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State Of the Art on Psychological Capital Interventions and Alternatives for Their Practice in Organizational Contexts

LUANA FOLCHINI DA COSTA

Universidade de Caxias do Sul, Brazil

SILVANA REGINA AMPESSAN MARCON

Universidade de Caxias do Sul, Brazil



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Correspondence: Luana Folchini da Costa (<https://orcid.org/0000-0002-3036-5911>). Email: lfcosta@ucs.br

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Abstract

In the contemporary organizational environment, understanding and developing different types of capital —human, social, and psychological— is essential for maximizing employee performance and well-being. Psychological capital (PsyCap) is composed of measurable and developable positive qualities, as self-efficacy, hope, resilience, and optimism, which significantly impact employee motivation and performance. This study conducted a state-of-the-art review to evaluate the effectiveness of PsyCap interventions. It reviewed 64 articles from the Scopus, ScienceDirect, and Web of Science databases, resulting in a final sample of 16 articles after removing duplicates and ineligible articles. The results indicate that PsyCap interventions promote the development of these qualities, improving psychological well-being and employee performance. Successful implementation of these interventions requires a clear understanding of workers' needs and strong support from organizational leadership.

Keywords: interventions, psychological capital, organizational context.

Estado Actual de las Intervenciones sobre Capital Psicológico y Alternativas para su Práctica en Contextos Organizacionales

Resumen

En el entorno organizacional contemporáneo, comprender y desarrollar diferentes tipos de capital —humano, social y psicológico— es esencial para maximizar el desempeño y el bienestar de los empleados. El capital psicológico (PsyCap) se compone de cualidades positivas medibles y desarrollables, como la autoeficacia, la esperanza, la resiliencia y el optimismo, que impactan significativamente la motivación y el desempeño de los empleados. Este estudio realizó una revisión del estado del arte con el objetivo de evaluar la efectividad de las intervenciones de PsyCap. Se revisaron 64 artículos de las bases de datos Scopus, ScienceDirect y Web of Science, resultando en una muestra final de 16 artículos después de eliminar duplicados y artículos no elegibles. Los resultados indican que las intervenciones de PsyCap promueven el desarrollo de estas cualidades, mejorando el bienestar psicológico y el desempeño de los empleados. La implementación exitosa de estas intervenciones requiere un entendimiento claro de las necesidades de los trabajadores y un fuerte apoyo del liderazgo organizacional.

Palabras clave: intervenciones, capital psicológico, contexto organizacional.

Introduction

In the contemporary organizational environment, understanding and developing different types of capital are essential for maximizing employee performance and well-being. Human capital refers to the set of knowledge, skills, and experiences an individual accumulates through education and training, while social capital pertains to the networks and relationships that facilitate cooperation and access to resources (Huang et al., 2021; Xu et al., 2022). Psychological capital (PsyCap) has been consolidated as an important resource in the organizational context, consisting of four main dimensions: self-efficacy, hope, optimism, and resilience (Luthans et al., 2007). Investment in the development of PsyCap has been widely studied in several sectors, demonstrating its positive influence on productivity, job satisfaction, engagement, and employee well-being. However, despite the growing interest in the topic, there are still gaps in the understanding of the application of PsyCap in broad organizational contexts.

Initially, it is appropriate to contextualize and operationally define what is understood as psychological capital. For this purpose we refer to the pioneering study on the subject (Luthans et al., 2006), in which the construct is defined as a positive developmental state of an individual characterized by: (1) Self-Efficacy (Confidence): The belief in one's own ability to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over life events; (2) Hope: A positive motivational state based on an interactively derived sense of successful agency (goal-directed energy) and pathways (planning to meet goals); (3) Optimism: Attributing success to internal and stable causes while attributing failures to external and unstable causes, maintaining a positive and realistic view of the future; and (4) Resilience: The ability to bounce back quickly from adversity, setbacks, conflicts, and failures, as well as adapt to changes and continue moving forward. Luthans et al. (2006) emphasize that these four components are measurable, developable,

and manageable, making PsyCap a practical and applicable approach in various contexts, as organizational settings, to enhance employee performance and well-being.

The impact of PsyCap is observed in different organizational contexts, highlighting its role in increasing employee motivation and improving the services offered. In the hotel industry, it has been associated with improving service quality and greater customer satisfaction (Han & Hwang, 2019). In tourism and hospitality, its relationship with work engagement is crucial for retaining talent and reducing turnover (Tsaur et al., 2019). Furthermore, in community programs, PsyCap is an essential factor for social inclusion and overcoming socioeconomic barriers (Morgan et al., 2019) the acquisition of capital to expedite the (re). The relevance of this psychological capital is also evident in the corporate environment, where leaders who encourage its development among subordinates promote a significant increase in proactivity and innovation (Li et al., 2019).

Recent studies indicate that PsyCap interacts with human and social capital in a complex and interdependent manner, significantly influencing professional performance. For example, research conducted in luxury hotels in China shows that PsyCap has a stronger impact on employees' self-rated performance compared to human and social capital (Huang et al., 2021). Similarly, a study of career adaptability among college students found that PsyCap is the most influential factor in this context, followed by human capital and, to a lesser extent, social capital (Xu et al., 2024). This perspective reinforces the importance of a holistic approach to building organizational capabilities, fostering not only technical skills and knowledge, but also social networks and positive psychological competencies.

PsyCap Interventions (PCI) have been shown to be effective in helping employees cope better with adversity, adapt quickly to change, and maintain a positive attitude in the face of challenges. In a corporate environment characterized by

rapid transformations and high competitiveness, these programs can contribute to job satisfaction, organizational commitment, and organizational citizenship behaviors, promoting well-being and engagement (Bayona & Guevara, 2019; Kong et al., 2018; Salanova et al., 2012; Xu et al., 2022). In sectors with high customer interaction, as hospitality and healthcare, PsyCap is positively correlated with job performance and employee satisfaction (Kong et al., 2018; Youssef & Luthans, 2013). Other studies highlight that interventions aimed at developing PsyCap reduce occupational stress and turnover intention, since resilience and hope enable employees to face adversity more effectively, reducing the desire to leave the organization (Kong et al., 2018). In the educational context, PsyCap is essential for students' career adaptability, helping them transition into the job market (Xu et al., 2024).

Another relevant aspect for discussion is the interaction between positive psychological capital and social capital. PsyCap is intrinsically linked to the strengthening of support networks within organizations, promoting greater collaboration between individuals and a healthier work environment (Wang et al., 2019). In business contexts the existence of positive interpersonal relationships amplifies the effects of PsyCap, favoring psychological safety and organizational cooperation (Morgan et al., 2019).

Given this scenario, this study presents a state-of-the-art review of the literature on interventions designed to develop PsyCap in organizational settings. Practices implemented to strengthen this psychological capital among workers were analyzed, considering the context of application, the methodology adopted, the duration of the interventions, and which dimensions of PsyCap were worked on. In addition, variables as the cultural context of the companies, the sector of activity, and the methodological rigor of the research, including the randomization of participants, were evaluated.

In this way, we seek to provide a comprehensive and evidence-based view of how organizations

are promoting PsyCap and which factors influence its effectiveness, contributing to the theoretical and practical advancement of this area of study. In addition, it is understood that strengthening PsyCap is directly associated with a more positive and collaborative work environment, impacting organizational well-being (Bayona & Guevara, 2019; Salanova & Ortega-Maldonado, 2019). Companies that invest in developing qualities as optimism and hope observe improvements in the organizational climate, greater employee engagement, and an increase in group morale, favoring positive organizational behavior (Youssef & Luthans, 2013). As the practical importance and theoretical foundation of PsyCap grow, it becomes essential to conduct new studies to deepen the understanding of its functions and implications in different organizational contexts (Tsai et al., 2020).

Methodology

To explore the state of the art on interventions aimed at enhancing and developing Psychological Capital, a search for published articles was conducted in the Scopus, ScienceDirect, and Web of Science databases. This selection is based on their breadth, quality, and advanced features. Scopus is one of the largest abstract and citation databases, covering a wide range of disciplines and offering advanced citation analysis tools. ScienceDirect, operated by Elsevier, is a leading repository of full-text articles, providing access to comprehensive journals influential in the field of psychology. Web of Science offers a robust platform for citation analysis and trend discovery, with extensive disciplinary coverage. All these databases are highly respected, ensuring access to high-relevance and scientifically rigorous research. Additionally, their intuitive interfaces and advanced search functionalities facilitate the precise location of relevant articles, making them indispensable for effective and comprehensive research in psychology. Comparative studies, as those by Falagas et al. (2008) and Mongeon and Paul-Hus (2016), corroborate the superiority of these databases in

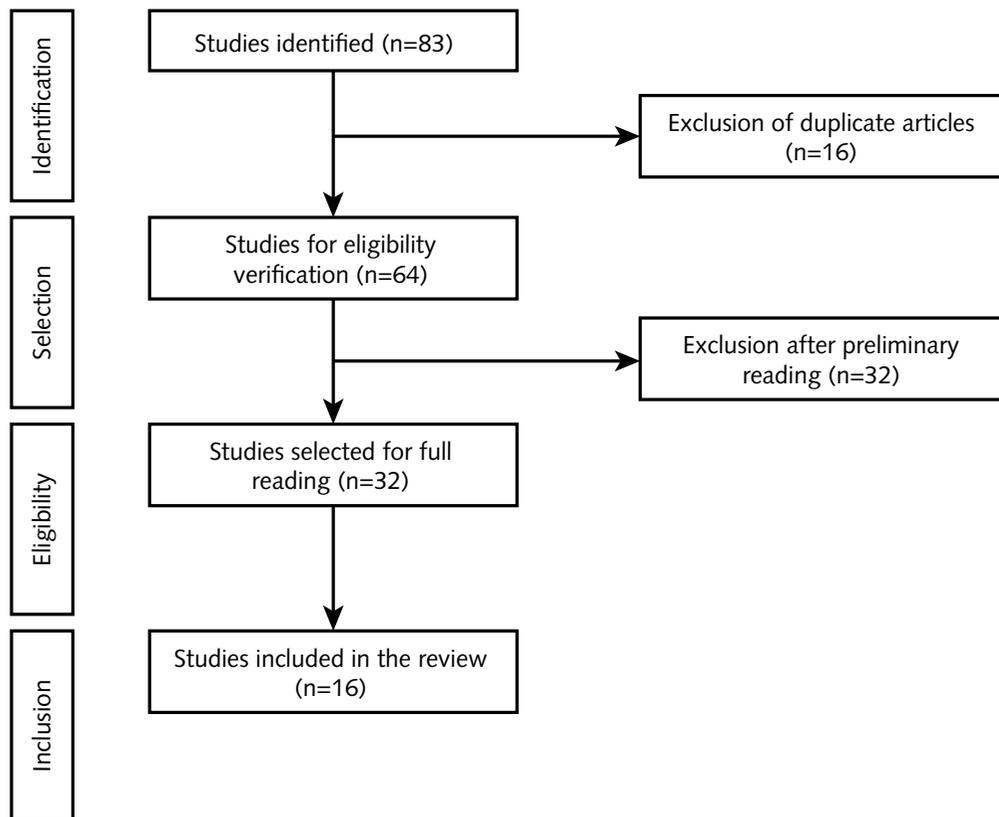
terms of coverage and analysis tools, reinforcing their choice for high-quality academic research.

The initial criterion for article selection was solely based on the search for the expressions: “psychological capital intervention” OR “psycap intervention” contained in the title, abstract, or keywords of the articles. The initial search was conducted on May 31, 2024, and identified 83 articles.

After excluding duplicates, 64 articles published between 2006 and 2024 remained.

The article selection process is presented in the flowchart suggested by the Preferred Reporting of Systematic Reviews and Meta-Analyses [PRISMA] (Moher et al., 2009) and is represented in Figure 1.

Figure 1. Flowchart of Database Search.



Note: **created** by authors.

Results

An initial observation of the current landscape on the investigated topic reveals an upward trend in publications, especially since 2013 (as illustrated in Figure 2), reflecting a growing interest in Psychological Capital and practices for its development in the organizational context. Between 2014 and 2016 this interest remained steady, with studies

expanding to different sectors and examining the role of PsyCap in various organizational environments. From 2017 onwards, research began to focus more on intervention programs (PsyCap Interventions - PCI) and their effectiveness in enhancing PsyCap among employees. Articles published between 2020 and 2022 paid greater attention to

the application of PCI in high-interaction sectors as hospitality and healthcare, highlighting its role in improving job performance and reducing occupational stress. The most recent publications, from 2023 onwards, indicate greater diversification of research topics, including the impact of PCI on career adaptability among students and its potential to reduce employee turnover. Additionally, these studies address the holistic development

of PsyCap, integrating it with human and social capital to promote overall employee well-being and organizational performance.

However, it is important to note that, to date, only 64 studies have been identified in three major international databases. This suggests that the subject is still in an early stage of development, leaving room for identifying gaps and opportunities for both theoretical and empirical advancements.

Figure 2. Timeline of Publications on pci.



Note: X-axis = Years; Y-axis = Number of Publications.

The preliminary analysis of the articles was conducted by reading the title, abstract, and keywords. This analysis resulted in 32 documents presenting proposals for interventions aimed at developing Psychological Capital. The other 32 documents pertained to theoretical or empirical studies that dealt with the definition of the concept and its relationship with other behavioral phenomena and organizational or academic outcomes, predominantly.

The publication of interventions for the development of PsyCap in organizational and work contexts has gained prominence since 2019. An in-depth reading of the articles allowed the establishment of additional criteria for the inclusion of

articles in this review. Peer-reviewed articles and open-access chapters were retained, as some documents originated from conference proceedings or book chapters for which full-text access was not available. Additionally, the articles were divided into two major groups: interventions in organizational contexts and interventions in educational contexts. Only one article did not belong to either of these groups; it was conducted with homeless women. Given the study's objective, articles whose interventions were carried out in organizational contexts with workers were retained. Consequently, the final sample consisted of 16 documents, which are briefly presented in Table 1:

Table 1
Characterization of Studies and Interventions

Article data	Intervention Characteristics
<p>Article 1 - Luthans et al., (2010) Title: The Development and Resulting Performance Impact of Positive Psychological Capital Summary: The conducted study utilized a PsyCap Intervention model with a randomized control group, followed by a study with managers to evaluate whether the intervention enhanced participant performance.</p>	<p>Intervention: Psychological Capital Intervention (pci) Duration: Short duration Sessions: Single session (2 hours) Format: In-person, group setting Results: The intervention demonstrated a positive influence on individual psychological dimensions (hope, self-efficacy, resilience, and optimism) and the core construct of positive psychological capital, leading to a positive impact on participant performance.</p>
<p>Article 2 - Alipour et al., (2013) Title: The Effectiveness of Psychological Capital Intervention Model (pci) on the Mental Health of Experts Working in Iran Khodro Diesel Co., Iran Summary: This quasi-experimental study used a pre-test and post-test design with an experimental group of 30 participants who underwent 10 two-hour pci sessions, focusing on hope, optimism, self-efficacy, and perseverance.</p>	<p>Intervention: Psychological Capital Intervention (pci) Duration: Long duration Sessions: 10 sessions (2 hours each) Format: In-person, group setting Results: The results showed significant improvement in mental health, social function, anxiety, and depression in the experimental group, with no significant differences in physical symptoms.</p>
<p>Article 3 - Zhang et al., (2014) Title: A Structured Reading Materials-Based Intervention Program to Develop the Psychological Capital of Chinese Employees Summary: This study investigates the effectiveness of a structured reading materials-based intervention program to develop the PsyCap of Chinese employees. The study involved 234 participants, comparing the outcomes of an intervention group with a control group.</p>	<p>Intervention: Structured Reading Materials-Based Intervention Program Duration: Short duration Sessions: Single session (30 minutes) Format: In-person Results: Compared to the control group, the intervention group showed significant increases in psychological capital and job performance, with lasting effects observed up to three months after the intervention.</p>
<p>Article 4 - Dello Russo & Stoykova, (2015) Title: Psychological Capital Intervention (pci): A Replication and Extension. Human Resource Development Summary: This study explores the PsyCap intervention developed by Luthans et al. (2010), replicating it with different facilitators and evaluating its practical implications for human resource management, suggesting that these can improve employee performance in a lasting manner.</p>	<p>Intervention: Psychological Capital Intervention (pci) Duration: Short duration Sessions: Single session (3 hours) Format: In-person Results: Significant improvements were observed in PsyCap levels, with lasting effects one month after the intervention. It is considered a low-cost and efficient intervention for developing the psychological capital of workers and students.</p>
<p>Article 5 – Akhoundi e Aerab Sheibani (2017) Title: Effectiveness of the Psychological Capital Intervention Model on Organizational Procrastination of Skill Workers in Iran Khodro Diesel Company, Iran Summary: This study investigates how PsyCap interventions proposed by Luthans can improve job performance by reducing procrastination.</p>	<p>Intervention: Psychological Capital Intervention (pci) Duration: Long duration Sessions: 10 sessions (2 hours each) Format: In-person, group setting Results: In the experimental group, there was a reduction in organizational procrastination, improvement in inefficiency, anxiety, and turnover. It also resulted in increased motivation and improved worker performance. The effects were lasting up to 2 months post-intervention.</p>
<p>Article 6 - Stratman & Youssef-Morgan (2019) Title: Can Positivity Promote Safety? Psychological Capital Development Combats Cynicism and Unsafe Behavior Summary: This study examines how the development of PsyCap can reduce cynicism and unsafe behaviors in the workplace, using a PsyCap development intervention in a quasi-experimental design.</p>	<p>Intervention: Psychological Capital Intervention (pci) Duration: Short duration Sessions: Single session (approximately 90 minutes) Format: In-person Results: The results indicate increased levels of PsyCap, a reduction in cynicism, and a decrease in unsafe behaviors. Cynicism was identified as a full mediator between PsyCap and unsafe behaviors.</p>

<p>Article 7 - Salanova & Ortega-Maldonado (2019) Title: Psychological Capital Development in Organizations: An Integrative Review of Evidence-Based Intervention Programs Summary: This article reviews and synthesizes the literature on PsyCap interventions in organizations. It highlights the importance of PsyCap as a developable psychological resource, comprising self-efficacy, optimism, hope, and resilience.</p>	<p>Theoretical: This article analyzes different interventions of short and long duration (30 minutes to 3 hours and 1 to 20 sessions). Results: The review covers various types of interventions, from micro-interventions to broader development programs, and examines cultural differences in the development of PsyCap. The findings show that PsyCap interventions are effective in improving psychological well-being, job performance, and positive attitudes among employees.</p>
<p>Article 8 - Georgiou e Nikolaou, (2019) Title: The Influence and Development of Psychological Capital in the Job Search Context Summary: This study highlights how PsyCap can support persistence and success among job seekers.</p>	<p>Intervention: Psychological Capital Intervention (pci) Duration: Short duration Sessions: Two sessions (3 hours each) Format: In-person Results: Increased levels of PsyCap were observed, along with greater persistence in the job search and improved job search outcomes (more interviews).</p>
<p>Article 9 - Da et al., (2020) Title: Effectiveness of Psychological Capital Intervention and Its Influence on Work-Related Attitudes: Daily Online Self-Learning Method and Randomized Controlled Trial Design Summary: This study aims to expand the Psychological Capital Intervention (pci) model and examine its influence on work-related attitudes. It tests the proposed intervention (daily online self-learning method) and observes its effectiveness on PsyCap, job satisfaction, and the reduction of turnover intention.</p>	<p>Intervention: Daily Online Self-Learning Method Duration: Long duration Sessions: 5 sessions (30 minutes each) Format: Online Results: The results indicated that the intervention was effective in increasing PsyCap, enhancing job satisfaction, and reducing turnover intention. However, there was no significant impact on job engagement.</p>
<p>Article 10 - Yu e Liu (2021) Title: Relationship Between Human Capital and Technological Innovation Growth of Regional Economy and Psychology of New Entrepreneurs in Northeast China Summary: This study explores the impact of human capital on economic growth in Northeast China and the factors influencing the psychological capital of new entrepreneurs in the entrepreneurial process.</p>	<p>Intervention: E-PCI-S (External Environment Substitute Psychological Capital Intervention) Details: The authors do not provide detailed information on the intervention but indicate that this model combines elements of PsyCap with the optimization of the external environment (material capital) and the investment of other types of capital, such as human capital. They consider that the pci model is limited and has potential cost-benefit asymmetries. The E-PCI-S model, on the other hand, presents significant operational potential in the macroeconomic environment.</p>
<p>Article 11 - Qiao et al. (2022) Title: Effect of Psychological Capital Interventions on Well-Being in New Recruits During Assembly Training: A Comparative Study Summary: This study investigates the effects of different forms of Psychological Capital (PsyCap) interventions on the well-being of recruits during the training period. Using cluster sampling, 99 recruits were divided into three groups: 8-session intervention, single-session intervention, and control group.</p>	<p>Intervention: Psychological Capital Intervention (pci) Duration: Short and long duration Sessions: 8 sessions (main group), 1 session (secondary group) Format: In-person Results: The 8-session intervention yielded better results. Psychological capital, as a positive psychological resource possessed by individuals, can enhance the perception of happiness. An increase in individual psychological capital leads to a more positive overall state, improving psychological well-being.</p>
<p>Article 12 - Carter e Youssef-Morgan (2022) Title: Psychological Capital Development Effectiveness of Face-to-Face, Online, and Micro-Learning Interventions Summary: This study compares the effectiveness of different methods of PsyCap interventions. The study involved 228 participants divided into three groups: face-to-face intervention, online intervention, and micro-learning via a mobile app.</p>	<p>Intervention: Psychological Capital Intervention (pci) Duration: Short and long duration Sessions and Format: Face-to-Face: Single session (3 hours) Online: Single session (3 hours) Micro-Learning via App: Weekly modules over 6 weeks Results: Increases in PsyCap were observed in all groups. Micro-learning provided superior content retention and better practical application. The online intervention was equally effective as the face-to-face format, with the added advantage of flexibility. Positive outcomes in terms of well-being and job performance were maintained after six weeks.</p>

<p>Article 13: Schelleman-Offermans et al. (2022) Future Positive, that aims to increase health behaviors among employees with a low socio-economic position (SEP) Title: The Future Positive Micro-Intervention Protocol: A Program Aiming to Increase a Healthy Lifestyle Among Employees with a Low Socio-Economic Position Summary: This study investigates the effects of a positive psychology-based micro-coaching intervention (ppmc) on the psychological capital (PsyCap) and goal-related self-efficacy of non-executive workers. The research is based on the premise that short, strength-focused interventions can enhance personal resources and job performance.</p>	<p>Intervention: Future Positive Micro-Intervention Duration: Short duration Sessions: 4 hours (2 sessions of 2 hours each) Format: In-person Results: After the intervention, there was an increase in participants' autonomous motivation to adopt healthy behaviors, improvement in setting smart (specific, measurable, achievable, relevant, and time-bound) goals, and an increase in PsyCap dimensions. Participants reported greater confidence and optimism in achieving their health goals following the intervention.</p>
<p>Article 14 - Pérez-Marqués et al., (2023) Title: Effects of Three Personal Resources Interventions on Employees' Burnout Summary: This study evaluates the effectiveness of three personal resources interventions in reducing burnout among workers, focusing on three interventions: job crafting, PsyCap, and a combination of both.</p>	<p>Intervention: pci, Job Crafting, and Combined Duration: Long duration Sessions: 5 modules (7 weeks) Format: Online Results: The study found that all interventions significantly improved participants' burnout levels, reducing cynicism and emotional exhaustion, and increasing professional efficacy and PsyCap. The combined intervention showed similar (slightly superior) efficacy compared to the PsyCap-only intervention.</p>
<p>Article 15 - Sumalrot et al. (2023) Title: The Development and Effectiveness of Web-Based Psychological Capital Intervention on the Mental Well-Being of Tourism Workers During the COVID-19 Pandemic Summary: This study evaluates the effectiveness of a psychological capital (PsyCap) intervention on the mental well-being of tourism workers during the COVID-19 pandemic. The intervention was developed using interview techniques and content analysis with 20 entrepreneurs in the tourism sector, resulting in a program based on four main themes: having a goal, tolerance to difficulties, inspiration from a role model, and the right way of thinking.</p>	<p>Intervention: Psychological Capital Intervention (pci) Duration: Long duration (1 month) Sessions: Not specified Format: Online Results: An improvement in the mental well-being of participants was observed one month after the intervention.</p>
<p>Article 16 - Tyne et al. (2024) Title: Employees' Experiences of Outdoor Adventure Training on Psychological Capital and Wellbeing: A Mixed Methods Case Study Summary: This study explores the impact of outdoor adventure training (oa) programs on employees' psychological capital (PsyCap) and well-being. The study involved nine employees who participated in a five-day program in the Pyrenees mountains.</p>	<p>Intervention: Altitude - Outdoor Adventure Program Duration: Short duration Sessions: Various daily activities over 5 days Format: In-person Results: The intervention resulted in increased PsyCap scores, greater team cohesion and trust, and improvements in psychological well-being due to the connection with nature and distancing from work demands.</p>

Analysis of the 16 articles on interventions for the development of PsyCap revealed that most interventions were effective in increasing the components of PsyCap (hope, self-efficacy, resilience, and optimism). One article is a literature review (No. 7). The interventions reported in the empirical articles were categorized into five main types: Training, Programs, and Others.

- **Training:** Structured, short-duration interventions (30 minutes to 3 hours or up to 2 sessions) focused on developing specific skills. Seven articles (Articles No. 1, 4, 6, 8, 11, 12, and 13) reported effectiveness.
- **Programs:** Comprehensive programs that include various activities with sessions and modules conducted over time (4, 6, 8, or 10 weeks). Six articles (Articles No. 2, 5, 11, 12, 14, and 15) reported effectiveness.
- **Others:** Unique or unconventional interventions. These interventions include self-learning methodologies with reading, self-guided activities, or outdoor activities. Four articles (Articles No. 3, 9, 10, and 16) reported effectiveness.

The analysis also revealed that interventions for the development of PsyCap can be classified as web-based (online/app) or in-person. Among the articles analyzed, four explicitly mentioned the use of web platforms or online methods for implementing the interventions (Articles No. 9, 12, 14, and 15). The remaining articles indicated in-person interventions or traditional training methods.

Discussion

Interventions aimed at developing psychological capital (PsyCap) have been widely studied and applied in various organizational contexts. These interventions, which vary in format, duration, and methodology, share the common goal of strengthening the components of PsyCap: self-efficacy, hope, resilience, and optimism, thereby providing significant benefits for both workers and organizations. However, the effectiveness of these interventions varies depending on the format, duration, cultural and sectoral context, and the methodology adopted.

Intervention formats vary from face-to-face to hybrid and online, each with specific advantages. Face-to-face interventions, as described in Articles 1, 3, 8, 15, and 16, allow for direct interaction between participants and facilitators, which can enhance engagement and training effectiveness. On the other hand, online interventions, mentioned in Articles 2, 9, 10, and 12, offer flexibility and accessibility, allowing participants to access the material at any time and place, and are particularly useful in contexts where time availability is limited. Furthermore, the hybrid model, discussed in Article 5, combines elements of both formats, taking advantage of the benefits of face-to-face interaction and the flexibility of remote access.

Some research suggests that the immediate effects of face-to-face interventions are stronger, but that online programs maintain benefits over longer periods and allow for greater scalability (Schelleman-Offermans et al., 2022). Furthermore, studies that adopted a hybrid model combining

in-person sessions with remote monitoring showed better results in retaining the effects of PsyCap over time. Thus, the choice of format can impact learning retention (Carter & Youssef-Morgan, 2022).

The duration of the interventions also varies significantly, from short-term programs lasting a few weeks, as in Article No. 1, to longer programs extending over several months, as in Articles No. 5 and 14. Shorter interventions tend to be more intensive, focusing on practical activities and focused discussions, while longer programs allow for a gradual and sustained development of PsyCap components, providing ample time for the internalization and practical application of the concepts learned.

The interventions analyzed were applied in different sectors, revealing different levels of impact:

- High-touch sectors (hospitality, healthcare, education) – PsyCap interventions have been successfully applied in these sectors, demonstrating significant benefits for psychological well-being and talent retention. Examples include Articles 6, 7, 12, and 13.
- Manufacturing and technology sectors – The impact of interventions in these sectors was more modest, suggesting that the applicability of PsyCap may depend on the emotional demands of the job. Studies have shown that the effects are limited when there is low social interaction and heavy reliance on technical processes. Examples include Articles 3, 9, and 14.
- Crisis-affected sectors (e.g. tourism during the COVID-19 pandemic) – Sectors as tourism and hospitality have been significantly impacted during the pandemic, with workers experiencing high levels of stress. PsyCap interventions have been instrumental in improving the well-being and resilience of these workers. Examples include Articles 2, 10, 15, and 16.

Organizational culture and national cultural context also influence the effectiveness of

interventions. Most studies have been conducted in Western countries (USA and Europe), while there is a dearth of research in Eastern cultures and emerging economies. In countries with a greater emphasis on collectivism, as China and Thailand, group interventions appear to be more effective.

The components of PsyCap are addressed in various ways, depending on the study. For example, self-efficacy is emphasized in interventions that use positive visualization techniques and goal-setting (Alipour et al., 2013; Luthans et al., 2010; Schelleman-Offermans et al., 2022) theory and research have supported psychological capital (PsyCap). Resilience is often developed through cognitive restructuring exercises and mindfulness practices, as in the studies by Dello Russo and Stoykova (2015), Qiao et al. (2022), Sumalrot et al. (2023) and Zhang et al. (2014). Hope and optimism are promoted through goal planning and coping strategies, as described in the articles by Dello Russo and Stoykova (2015) and Georgiou and Nikolaou (2019). Some approaches explore different methods of intervention to effectively develop these components (Qiao et al., 2022).

The methods of implementation vary widely, reflecting the need to adapt the interventions to the specific context of the participants. Stratman and Youssef-Morgan (2019) review various approaches and conclude that group-based interventions, where participants can share experiences and support each other, tend to be more effective. Conversely, Salanova and Ortega-Maldonado (2019) highlight the efficacy of individual interventions, especially when tailored to meet the specific needs of the participants.

One of the studies compares short and long-duration interventions (Qiao et al., 2022). Participants were divided into three groups: 8 sessions, a single session, and a control group. The 8-session training occurred twice a week, approximately 2 hours per session, over 4 consecutive weeks. The single-session intervention group received 3 hours of group training during the same period as the final week of the 8-session

group. It was observed that the group receiving the longer and more intensive intervention showed better results, significantly increasing the participants' psychological capital and happiness levels, proving to be more effective and lasting than a single-session intervention.

Another study, conducted by Carter and Youssef-Morgan (2022) investigates the effects and efficacy of different forms of intervention (in-person, online, and hybrid). The authors conclude that all methods are effective in increasing PsyCap, although individual preference can influence the outcomes. This highlights that the flexibility and adaptability of the method are crucial for the intervention's efficacy.

The relationship between the increase in PsyCap and improvement in organizational outcomes is explored in the analyzed studies (Dello Russo & Stoykova, 2015; Georgiou & Nikolaou, 2019; Luthans et al., 2010; Zhang et al., 2014), including better job performance, higher satisfaction, and lower turnover. For employees, the benefits include greater well-being, improved stress management, and a general sense of competence and control over their work. Additionally, Da et al., (2020) argue that different forms of intervention can have varied impacts, but all tend to improve employee well-being.

Among the convergent points, the overall efficacy of PsyCap interventions in enhancing workers' psychological factors stands out. Most studies, regardless of the format or duration of the intervention, reported significant improvements in PsyCap constructs and organizational outcomes. Schelleman-Offermans et al. (2022) Future Positive, that aims to increase health behaviors among employees with a low socio-economic position (SEP, for example, report that interventions focused on self-efficacy and resilience are particularly effective in high-pressure organizational contexts. However, methodological and contextual differences influence the results and applicability of the interventions. In-person studies often reported higher engagement and immediate feedback, while

online interventions highlighted convenience and scalability.

Organizational culture and managerial support emerge as critical factors for the success of the interventions. There is evidence that the efficacy of the interventions can vary depending on the level of organizational support and managerial involvement (Akhoundi & Aerab Sheibani, 2017). Similarly, Pérez-Marqués et al., (2023) based on their review, and Tyne et al., (2024) in evaluating an outdoor experiential training-based intervention, also emphasize the importance of organizational support and the creation of an environment conducive to PsyCap development.

The comparison between PsyCap and other forms of capital, as human and social capital, provides valuable insights into the unique contributions of PsyCap to organizational outcomes. While human capital, which includes the skills, knowledge, and experiences of individuals, and social capital, which encompasses the networks and relationships that facilitate cooperation and resource access, are crucial for organizational success, PsyCap offers distinct advantages. Studies have shown that PsyCap has a more direct and immediate impact on employee performance and well-being compared to human and social capital (Huang et al., 2021; Xu et al., 2022). For instance, the development of PsyCap components like self-efficacy, hope, resilience, and optimism can directly enhance an individual's motivation and ability to cope with challenges, leading to better job performance and reduced turnover intentions (Dello Russo & Stoykova, 2015; Luthans et al., 2010). This underscores the importance of integrating PsyCap development into organizational strategies, as it complements and enhances the benefits derived from human and social capital. By fostering a holistic approach that includes PsyCap, organizations can achieve more comprehensive and sustainable improvements in employee well-being and organizational performance.

Conclusions

The analysis revealed that PsyCap interventions are mostly effective, with training programs and structured sessions showing particularly positive results. The diversity in formats and durations of the interventions indicates the flexibility of these initiatives to adapt to the specific needs of organizations and workers. Both web-based and in-person interventions can be effective, each with its specific advantages and challenges. Online interventions overcome geographical barriers and offer flexibility, while in-person interventions foster greater engagement and direct interaction. To maximize effectiveness, a hybrid approach that combines the strengths of both modalities and personalizes the interventions according to the participants' profiles and organizational context can enhance outcomes, promoting a more robust and sustainable development of PsyCap.

Regardless of the format, emphasizing the development of self-efficacy, hope, resilience, and optimism is effective in promoting employee well-being and achieving organizational goals. Successful implementation of these interventions requires a clear understanding of workers' needs and strong organizational leadership support. The combination of theoretical and practical techniques, the use of different formats, and adaptation to participants' needs are essential for success. Studies show that the development of PsyCap brings substantial benefits to both workers and organizations, highlighting the importance of investing in psychological capital as a fundamental strategy for organizational development.

Despite these positive findings, some limitations and biases should be considered. Variability in intervention methods and contexts makes it difficult to standardize results. Many studies rely on self-reports, which can introduce measurement bias and overestimate the effects of interventions. In addition, sample sizes and duration of interventions vary widely, affecting the generalizability and sustainability of results.

The lack of complete randomization in some studies compromises the generalizability of findings, since non-randomized samples can introduce selection bias. Studies that adopted control groups and randomized samples showed greater reliability in their results, as observed in Articles 4, 7, and 12. In addition, the predominance of self-reports in measuring the effects of interventions raises questions about the validity of the findings. Article 7 mentions that, despite improvements reported by participants, there was no objective control of performance, which can lead to an overestimation of the effects. Similarly, Article 9 highlights that the lack of objective assessments can inflate the results reported by participants.

Another important bias is related to the context of the interventions. Many studies were conducted in specific sectors, as hospitality and tourism, which limits the applicability of the findings to other industries. Comparisons between sectors showed that the interventions were more effective in sectors that demand high human interaction, but their effects were less significant in technology and industrial sectors, as reported in Articles 6, 9 and 15.

The studies analyzed suggest several areas for improvement. Increasing sample sizes, including control groups, and extending the duration of programs are essential recommendations to ensure lasting effects. Addressing these limitations and implementing personalization strategies can help organizations develop more robust and effective PsyCap programs, contributing significantly to the well-being and performance of individuals.

Future research should aim to standardize PsyCap intervention protocols to facilitate comparison across studies. Longitudinal studies are needed to assess the long-term sustainability of intervention effects. Additionally, exploring the role of organizational culture and managerial support in more depth could provide insights into maximizing the effectiveness of PsyCap interventions. Expanding research to include diverse cultural and organizational settings will also help

in understanding the global applicability of these interventions.

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