows for the evaluation of heterogeneous research designs (Li et al., 2023). This instrument consists of 8 items (Preliminaries, Introduction, Design, Sampling, Data collection, Ethical matters, Results and Discussion) where all categories must be scored from 0 (minimum) to 5 (maximum) and 40 points is the overall score (Crowe, 2013). The artificial intelligence tool NotebookLM (Moons et al., 2025) was applied to synthesize and analyse the results and it served as a supplement to streamline the research process (Fabiano et al., 2024).

3. Research Results

The results of a bibliometric analysis covering 145 articles linking PsyCap with entrepreneurship were used to answer sub-research question (1). This served to identify important authors, institutions, articles and journals for the period from the inception of the construct to the present. It also looked at the amount of articles from certain countries. The second sub-research question (2) about key PsyCap research

trends in entrepreneurship was answered through content analysis. The CCAT tool was used to evaluate 36 articles.

Publication trends

Although the concept of PsyCap was developed at the beginning of the millennium, studies related to business appeared 10 years later (Figure 2). That year, an article entitled "The Development and Resulting Performance Impact of Positive Psychological Capital" (Luthans et al., 2010) was published, which became a breakthrough and marked the entry of PsyCap into the field of entrepreneurship. This single article recorded the second highest total citation (TC) rate in the WoS database for the entire period under observation. By 2017, the number of articles (NoA) had not exceeded five articles in any of the years under observation. In 2017, the NoA published on PsyCap in entrepreneurship reached 5 articles, and interest in this topic has been growing every year since then. The turning point came in 2020, which registered a record NoA in the WoS database as well as a record number of TC articles from this year.

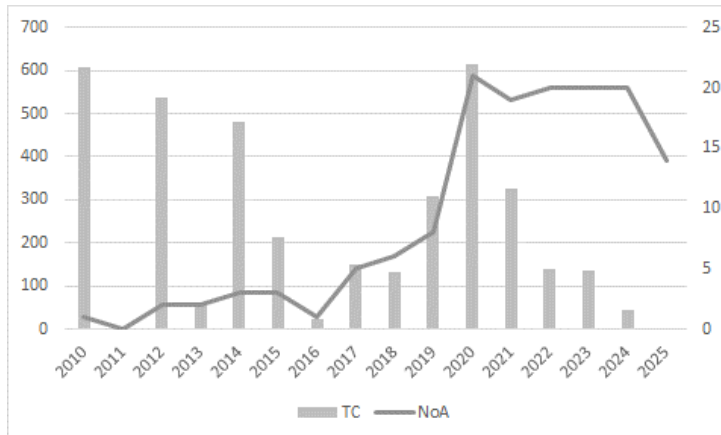


Figure 2. Number of publications and total citations in the WoS database (source: Author's processing based on the Web of Science database (Clarivate Analytics, 2025))

It should be noted that the decline in NoA and TC in 2025 does not yet correspond to current developments, as the articles were extracted on July 1 of 2025 and thus do not consider data for the entire year. During the monitored period, there were 50 different countries participating in the PsyCap in entrepreneurship research. These countries most frequently include China (47 NoA), the USA (33 NoA), India (12 NoA), Australia and Malaysia (9 NoA) and Pakistan (8 NoA).

Influential institutions

In order to identify influential institutions, the NoA value for PsyCap in the field of entrepreneurship and TC obtained by the institution for the given articles in the WoS database was analysed. TC does not include citations for all articles published by a single institution, merely those articles that are related to PsyCap in the context of entrepreneurship. In terms of the number of published articles, institutions based in the USA, Taiwan, Australia, China, Uganda, and Pakistan are the most frequent. Other

institutions have published two or fewer articles. Interest in this issue can be observed across the globe. Looking at TC, institutions from the USA and Portugal achieve excellent research results. Institutions in China and New Zealand are also significant. This is demonstrated in Table 1.

Table 1. Influential institutions (source: Author's processing based on the Web of Science database (Clarivate Analytics, 2025))

Institution	Rank based on NoA		Institution	Rank based on TC	
	NoA	TC		NoA	TC
University of Nebraska System (USA)	6	2375	University of Nebraska System (USA)	6	2375
University of North Carolina (USA)	5	2	Arizona State University (USA)	3	867
Cheng Shiu University (Taiwan)	4	104	Central Washington University (USA)	1	608
Kean University (USA)	4	18	University of Washington (USA)	1	608
Arizona State University (USA)	3	867	Universidade Nova de Lisboa (Portugal)	2	415
Queensland University of Technology (QUT) (Australia)	3	70	Universidade de Aveiro (Portugal)	1	388
University of Macau (China)	3	59	University of Tras-os-Montes & Alto Douro (Portugal)	1	388
Huaiyin Institute of Technology (China)	3	58	Polytechnic Institute of Leiria (Portugal)	1	388
Makerere University (Uganda)	3	35	Tsinghua University (China)	2	252
University of Punjab (Pakistan)	3	13	University of Waikato (New Zealand)	1	230
Jilin University (China)	3	1	Massey University (New Zealand)	1	230

The following are additional notable institutions with over 100 achieved TC are Peking University (China), Oklahoma State University System (USA), Texas Christian University (USA), University of Nebraska Kearney (USA), University of Canterbury (New Zealand), Netanya Academic College (Israel), Bar-Ilan University (Israel), and Cheng Shiu University (Taiwan).

Notable articles

The ranking of the most notable articles (Table 2) includes articles from 2010 to 2015. The articles are ranked according to the number of TC they achieved in the WoS database.

Table 2. Notable articles (source: Author's processing based on the Web of Science database (Clarivate Analytics, 2025))

Rank	Publication title	Year published	Author(s)	TC
1	The Development and Resulting Performance Impact of Positive Psychological Capital	2010	Luthans, F; Avey, JB; Avolio, BJ; Peterson, SJ	608
2	Authentic leadership promoting employees' psychological capital and creativity	2012	Rego, A; Sousa, F; Marques, C; Cunha, MPE	388
3	The Role of Mindfulness and Psychological Capital on the Well-Being of Leaders	2014	Roche, M; Haar, JM;	230
4	Impact of authentic leadership on performance: Role of followers' positive psychological capital and relational processes	2014	Luthans, F; Wang, DN; Wu, YH	222
5	The Relative Roles of Founding CEO Human Capital, Social Capital, and Psychological Capital in Contexts of Risk versus Uncertainty	2015	Hmieleski, KM; Carr, JC; Baron, RA	164

The articles in the ranking demonstrate the growing interest in PsyCap in business and provide a theoretical foundation that future researchers can build upon in their investigations. The study by Luthans et al. (2010) examines whether adherence to PCI training guidelines led to improved performance among practicing managers, with results showing that short training interventions are not only useful for developing participants' psychological capital, which can also lead to improved work performance. Raego et al.'s study (2012) demonstrates that authentic leadership and PsyCap can both promote employee creativity, which helps organizations face the challenges of competitiveness. A study by Roche et al. (2014) found that mindfulness is negatively associated with several dysfunctional outcomes, such as anxiety, depression, and negative affect in managers, and burnout syndrome in entrepreneurs. The study by Wang et al. (2014) explores the moderating role of followers' positive PsyCap and the mediating role that leader-member exchange can play in influencing the relationship between authentic leadership and follower performance. These are positively correlate, especially among followers who have low rather than high levels of PsyCap. The latest study by Hmielsi et al. (2015) in Table 2 examines the relationship between the intangible resources of CEOs and the performance of their companies in stable versus dynamic industry contexts. The results suggest that entrepreneurial experience is positively related to performance in stable environments, while educational attainment, social and psychological capital have a positive relationship with performance in dynamic environments.

Renowned authors

The list of renowned authors was based on the amount of TC that authors acquired for their articles. Individual authors appear in the list without their obtained titles. Since authors contribute to collaborative articles, the H-index value was another important

criterion, which helps to understand the quality of research articles authored by a given researcher (Roldan-Valadez et al., 2019; Vasudevan et al., 2025). NoA in Table 3 presents the number of articles on PsyCap in entrepreneurship (PsyCap), as well as the total number of articles (Overall) published in the WoS database. The authors' affiliations are based on the articles provided by the authors. For information on organizations where authors are active, check out the WoS or other databases.

Table 3. Renowned authors (source: Author's processing based on the Web of Science database (Clarivate Analytics, 2025))

Author	Affiliation	NoA		TC	H-Index
		PsyCap	Overall		
Luthans, Fred	University of Nebraska Lincoln	4	199	1113	61
Avolio, Bruce J.	University of Washington Central Washington	1	145	608	71
Avey, James B.	University Thunderbird Sch Global Management	1	44	608	27
Peterson, Suzanne J.	Thunderbird Sch Global Management	1	44	608	26
Pina e Cunha, Miguel	Universidade Nova de Lisboa	2	165	415	39
Rego, Armenio	Universidade de Aveiro	2	69	415	30
Marques, Carla	University of Tras-os- Montes & Alto Douro	1	76	388	26
Sousa, Filipa	Polytechnic Institute of Leiria	1	24	388	9
Haar, Jarrod M.	Massey University	1	130	230	30
Roche, Maree	University of Waikato	1	34	230	16

The issue of PsyCap in entrepreneurship is still in the early stages of research. Interest in this topic has grown significantly in recent years. Among the renowned authors, it is certainly worth highlighting the authors of the most notable articles who have participated and continue to contribute to the development of this topic. Researchers focusing specifically on PsyCap and the development of this field also play an important role.

Influential journals

The ranking of influential journals (Table 4) is compiled according to NoA, as in the case of Suhaimi and Mahmud's study (2022) on PsyCap in entrepreneurship, but also according to the arrangement of TC articles devoted to this issue, such as Nobanee et al.'s study (2021). Table 4 also includes the Impact Factor (IF), which many researchers and journals accept as an indicator of journal quality (Vasudevan et al., 2025), as well as the JCR Category Quartile, which provides information on the citation performance of a given journal and its place in the community of journals in a given scientific category (Asan & Aslan, 2020).

Table 4. Influential journals (source: Author's processing based on the Web of Science database (Clarivate Analytics, 2025))

Rank by NoA	Journal	IF 2024	JCR Category Quartile	NoA	TC
1	Frontiers in Psychology	2.9	Q2	31	456
2	Sustainability	3.3	Q3	5	62
3	Journal of Business Research	9.8	Q1	3	404
4	Journal of Leadership & Organizational Studies	4.9	Q1	3	86
5	Journal of Small Business Management	6.0	Q1	3	85

Rank by TC	Journal	IF 2024	JCR Category Quartile	NoA	TC
1	Human Resource Development Quarterly	3.8	Q1	1	608
2	Frontiers in Psychology	2.9	Q2	31	456
3	Journal of Business Research	9.8	Q1	3	404
4	Journal of Occupational Health Psychology	3.9	Q1	1	230
5	Journal of Organizational Behavior	1.2	Q3	1	222

Among the influential journals are 'Frontiers in Psychology' and 'Journal of Business Research', both of these journals ranked equally in terms of the number of articles and the number of total citations in WoS. The largest number of articles on PsyCap in entrepreneurship is published by 'Frontiers in Psychology', which had published 31 articles with a total of 456 citations in articles found in the WoS database as of the date of data extraction. At the time of data extraction, only 3 articles on this topic had been published in the 'Journal of Business Research', however, the journal has a significantly higher IF and achieved 52 fewer total citations than 'Frontiers in Psychology'. This reflects the quality of the journal.

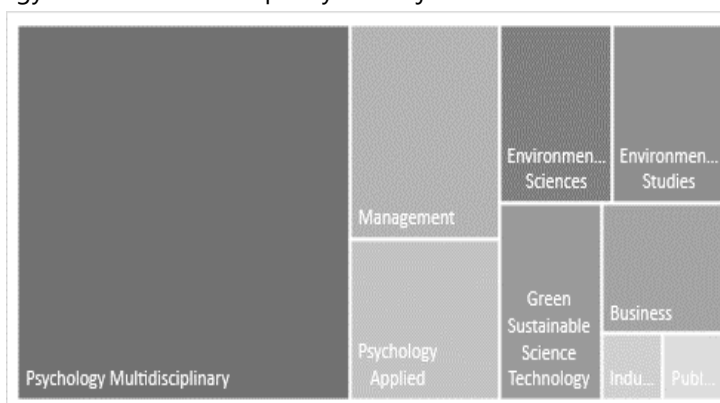


Figure 3. Web of Science Categories database (source: Author's processing based on the Web of Science database (Clarivate Analytics, 2025))

The majority of articles are in the WoS category (Figure 3) Psychology Multidisciplinary (46.97 %), followed by Management (12.10 %), Psychology Applied (9.09 %), Environmental Sciences, Environmental Studies, and Green Sustainable Science Technology, with 7.58 % each, Business (6.06 %), and Industrial Relations Labor together with Public Environmental Occupational Health, with 1.52 % in each category. The current trend thus continues to be the study of PsyCap, particularly in psychological disciplines that are penetrating other scientific fields. The most

prominent field at present is Management, where this concept is mainly associated with leadership (Reichard et al., 2024; Round et al., 2024; Tho et al., 2025).

Characteristics of psychological capital in entrepreneurship

Similar to the study by Li et al. (2023), the CCAT method was used in this study to evaluate the included articles. The results of this analysis are demonstrated in Table 5. The results are sorted by CCAT score and, in the case of equal scores, by TC and year of publication.

The CCAT scores ranged from 39 (3 cases) to 14 (1 case) scores. The mean score is 31 points. PsyCap research in entrepreneurship reached a peak in 2017 (see Figure 2), which was the first year that the group of entrepreneurs was used as a research sample. During this period, two studies appeared, until 2025, by which time there were already four studies. The highest number of studies with a sample of entrepreneurs was recorded in 2022, when there were 7 studies. The most preferred journal for publishing the authors' studies was *Frontiers in Psychology*, where 11 articles were published. Additional preferred journals include the *Journal of Business Venturing and Sustainability*, in which 2 papers were published. The articles are published by 2 (5 cases) to 8 (1 case) authors. The average number of contributors is 4 authors per article. These 36 included publications had a total of 622 citations in another articles in the WoS database at the time of extraction.

Based on the sources and their content, the most frequently used keywords or concepts include Psychological capital (or PsyCap), which appears in 227 cases, Entrepreneur/Entrepreneurship (320 cases), Small and Medium Enterprises or SME (65 cases), Performance/Business Performance/Firm Performance/Financial Performance (229 instances), Social capital (61 instances), Structural Equation Modelling (SEM)/PLS-SEM/CB-SEM (46 instances), COVID-19 (20 instances), Reliability/Validity (35 instances), Mediation/Mediating effect (59 cases), Women/Female entrepreneurs (47 cases), Resilience (63 cases), Self-efficacy (56 cases), Optimism (46 cases) and, finally, Hope (51 cases).

In the studies, four main themes were identified as the content of the publications. These themes included The Central Role of Psychological Capital (PsyCap) in Entrepreneurship, Impact of PsyCap on Entrepreneurial Outcomes and Performance, Coping with Crisis and Adversity, and Interplay with Other Resources and Factors. Multiple subtopics were identified for each main theme, as shown in Table 6.

Table 5. Ranking of articles based on CCAT scores (source: Author's processing)

No.	Author(s)	Title	Journal	Key findings	TC	CCAT
1	Jaili et al. (2021)	The Mediating Effect of Coping Strategies Between Psychological Capital and Small Tourism Organization Resilience: Insights From the COVID-19 Pandemic, Malaysia	Frontiers in Psychology	PsyCap of small tourism firm owners in Malaysia significantly affects organizational resilience. Furthermore, the study discovered that problem-focused and emotion-focused coping strategies have partial mediating effects on the association between PsyCap and organizational resilience	19	39
2	Elgarhy & Alotaibi (2025)	Beyond subjective norms and passion: The interplay of self-efficacy, intention, psychological capital, and firms performance in shaping entrepreneurial persistence behavior	Tourism and Hospitality Research	Subjective norms and entrepreneurial passion enhance self-efficacy, which in turn strengthens intention. Additionally, PsyCap boosts self-efficacy and intention, while perceived barriers hinder intention and persistence behavior.	0	39
3	Zhou et al. (2025)	Influence of entrepreneurial psychological capital on business model innovation: the roles of dynamic capabilities and technical environmental uncertainty	Current Psychology	PsyCap can significantly improve new ventures' business model innovation, entrepreneurial dynamic capabilities play a mediating role in the relationship between PsyCap and business model innovation, and technical environmental uncertainty negatively regulates the relationship between dynamic capabilities and business model innovation	0	39
4	Obšchonka et al. (2023)	Job burnout and work engagement in entrepreneurs: How the psychological utility of entrepreneurship drives healthy engagement	Journal of Business Venturing	The psychological utility of entrepreneurship plays a key role in maintaining healthy work engagement and preventing burnout among entrepreneurs. This utility then maintains strong work engagement that persists even beyond working time and helps prevent burnout, which is beneficial not only for entrepreneurs as such, but also for their companies	30	38
5	Grözinger et al. (2025)	The impact of SME leader's psychological capital on strategic responses during crisis	Business Research Quarterly	Leaders with a high PsyCap prefer adopting investment measures, which positively influences the performance of their companies during a crisis. However, adopting cost-cutting measures lowers performance	2	38
6	Tisu et al. (2023)	Entrepreneurial well-being and performance: antecedents and mediators	Frontiers in Psychology	PsyCap was a precursor of entrepreneurial satisfaction both directly and through work engagement. Also, PsyCap predicted entrepreneurs' mental health directly and through work-life balance	2	38

No.	Author(s)	Title	Journal	Key findings	TC	CCAT
7	Digan et al. (2018)	Women's Perceived Empowerment in Entrepreneurial Efforts: The Role of Bricolage and Psychological Capital	Journal of Small Business Management	The study emphasises that although perceived empowerment is important in nature, its positive impact on business performance is even more significant when female entrepreneurs effectively utilise available resources and possess high PsyCap .	73	37
8	Groźinger et al. (2022)	The power of shared positivity: organizational psychological capital and firm performance during exogenous crises	Small Business Economics	The results support the idea that organizational PsyCap positively influences creative innovation in small and medium enterprises, and thus their performance during crises. At the same time, the research contributes to the literature on organizational behavior by showing that the psychological resources of small and medium enterprises can strengthen performance in times of crisis and help prepare for future crises	52	35
9	Tanner et al. (2022)	Psychological capital, social capital and organizational resilience: A Herringbone Model perspective	International Journal of Disaster Risk Reduction	Organizational resilience is not solely the result of PsyCap or social capital individually, but is shaped by the interaction of both types of capital. The study therefore emphasizes that resilience is a complex process in which personal resources and network resources interconnect and reinforce one another so that the organization can thrive even in unpredictable situations	26	35
10	Modesti et al. (2020)	Social and Psychological Capital for the Start-Up of Social Enterprises With a Migratory Background	Frontiers in Psychology	While social and PsyCap were independently activated to start from scratch in the resettlement community, they occurred in interrelation in a subsequent phase when participants transformed their direct experiences related to migration into the human capital of their enterprise	11	35
11	Kibler et al. (2024)	Aging and entrepreneurs' emotional exhaustion: The role of entrepreneurial strategy, psychological capital, and felt age gap	Journal of Business Venturing	The study introduced the concept of the "Hebe Effect in entrepreneurship," which shows how feeling younger than biological age acts as a stress absorber and protects entrepreneurs from the pressures of business, but also how entrepreneurs' strategic decisions evolve over the course of their lives and affect their personal well-being	5	35

No.	Author(s)	Title	Journal	Key findings	TC	CCAT
12	Kadiyono & Sulistiobudi (2024)	Linking psychological capital, technology readiness and entrepreneurial orientation to entrepreneurs' financial performance: a study of women MSMEs in Indonesia	Cogent Business & Management	Technological readiness significantly moderates the relationship between <i>PsyCap</i> and the financial performance of entrepreneurs. This suggests that technological readiness can increase performance but does not affect the <i>PsyCap</i> factors that influence the financial performance of female entrepreneurs	2	35
13	Kariv et al. (2025)	Harnessing psychological capital for technological capability development: An entrepreneurial response to crises	Technology in Society	NLP-driven findings highlight the substantial impact of positivity attributed to both external support-seeking and <i>PsyCap</i> on the positivity associated with technological capability development during a crisis	0	35
14	Hu et al. (2022)	Entrepreneurial Passion and Entrepreneurial Success—The Role of Psychological Capital and Entrepreneurial Policy Support	Frontiers in Psychology	Entrepreneurial passion can increase individual <i>PsyCap</i> and positively affect entrepreneurial success. Entrepreneurship policy support at the environmental level can promote the effect of entrepreneurial passion on the accumulation of <i>PsyCap</i> , and promote the transformation of entrepreneurial passion into entrepreneurial success through <i>PsyCap</i>	17	34
15	Zeng et al. (2023)	Online experimental research on the psychological capital development of new venture entrepreneur under the COVID-19 pneumonia epidemic	Frontiers in Psychology	The research findings indicated that structured reading materials could effectively improve the overall <i>PsyCap</i> of the subjects and impact in every dimension	8	34
16	Jalil et al. (2022)	Microfinance services and MSE growth in Pakistan: The mediating perspective of social and psychological capital	Journal of Entrepreneurship, Management and Innovation	Social and <i>PsyCap</i> are the crucial factors that partially mediate the relationship between microfinance services and MSE growth in Pakistan	7	34
17	Ephrem et al. (2021)	Entrepreneurial Motivation, Psychological Capital, and Business Success of Young Entrepreneurs in the DRC	Sustainability	Positive effect of opportunity-led motivation on <i>PsyCap</i> was found, but the findings did not support any direct effect of entrepreneurial motivation on business success. Instead, <i>PsyCap</i> positively and significantly mediated the relationship between entrepreneurial motivation and business success	23	33

No.	Author(s)	Title	Journal	Key findings	TC	CCAT
18	Jaili et al. (2023)	The influence of psychological capital and social capital on women entrepreneurs' intentions: the mediating role of attitude	Humanities and Social Sciences Communication	Social capital, PsyCap, and entrepreneurial attitudes interact to encourage women entrepreneurs' intentions to expand their businesses. Entrepreneurial attitudes were also discovered to partially mediate the influential relationship between PsyCap and women entrepreneurs' intentions	10	33
19	Schwarz et al. (2024)	Social Entrepreneurs' Perceptions of the Institutional Environment: The Influence of Human and Psychological Capital	International Journal of Public Administration	PsyCap components affect social entrepreneurs' perceptions of regulative institutions at different stages of the venture. Self-efficacy and optimism are useful at the beginning of the social entrepreneur's journey, whereas hope and resilience are more important for the viability of social enterprise at later stages	3	32
20	Eishaer et al. (2024)	Managing Stress and Building Resilience in Tourism and Hospitality Entrepreneurship: The Power of Psychological and Social Capital	Journal of Tourism and Services	The combination of PsyCap and social capital increases entrepreneurs' ability to effectively manage stress and contributes to their psychological and organizational resilience, which is essential for long-term success in the turbulent environment of tourism	3	32
21	Yao & Li (2023)	The causal exploration of digital entrepreneurial psychological capital configurations based on fsQCA	Journal of Innovation & Knowledge	To improve digital PsyCap, digital entrepreneurs should actively seek support from family members, build self-regulated entrepreneurial learning skills, gain business experience by adjusting focus on regulation to a lower level, or gather digital business experience in a good business environment	20	30
22	Hasan et al. (2020)	Positive psychological capital, market orientation, and business performance of family business in the culinary sector: A research study	Economics and Sociology	The study highlights how family businesses need to not only nurture positive psychological traits among family members to be high performance, they also need to actively focus on the market and their customers	8	30
23	Chitsazan et al. (2017)	Intellectual, Psychological, and Social Capital and Business Innovation: The Moderating Effect of Organizational Culture	Iranian Journal of Management Studies	The results indicated that intellectual, PsyCap, and social capitals significantly affect business innovation	7	30

No.	Author(s)	Title	Journal	Key findings	TC	CCAT
24	Lanjimba et al. (2024)	Unveiling the interplay of psychological capital, family business, and gender on firm performance during COVID-19	International Entrepreneurship and Management Journal	PsyCap positively influences firm performance, supporting the hypothesis that owners with higher PsyCap contribute to better business outcomes	3	30
25	Byarugaba et al. (2022)	Mediation of psychological capital on human resource management practices and firm financial performance	International Journal of Business and Society	Human resource management practices, PsyCap and financial performance are positively correlated to one another. Moreover, through hierarchical regression analyses, PsyCap was found to partially mediate the relationship between human resource management practices and financial performance	0	30
26	Wang et al. (2022)	The Influence of Psychological Capital and Social Capital on the Entrepreneurial Performance of the New Generation of Entrepreneurs	Frontiers in Psychology	There is a significant positive correlation between the dimensions of PsyCap and entrepreneurial performance. Gender, age, educational background, marital status, the establishment time of enterprises, and the number of employees all have a significant impact on the PsyCap of the new generation of entrepreneurs	16	27
27	Yousaf et al. (2020)	Mediating Effects of Entrepreneurs' Work Performance on the Relationship between Their Psychological Capital and Growth Intentions: A Study on Malaysian Entrepreneurs	The South East Asian Journal of Management	The findings confirmed the direct relationships between PsyCap and work performance; and PsyCap and growth intention of entrepreneurs. However, this study found no mediating effect of work performance in the relationship between PsyCap and growth intention of the entrepreneurs	1	27
28	Gao et al. (2021)	Family support and entrepreneurial passion: The mediating role of entrepreneurs' psychological capital	Social Behavior and Personality	The results show that financial support and social capital support had a stronger influence on entrepreneurial passion than did emotional support	17	26
29	Fang et al. (2020)	Psychological capital, coping mechanisms and organizational resilience: Insights from the 2016 Kaikoura earthquake, New Zealand	Tourism Management Perspective	The study identified that problem-solving and emotion-focused stress management mechanisms enabled owners and managers to activate components of PsyCap to build organisational resilience	99	24

No.	Author(s)	Title	Journal	Key findings	TC	CCAT
30	Gao et al. (2020)	The Entrepreneur's Psychological Capital, Creative Innovation Behavior, and Enterprise Performance	Frontiers in Psychology	It is found that the fitting index of the model of entrepreneurs' PsyCap, creative innovation behavior, and enterprise performance meets the fitting standard, which shows that both the PsyCap and the creative innovation behavior of entrepreneurs can promote the improvement of enterprise performance. Entrepreneur's creative innovation behavior plays an intermediary effect in the positive influence of entrepreneur's PsyCap on enterprise performance	31	23
31	Li et al. (2022)	The relationship between farmers' entrepreneurial behavior and macroeconomics based on the probit regression model and entrepreneurial psychological capital	Frontiers in Psychology	Macroeconomics can influence farmers' entrepreneurial behavior to varying degrees by affecting their entrepreneurial psychological capital, which acts as an intermediary between farmers' entrepreneurial behavior and macroeconomics	1	23
32	Wang et al. (2018)	Antecedent and Consequences of Psychological Capital of Entrepreneurs	Sustainability	Organizational climate, organizational justice, leader-member exchange, authentic leadership have significant and positive influences on PsyCap, while occupational stressor is significantly associated with PsyCap. Among them, authentic leadership has the strongest impact on PsyCap. Results also found that PsyCap has significant and positive influences on entrepreneurs' job satisfaction, performance, attitude, organizational citizenship behavior, while it also has negative influences on undesirable behavior	15	21
33	Hizam-Hanafiah et al. (2017)	The influence of psychological capital on the growth intentions of entrepreneurs: A study on Malaysian SME entrepreneurs	BEH - Business and Economic Horizons	Two out of four dimensions of PsyCap (hope and self-efficacy) have significant and positive influence on entrepreneurs' growth intentions. It is also revealed that PsyCap as a core construct, more powerfully predicts the growth intentions as compared to its first order constructs separately	12	21
34	Xu & Zhao (2020)	The Influence of Entrepreneurs' Psychological Capital on Their Deviant Innovation Behavior	Frontiers in Psychology	There are significant correlations between an entrepreneur's PsyCap, work values, and entrepreneurial work remodelling and deviant innovation behavior with PsyCap and work values correlating most strongly with deviant innovation. With the addition of the entrepreneur's PsyCap as an adjustment variable and interaction, the explanatory power of the equation increased from 17% to 24.2 %	16	20

No.	Author(s)	Title	Journal	Key findings	TC	CCAT
35	Wang et al. (2019)	Effects of Human, Relational, and Psychological Capitals on New Venture Performance	Frontiers in Psychology	Entrepreneurs with PsyCap tend to have a reputation for mental hardness that attracts customers as well as situations that enable the organization to reinforce their capacity within the organization	17	17
36	Bockorny & Youseff-Morgan (2019)	Entrepreneurs' Courage, Psychological Capital, and Life Satisfaction	Frontiers in Psychology	Results show that entrepreneurs' courage is related to their life satisfaction, even after accounting for various characteristics of the entrepreneur and the venture. Moreover, PsyCap fully mediates the relationship between courage and life satisfaction	66	14

Table 6. Identified main themes and subthemes (source: Author's processing)

Main theme	Subthemes
The Central Role of Psychological Capital (PsyCap) in Entrepreneurship	Definition and Components Malleability and Development Enhanced Performance and Success
Impact of PsyCap on Entrepreneurial Outcomes and Performance	Growth Intentions Innovation and Business Model Innovation (BMI) Well-being and Stress Reduction COVID-19 Pandemic as a Context
Coping with Crisis and Adversity	Organizational Resilience Coping Strategies Mediating and Moderating Effects
Interplay with Other Resources and Factors	Complementary Forms of Capital Technological Preparedness Other Influencing Factors

The most important theme bridging across the rest and appearing in every article is the central role of PsyCap in entrepreneurship. Authors focus on its definition and components as well as the malleability and development of this capital (Yao & Li, 2023; Zeng et al., 2023) for entrepreneurial purposes. It is characterized as a key intangible resource for entrepreneurs, equipping them with a mindset focused on success (Jalil et al., 2023; Grözinger et al., 2025). A key finding across studies was also the positive (Hizam-Hanafiah et al., 2017) and significant influence of PsyCap (Xu & Zhao, 2020) on various indicators of business performance (Grözinger et al., 2022; Kadiyono & Sulistiobudi, 2024). This predictor of business growth (Yousaf et al., 2020; Tisu et al., 2023) supports creative innovation and is key to business model innovation in new ventures, enabling entrepreneurs to navigate uncertainty and promote new solutions (Zhou et al., 2025; Kariv et al., 2025), as it helps reduce stress, anxiety, and emotional exhaustion, especially in challenging environments, and maintain optimism in the face of challenges (Kadiyono et al., 2024; Elgarhy & Alotaibi, 2025). In recent years, PsyCap studies have therefore focused on addressing the issue of Covid-19, with many studies (Jalil et al., 2021; Lanchimba et al., 2024) have examined the impact of the COVID-19 pandemic on entrepreneurs and small and medium-sized enterprises and explored how PsyCap and related factors enable problem-solving and resilience during this period. The Wang et al. study (2018) or Obschonka et al. study (2023) deal with problem-focused and emotion-focused coping strategies and their mediating role in the relationship between PsyCap and organisational resilience, where PsyCap increases organisational resilience (Tanner et al., 2022) and supports companies in quickly recovering from disaster-related difficulties (Fang et al., 2020; Hasan et al., 2020; Schwarz et al., 2024). To make these relationships more comprehensive, PsyCap often interacts with other variables such as social capital (Chitsazan et al., 2017; Wang et al., 2022), human capital (Modesti et al., 2020; Byarugaba et al., 2022), highlighting their collective importance for entrepreneurial success and resilience (Digan et al., 2018; Wang et al., 2022). Studies also examine the role of entrepreneurial passion (Gao et al., 2021; Hu et al., 2022), family support (Hasan et al., 2020; Yao and Li, 2023),

seeking external support (Kariv et al., 2025), and perceived barriers (Ephrem et al., 2021) in shaping entrepreneurial outcomes.

The majority of research designs employ a quantitative approach based on questionnaire surveys using a Likert scale to collect and analyse large amounts of data. A particularly frequently used analytical method for testing relationships between variables and hypotheses is structural equation modelling. The usage and popularity of this method lies in its ability to test models that include many variables (Vaithilingam et al., 2024), including direct and indirect effects, which is crucial for complex psychological constructs such as psychological capital. At the same time, it can work with latent variables (Sakaria et al., 2023) that are not directly measurable but are derived from several observable indicators. This allows for a more accurate and robust analysis than simpler statistical methods would provide. This method is used in 26 studies. The additional statistical methods used are descriptive statistics, correlation analyses, regression analyses and analysis of variance. To ensure the quality of measurements, reliability tests (mostly Cronbach's alpha) and validity tests (mostly confirmatory factor analysis related to the use of structural equation modelling) are widely used. For the qualitative approach, the most common method is thematic analysis, which is used in 8 studies, or Natural Language Processing, which is used in 6 studies. One study explicitly mentions a sequential mixed-methods design, which combines quantitative data collection (surveys) with subsequent qualitative interviews. It follows from the above that most articles focus on the quantitative analysis of large data sets to identify and test relationships between variables, with SEM being a key tool.

4. Discussion

Findings confirm that PsyCap positively influences a wide range of performance. For a venture, this includes its efficiency (Hasan et al., 2020; Tisu et al., 2023; Grözinger et al., 2025), financial performance (Byarugaba et al., 2022; Kadiyono & Sulistiobudi, 2024), growth intentions (Hizam-Hanafiah et al., 2017; Yousaf et al., 2020), innovation (Chitsazan et al., 2017; Gao et al., 2020) and organisational resilience (Jalil et al., 2021), often through complex mechanisms and in different contexts. PsyCap, defined as a positive psychological state consisting of four dimensions – self-efficacy, optimism, hope, and resilience – is considered a critical intangible resource and factor of sustainable competitive advantage for businesses (Grözinger et al., 2025), especially in turbulent and uncertain environments such as the COVID-19 crisis (Jalil et al., 2021; Zeng et al., 2023; Lanchimba et al., 2024). It is important to note that PsyCap is a 'state-like' variable (Grözinger et al. 2022), which means that it can be developed through various interventions, such as structured reading materials (Zeng et al., 2023), training (Kadiyono & Sulistiobudi, 2024) or mindfulness exercises (Zeng et al., 2023).

Based on a study by Tisu et al. (2023), it's a precursor to entrepreneurial well-being, including work engagement, entrepreneur satisfaction, and mental health. That's because it reduces crisis-related stress (Kariv et al., 2025), preserving mental and cognitive capacity for strategic thinking. This helps entrepreneurs to rethink the limitations of the crisis and interpret challenges as opportunities (Grözinger et al.,

2025), as people with high PsyCap prefer investment measures, but they can also use organisational psychological capital (OPC), which represents the sum of individual PsyCap, to mitigate the negative effects of external crises (Grözinger et al., 2022). Reduced crisis tension paves the way for a more strategic, proactive, and long-term approach and creates conditions for seeking external support (knowledge, mentoring, and resources) necessary for technological progress (Kariv et al., 2025). The role of technology is significant in most business strategies, from managing processes to marketing, and technology-enabled initiatives have been crucial for businesses surviving global crises, particularly for online businesses (Kadiyono & Sulistiobudi, 2024).

Throughout this process, PsyCap performs a crucial role as a mediator, connecting the individual components and thus representing, according to Yousaf et al. (2020), Ephrem et al. (2021), and Zeng et al. (2023), it is a better predictor of entrepreneurial success than its individual components. It acts as a precursor to entrepreneurial well-being (Tisu et al., 2023), which is positively related to work engagement, which in turn leads to higher entrepreneurial satisfaction (Yousaf et al., 2020). Satisfaction is also linked to the courage (Bockorny & Youseff-Morgan, 2019) to embark on entrepreneurship. Based on the findings of Ephrem et al. (2021), entrepreneurs motivated by opportunity have demonstrably higher levels of PsyCap compared to those motivated by necessity. These individuals embark on entrepreneurship because they believe in their entrepreneurial competencies and have more resources to overcome any obstacles. They are confident, optimistic in their expectations, and prepared to overcome any difficulties. At the same time, entrepreneurial motivation has no direct significant impact on business success, but it has an indirect and significant impact through PsyCap. Approximately 7% of the impact of entrepreneurial motivation on business success is manifested through PsyCap. It has been found that opportunity-motivated entrepreneurs have 4% higher PsyCap and, as a result, have a 3% greater chance of success in business compared to those who are necessity-motivated (Ephrem et al., 2021).

Research suggests (Obschonka et al., 2023) that this may be due to the psychological usefulness of their job. This indicates that the positive, energizing activation pattern of motivation outweighs the negative, exhausting stress process. In their case, work demands are less stressful and they have sufficient work and personal resources to cope with tasks. Although the study by Obschonka et al. (2023) did not find that self-employed entrepreneurs differed in their level of PsyCap from non-employing entrepreneurs or employees in general, psychological capital is a key personal resource that helps entrepreneurs cope more effectively with stress and uncertainty. In addition, Obschonka et al. (2023) suggest that this enhanced psychological utility could be an obstacle to future business growth. Individuals tend to place a high value on avoiding the loss of existing benefits (such as perceived utility), which is referred to as loss aversion or status quo bias. This may mean that sole entrepreneurs may be reluctant to expand their entrepreneurship and hire others if it would potentially lead to a loss of their exceptional psychological utility, even if it could lead to increased economic profits.

Despite the common belief that entrepreneurship is stressful, entrepreneurs on average report less burnout (Bockorny & Youseff-Morgan, 2019) than employees. Together, entrepreneurs also tend to have higher levels of psychological capital compared to other populations (Gao et al., 2020; Schwarz et al., 2024). The feeling of being younger than one's biological age also acts as a buffer against emotional burnout (Kibler et al., 2024), as PsyCap increases with biological age and its effect on reducing emotional burnout is stronger in those who feel younger than their biological age. Gao et al. (2021) believe that this is due to passion, a construct that has affective (strong positive emotions), cognitive (the activity is very important to the individual), and behavioral (investing time and energy in it) components (Elgarhy & Alotaibi, 2025). According to Hu et al. (2022), a key finding is that PsyCap mediates the relationship between entrepreneurial passion and entrepreneurial success because it provides psychological resources for coping with the emotional challenges inherent in entrepreneurial activity (Wang et al., 2019).

In contrast, Gao et al. (2021) found that entrepreneurial PsyCap did not mediate the relationship between family emotional support and entrepreneurial passion, because one possible reason is that young entrepreneurs already have strong and positive emotions stemming from their interests in starting a business, making emotional support less critical as a mediator of their passion. Nevertheless, the family is considered the primary source of support for entrepreneurs, especially in difficult situations, and provides various types of assistance to achieve success (Gao et al., 2021; Yao & Li, 2023; Lanchimba et al., 2024). Care and understanding from family members can alleviate the physical and mental stress of entrepreneurs, making them more confident and optimistic about the future, according to Yao & Li (2023). and vice versa, a lack of family support can lead to feelings of helplessness, negatively affect physical and mental health, and increase the risk of getting stuck in problems. This is particularly important for young entrepreneurs, where the family can provide financial support (Gao et al., 2021) or social capital, where networks of parents or partners can help young entrepreneurs gain access to information and policies and overcome obstacles (Gao et al., 2021; Yao & Li, 2023).

5. Conclusion

The aim of this study is to investigate the literature on synergizing PsyCap with entrepreneurship in order to identify current developments in research on this issue and the direction of research focus. PsyCap research in entrepreneurship is still in its infancy and offers as yet undiscovered opportunities for research and application. It first appeared in connection with business in 2010, but the greatest interest in research was not recorded until 7 years later in 2017, when interest in research on this topic began to grow. Research continues to be most common in the fields of Multidisciplinary Psychology and Management, but there is also evidence of overlap into other disciplines. Interest in research is widespread throughout the world, but most of the output comes from China and the USA. From this perspective, there is a higher interest in research on this topic in Asian countries. However, institutions from the USA and Portugal achieve excellent scientific results. Similar to the study by Li et al. (2023), *Frontiers in Psychology* was found to be a significant journal in this case as

well. The study found it to be the journal with the most publications on the issue, and in the category with the highest number of citations. The Journal of Business Research, which achieves higher journal quality compared to Frontiers in Psychology, was also included in both categories. These conclusions were based on findings from 145 journals in the Web of Science database on PsyCap in entrepreneurship.

The CCAT is designed to evaluate a wide range of research types, including qualitative, quantitative, mixed-methods, and review studies. This allows for direct comparison and integration of results from different research designs. Unlike many other critical appraisal tools, CCAT has data available on its validity and reliability (Crowe et al., 2012). This has led to its use in evaluating the content of individual articles included. Such studies require considerable time and effort (Tod et al., 2022) and should stimulate further research. In the case of this study, the research focused on insights gained from a sample of entrepreneurs. The articles included achieved CCAT scores ranging from 14 to 39 points, with an average score of 31 points. The articles covered 4 main themes. These topics also included subtopics related to the main topic. Most articles focus on the quantitative analysis of large data sets to identify and test relationships between variables, with SEM as the key tool.

From a theoretical perspective, the study provides an overview of studies and current research trends in this area of research. It expands on existing knowledge about PsyCap and explores the need for this capital in entrepreneurship. It opens up possibilities for following current research trends or expanding into new topics that have not yet been explored. In the future, it will be necessary to continue research and make new investigations. Although the current study agreed on the positive effects of PsyCap, further research is needed in the future, as uncontrolled optimism and self-confidence can lead to overestimating personal abilities and subsequent burnout (Dawkins et al., 2019) or underestimating risks, which can be dangerous in the workplace (Nembhard & Serbes, 2020). In practical terms, entrepreneurs should focus on developing this type of capital and should not underestimate it, but equally should not overestimate it. As part of education, support programs should be created for the training, usage, and understanding of this capital. The COVID-19 crisis, in particular, has brought this topic to the attention of more people and encouraged entrepreneurs to develop PsyCap. Governments should support this development more in their policies and entrepreneurship programs. Meanwhile, such interventions seem to be more prevalent in developing countries.

The study also had certain limitations. Only articles indexed in the Web of Science database were analysed, which could have skewed the results. The use of other databases such as Google Scholar, Scopus, ERIC, PsycINFO (EBSCO), SpringerLink, or ScienceDirect could have supplemented the research or taken it in other directions on the issue of PsyCap in entrepreneurship. Only scientific articles were used, which limited the current trend. Also, only the articles in English were selected due to the authors' limited language skills, while the use of foreign-language studies would have broadened the research. Furthermore, the research on PsyCap in entrepreneurship focused only on studies where the research sample consisted of entrepreneurs, which also represents a limitation in this issue. Although the CCAT tool was used to evaluate the included articles, relying solely on self-assessment as the only method of data

collection may compromise the validity of the information obtained. Nevertheless, the study provides insight into the issue of PsyCap in entrepreneurship and raises the possibility of the importance of this capital for entrepreneurs.

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