Asian Administration and Management Review

Original Research Article

Received: 22 June 2025 **Revised:** 19 July 2025 **Accepted:** 29 July 2025

PSYCHOLOGICAL CAPITAL AMONG THAI FLIGHT ATTENDANTS: A CONFIRMATORY FACTOR ANALYSIS

Punpong SUWANVATIN[1], Rewadee WATAKAKOSOL[1,2*], Sompoch IAMSUPASIT[1] and Juthatip WIWATTANAPANTUWONG[1,2]

1 Faculty of Psychology, Chulalongkorn University, Thailand

2 Research Unit on Disaster Psychology and Well-Being, Chulalongkorn University, Thailand; rewadee.w@chula.ac.th (R. W.) (Corresponding Author)

Handling Editor:
Professor Dr.Wing-Keung WONG Asia University, Taiwan
(This article belongs to the Theme 1: Business & Economic in Industry 5.0)

Reviewers:
1) Professor Dr.Duchduen BHANTHUMNAVIN NIDA, Thailand
2) Dr.Napat LIMAROON NEDA, Thailand
3) Dr.Parinya SIRIATTAKUL North Bangkok University, Thailand

Abstract

This study examines the construct validity of psychological capital (PsyCap) among flight attendants in Thailand, a population that is underrepresented in the existing literature. Utilizing confirmatory factor analysis (CFA) on data from 401 flight attendants, the research examines whether the four-component model of PsyCap (self-efficacy, hope, resilience, and optimism) holds within this specific occupational context. Results indicated a good fit for the four-factor model, with hope exhibiting the highest standardized factor loading ($\lambda = 0.853$), followed by self-efficacy ($\lambda = 0.737$), resilience ($\lambda = 0.687$), and optimism ($\lambda = 0.592$). Model fit indices, including $\chi 2/df = 0.484$, CFI = 1.000, TLI = 1.000, RMSEA = 0.000, and SRMR = 0.0026, supported the model's validity after allowing covariance between the resilience and optimism error terms. These findings confirm the applicability of the PsyCap construct among Thai flight attendants, emphasizing the potential for leveraging PsyCap in human resource management and development initiatives. The prominence of hope underscores its particular importance for this occupational group. This research contributes to understanding psychological resources among airline personnel and offers insights for enhancing employee resilience and well-being in the aviation sector.

Keywords: Psychological Capital, Flight Attendants, Confirmatory Factor Analysis, Thailand, Aviation Industry

Citation Information: Suwanvatin, P., Watakakosol, R., Iamsupasit, S., & Wiwattanapantuwong, J. (2025). Psychological Capital among Thai Flight Attendants: A Confirmatory Factor Analysis. *Asian Administration and Management Review, 8*(2), Article 17. https://doi.org/10.14456/aamr.2025.42

Introduction

Psychological Capital (referred to as PsyCap hereafter) is defined as a collection of positive psychological resources that significantly impact individuals' performance and general well-being in various contexts. The original definition of PsyCap comprises four factors: self-efficacy, resilience, hope, and optimism. Each factor uniquely functions as an individual's capacity to deal with stress and problems in a specific manner. Specifically, self-efficacy pertains to an individual's belief in their ability to succeed in particular scenarios; resilience signifies the ability to recover from adversity and hardship; hope involves setting and pursuing goals; and a positive outlook on potential outcomes characterizes optimism (Luthans et al., 2007; Luthans et al., 2015). According to Zhang et al. (2014), these four PsyCap factors protect against adverse mental health situations and enhance job performance and participation, which is especially true for employees in high-pressure and/or high-risk working environments, such as firefighters, police officers, emergency medical personnel, and other healthcare providers (Lowery & Cassidy, 2022).

In the aviation industry, flight attendants must continuously interact with passengers regarding various service requests and provide prompt customer care. To fulfill their responsibilities, flight attendants often encounter challenges from 1) irregular schedules that disrupt personal lives and family routines, 2) prolonged absences from home that may induce feelings of isolation and loneliness, and 3) the continuous necessity to manage various passenger requests that have unique expectations and demands and vary considerably day by day. All these challenges can lead to severe occupational stress, burnout, and disengagement (Henning, 2015), detrimental impacts on the health of flight attendants (McNeely et al., 2018), as well as the ineffectiveness of an airline company (e.g., low morale, increased absenteeism, and lower productivity).

Recently, the relationship between psychological capital (PsyCap) and job performance in the aviation industry has become increasingly prominent in the literature. Prior studies suggest that elevated levels of self-efficacy, hope, resilience, and optimism—the four factors of PsyCap—significantly enhance the job performance and general well-being of flight attendants (Suwanvatin et al., 2022). In particular, Cheng et al. (2018) conducted a comprehensive study involving 375 flight attendants of China Airlines and reported that PsyCap positively influences service behavior both directly and indirectly. Cheng et al. (2018) found that the service environment moderates the direct influence of PsyCap on service behavior, while the indirect influence is mediated by work engagement. Generally, higher levels of psychological capital (PsyCap) lead to higher levels of service behavior, which, in turn, enhance the job performance of flight attendants. Beyond the aviation industry, Avey et al. (2011) found that integrating PsyCap into the human resource management framework fosters a resilient workforce, promotes sustainable workplace dynamics, and improves employee satisfaction. In brief, psychological capital (PsyCap) plays a pivotal role in achieving organizational success and fostering personal well-being. Establishing construct validity using confirmatory factor analysis (CFA) furnishes the critical methodological basis for further research investigating the associations between psychological capital (PsyCap), work performance, well-being, and organizational outcomes. Utilizing validated measurements, subsequent research can investigate whether PsyCap differentially predicts job performance among Thai flight attendants compared to Western samples, formulate culturally relevant interventions based on the significance of its components, and conduct substantive cross-cultural comparisons within the aviation sector. Therefore, this study aimed to (1) conduct a confirmatory factor analysis of the PsyCap of Thai flight attendants and (2) validate the construct validity of the PsyCap model using empirical data.

Literature Reviews

Recent research has increasingly recognized psychological capital (PsyCap) as a critical determinant of employee well-being and organizational outcomes, particularly in high-stress service industries such as aviation and hospitality. PsyCap, comprising four core components—self-efficacy, hope, resilience, and optimism—has been shown to significantly reduce turnover intention and enhance organizational commitment among service workers (Han & Cai, 2024). Studies conducted in Southeast Asian contexts have revealed culturally specific patterns, with research on Korean flight attendants showing that hope, rather than optimism or resilience, has the most significant adverse effect on turnover intention (Han & Cai, 2024). Similarly, investigations of Chinese expatriates working in Thailand found that PsyCap effectively reduced burnout through the mediating role of host country national coworker support, with personal characteristics such as gender and language proficiency moderating these relationships (Fu & Charoensukmongkol, 2022). The aviation industry has received particular attention, with recent studies demonstrating that PsyCap mediates the relationship between servant leadership and work engagement among flight attendants and influences service recovery performance (Karatepe & Karadas, 2015). Furthermore, meta-analytical reviews in hospitality and tourism contexts have confirmed the robust positive effects of PsyCap on employee performance and well-being across diverse cultural settings (Sumalrot et al., 2023). The COVID-19 pandemic has further highlighted the importance of PsyCap interventions, with web-based psychological capital interventions proving effective in improving mental well-being among tourism workers in Thailand during crises (Sumalrot et al., 2023). These findings suggest that while PsyCap demonstrates universal benefits for employee outcomes, its specific manifestations and effectiveness may vary across cultural contexts and individual characteristics, necessitating culturally sensitive approaches to PsyCap development in multinational service organizations.

Research Hypotheses

Luthans stated that research using PsyCap as a collective construct can predict related outcomes more accurately than examining each component separately (as stand-alone components). This has been demonstrated in multiple studies showing the combined predictive power of various PsyCap components (Luthans & Youssef, 2007; Stajkovic & Luthans, 1998). The research hypotheses are as follows.

1) The PsyCap model for flight attendants comprises self-efficacy, hope, resilience, and optimism.

2) The PsyCap model for Thai flight attendants developed by the researcher is consistent with empirical data.

Conceptual Framework

The conceptual framework for this study is based on the concept and theory of Psychological Capital (PsyCap) as proposed by Luthans et al. (2007). PsyCap refers to an individual's positive psychological state that supports personal development. The key components include self-efficacy (confidence in one's abilities), optimism (a positive outlook), hope (perseverance toward goals and the ability to find pathways to achieve them), and resilience (the capacity to recover from setbacks). The PsyCap questionnaire used in this study consisted of 24 items, each rated on a 5-point scale, measuring the following four dimensions: Figure 1 illustrates this framework.

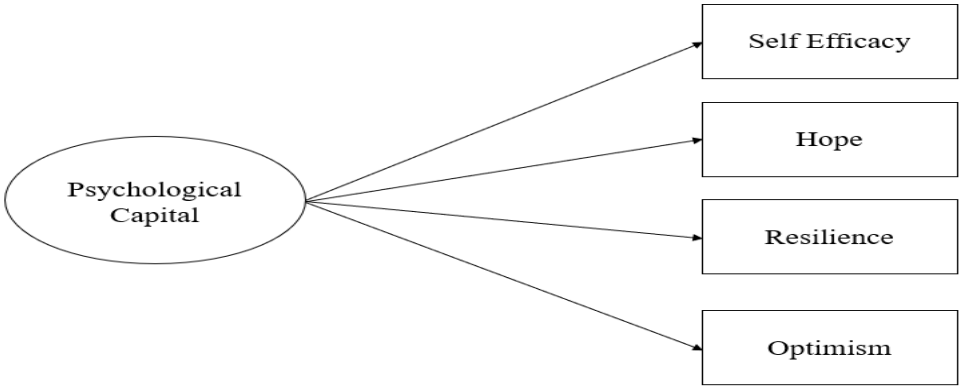

Figure 1 Conceptual Framework

Research Methodology

Population and Sample

Participants for this study were selected using a stratified random sampling methodology from the roster of flight attendants across different service classes who attended various training courses conducted by the flight attendant training department. This sampling approach ensured the proportional representation of employees from each service class, thereby obtaining a representative sample of the workforce. The selection criteria included: (1) employment as a flight attendant in any service class at a commercial airlines company (2) no restrictions on gender, income, or educational level, (3) actual working age of employees, (4) Thai nationality with the ability to perform assigned flight duties according to regular schedules, (5) proficiency in reading and writing the Thai language as required for the questionnaire, and (6) voluntary consent to participate in the research. According to current data from the flight attendant management department, 2,700 operational flight attendants are ready for flight duties, excluding supervisory levels or air traffic controllers. These employees were divided into two groups based on job position, and the number of participants from each group was calculated proportionally to achieve the desired sample size of 401 participants while maintaining the representativeness of the entire population.

Sample size determination in research using structural equation modeling employs general rule-based methods. Hair et al. (2019) stated that the sample size used in structural equation analysis should be at least 100 samples, with a ratio of sample size to estimated parameters of 10-20 samples per parameter. To rigorously examine the latent structure of the PsyCap Model, which comprises the constructs of self-efficacy, hope, resilience, and optimism, data were collected from 401 participants. This sample size was determined based on established guidelines for structural equation modelling (SEM) and Confirmatory Factor Analysis (CFA), which recommend a minimum of 200 participants for robust model estimation, with larger samples of at least 300 or more. The researcher chose 401 participants to make the study more robust and provide greater statistical power, more stable parameter estimates, and more reliable fit indices (Kline, 2023; Hair et al., 2019)

Data Collection and Data Analysis

The Psychological Capital Questionnaire (PCQ), developed by Luthans et al. in 2007, is a 24-item measurement instrument (PCQ-24) that assesses four key factors of Psychological Capital (PsyCap), each with six items. These factors include:

1) Hope - “At present, I am energetically pursuing my work goals.”
2) Self-efficacy - “I feel confident analyzing a long-term problem to find a solution”
3) Resilience - “I usually manage difficulties one way or another at work”
4) Optimism- “I always look on the bright side of things regarding my job.”

The PCQ has demonstrated strong reliability and validity across various cultural and organizational settings (Luthans et al., 2007), and the researcher obtained permission to use this copyrighted scale for this study. The original English version of the PCQ is available from www.mindgarden.com. The PCQ was translated into Thai to ensure linguistic and cultural appropriateness for use by flight attendants in Thailand. Permission from the original authors was obtained prior to the translation process. Translation followed the three-step procedure recommended by Brislin (1970).

In the first step, two of the authors translated the original PCQ into Thai, which the other authors later edited to ensure cultural relevance and appropriateness of the language.

In the second step, the translated Thai version was translated back into English by a professional bilingual Thai translator.

In the third step, a native English speaker from the US assessed the accuracy of the back-translated English version against the original English version.

This meticulous translation process is crucial for maintaining psychometric properties and measurement equivalence when psychological measures are adapted across diverse cultural and occupational settings (van de Vijver & Tanzer, 2004). Furthermore, consulting experts in the Thai language and culture, specifically those familiar with the context of flight attendants, was essential to ensure that the items were culturally sensitive and resonated with the target population. Idioms, metaphors, and specific phrases were carefully considered to avoid misinterpretations.

The translated Thai version used a 5-point Likert scale for all 24 questionnaire items, replacing the original 6-point scale to include a neutral midpoint. This change allows respondents to express ambivalence and avoids forcing false responses from those with neutral or undefined attitudes. The total score ranges from 24 to 120, with higher scores indicating greater psychological capital (PsyCap), such as strong emotional intelligence, resilience, optimism, and effective teamwork. Lower scores reflect the opposite traits, including poor stress management, low self-confidence, and limited leadership potential.

Prior to the main data collection, a pilot study was conducted to examine the reliability and clarity of the Thai version of the PCQ-24. The pilot study involved 40 flight attendants from a domestic commercial airline in Thailand who shared similar demographic characteristics with the target population. Participants were asked to complete the full 24-item scale using a revised 5-point Likert format. To ensure the validity of this study, the Index of Item-Objective Congruence (IOC) was employed to assess the appropriateness of the research instruments. The test-retest reliability of a measure represents the consistency of scores between two sessions, ideally conducted under similar conditions (Terwee et al., 2003). Test-retest reliability is typically assessed using a coefficient ranging from −1 (perfect negative correlation) to 1 (perfect positive correlation). Measures with high test-retest reliability (correlation ≥ 0.70) are favored, as they are more sensitive to changes in state impulsivity (Terwee et al., 2003). This study was conducted with a sample group of 40 participants, and retesting was performed at one-month intervals. The results are presented in Table 1.

Table 1 Test-Retest Reliability of PsyCap Scales

Variables	**r**
Self Efficacy	.940**
Hope	.937**
Resilience	.969**
Optimism	.970**

** $p < .01$

The table reports the correlation coefficients (r) among four psychological variables: Self-Efficacy, Hope, Resilience, and Optimism, with each coefficient denoted by a double asterisk (**), signifying a very high level of statistical significance. The observed correlation coefficients are notably high, ranging from .937 to .970, indicating robust positive associations among these constructs. These findings suggest that individuals who score highly on one of these psychological variables are very likely to exhibit elevated scores on the others, underscoring the interconnectedness of self-efficacy, hope, resilience, and optimism.

A closer examination of the individual coefficients further elucidates these relationships. The correlation for self-efficacy (.940**) reveals a strong positive association with the other variables, implying that individuals with high self-efficacy are also likely to possess greater hope, resilience, and optimism. Similarly, hope (.937**) demonstrates a substantial correlation with the remaining constructs, indicating that hopeful individuals tend to be confident, resilient, and optimistic. Resilience (.969**) exhibits the highest correlation among the four, indicating a near-perfect alignment with self-efficacy, hope, and optimism. Optimism (.970**) presents the strongest correlation, highlighting its central role and deep interconnection with the other psychological variables examined in this study.

Statistical analyses were conducted using specialized software packages, as detailed below: 1) Test-Retest Reliability was used to assess the internal consistency reliability. Moreover, 2) CFA was performed to test the construct validity of the measurement model.

Research Ethics

This research obtained ethical approval from The Research Ethics Review Committee for Research Involving Human Subjects: The Second Allied Academic Group in Social Sciences, Humanities and Fine and Allied, Chulalongkorn University, prior to data collection. The Committee approved this study with the number of research project 123.1/64, 11 11 21.

Research Results

The study comprised a total sample of 401 flight attendants. The gender distribution was relatively balanced, with 201 male participants (51.10%) and 199 female participants (49.90%). Regarding age distribution, the majority of participants (55.60%) were aged between 26 and 30 years, followed by those aged 36 and 45 years (22.70%) and participants over 46 years of age (21.20%). Only 2 participants (0.50%) were under 25 years of age.

Educational attainment revealed that the vast majority held bachelor's degrees (n = 320, 79.80%), while 81 participants (20.20%) possessed master's degrees.

In terms of class of service duties, participants were nearly equally distributed between business class (49.10%) and economy class (50.90%) operations.

Work experience analysis indicated that the largest cohort had 7-12 years of experience (n = 197, 49.10%), followed by those with 13-18 years of experience (21.20%) and participants with more than 19 years of service (21.90%). The smallest group comprised those with 1-6 years of experience (7.70%).

Before proceeding with further data analysis, it is essential to examine the correlation matrix of the observed variables. This step enabled us to assess the strength and pattern of interrelationships within the dataset, a prerequisite for determining the suitability of the data for confirmatory factor analysis (CFA). By analyzing the correlation matrix, we can determine whether sufficient correlations exist among variables to justify the application of factor analysis techniques and identify any potential issues, such as multicollinearity or the presence of variables that do not correlate well with others. This preliminary assessment ensured the robustness and validity of the subsequent analyses. The information is presented in Table 2.

Table 2 Correlation Matrix of observable variables in the PsyCap component model of flight attendants

Variables	Self-efficacy	Hope	Resilience	Optimism
Self Efficacy	1.000			
Hope	.629**	1.000		
Resilience	.500**	.589**	1.000	
Optimism	.448**	.499**	.561**	1.000
Bartlett's Test of Sphericity with Chi Square = 570.23, df = 6, p < .01, KMO = .702				

** p < .01

The table presents the intercorrelations among four observable variables—Self-efficacy, Hope, Resilience, and Optimism—which are components of PsyCap in flight attendants. All correlations are statistically significant at the p < .01 level (as indicated by **), suggesting strong relationships among these variables. Self-efficacy is strongly correlated with Hope (r = .629), moderately correlated with Resilience (r = .500), and moderately correlated with optimism (r = .448). Hope shows strong correlations with Resilience (r = .589) and Optimism (r = .499). Resilience is also strongly correlated with Optimism (r = .561). These results indicate that higher levels of one PsyCap component are associated with higher levels of the others among flight attendants.

Furthermore, KMO assesses the overall sampling adequacy of the data for factor analysis. At the same time, Bartlett's Test checks whether the variables in the dataset are correlated enough to proceed with factor analysis. Both tests are essential preliminary steps to determine whether factor analysis is appropriate for the data or whether adjustments to the dataset are necessary before conducting factor analysis. The results are as follows. Kaiser-Meyer-Olkin (KMO) Measure: The KMO value is .702, which is considered acceptable and suggests that the sample is adequate for factor analysis. Bartlett's Test of Sphericity: The test yielded a Chi-Square value of 570.23 with 6 degrees of freedom, which is highly significant (p < .01). This indicates that the correlation matrix is not an identity matrix and is suitable for factor analysis.

The correlation matrix revealed significant and positive relationships among self-efficacy, hope, resilience, and optimism in flight attendants, supporting the coherence of these variables as components of Psychological Capital (PsyCap). The results of Bartlett's Test and the KMO measure further confirmed the appropriateness of conducting factor analysis on these data.

Validation Scale

Confirmatory factor analysis (CFA) was conducted to test the measurement model of PsyCap, which comprised four observed indicators: efficacy, hope, resilience, and optimism. The analytical results are obtained (see Table 1): chi-square = .484, df = 1, chi-square/df = .484, GFI = 0.977, AGFI = 0.994, NFI = 0.999, TLI = 0.914, CFI = 1.000, RMR = 0.001, SRMR = 0.0026, and RMSEA = 0.000 —all exceeding recommended cut-off values. Therefore, the measurement model was compatible with the empirical data. These results support the multidimensional structure of PsyCap, although further model refinement is warranted to improve the fit.

The initial measurement model, comprising four observed variables, failed to meet the goodness-of-fit criteria, indicating a poor alignment with the empirical data. Model refinement was conducted by allowing covariance between the error terms of one pair of variables: resilience and optimism, as detailed in Table 3.

Table 3 Index of Fit Between the Baseline Model and the Empirical Data of the Measurement Model Usage After Model Modification

Fit Index	Acceptance Criteria	Baseline Model	Modified Model	Evaluation Results	References
χ^2	Close to 0	18.291	.484	passed	Kline (2023)
df	Close to 1	2	1	passed	Kline (2023)
χ^2/df	≤ 2	9.146	.484	passed	Kenny (2024)
GFI	≥0.90	.977	.999	passed	Byrne (2010)
AGFI	≥0.90	.883	.994	passed	Byrne (2010)
NFI	≥0.90	.968	.999	passed	Bentler & Bonett (1980)
TLI	≥0.90	.914	1.000	passed	Tucker & Lewis (1973); Hu & Bentler (1999)
CFI	≥0.90	.971	1.000	passed	Bentler (1990); Hu & Bentler (1999)
RMR	≤0.05	.005	.001	passed	Byrne (2010)
SRMR	≤0.05	.0047	.0026	passed	Hu & Bentler (1999); Kline (2023)
RMSEA	≤ 0.05	.143	.000	passed	Browne & Cudeck (1992); Hu & Bentler (1999)

Following this modification, the measurement model demonstrated a satisfactory fit with the empirical data. The goodness-of-fit indices (chi-square = .484, df = 1, chi-square/df = .484, p = .487, GFI = .999, AGFI = .994, NFI = .999, TLI = 1.000, CFI = 1.000, RMR = .001, SRMR = .0026, RMSEA = .000) all met the established criteria. The detailed parameter estimates for each observed variable are presented in Table 4.

Table 4 First-order construct standardized factor loading

Latent Variable	Observed Variable	Standardized Factor Loading	SE	t-statistics	R^2	AVE	CR
PsyCap	Self Efficacy	0.737**	0.091	8.099	0.544	.812	.523
	Hope	0.853**	0.063	13.258	0.727		
	Resilience	0.687**	0.055	12.244	0.471		
	Optimism	0.592**	0.054	10.557	0.351		

**p < .01

Table 4 presents the results of the latent variable model analysis for the PsyCap. The findings indicate that the observed variables significantly explained the variance of the latent variable at the .001 level. Hope demonstrated the highest standardized factor loading (λ = .853), followed by efficacy (λ = .737), resilience (λ = .687), and optimism (λ = .592).

The Hope variable explained 72.7% of the latent variable's variance (R^2 = .727), while Efficacy, Resilience, and Optimism explained 54.4%, 47.1%, and 35.1% of the variance, respectively. The composite reliability (CR) and average variance extracted (AVE) values for the PsyCap latent variable were .812 and .523, respectively. These values indicate that the four observed variables demonstrated internal consistency and were appropriate for measuring the PsyCap latent variable. The AVE value of 52.3% further confirms that these four observed variables effectively measure the psychological capital construct.

Confirmatory factor analysis (CFA) of the psychological capital model among Thai flight attendants demonstrated an exceptional fit after necessary model modifications. The initial baseline model exhibited a poor fit, with problematic indices (χ^2/df = 9.146, RMSEA = 0.143,

TLI = 0.914), necessitating refinement by allowing covariance between the error terms of resilience and optimism—a theoretically justified modification given their conceptual overlap in positive future-oriented thinking. Following this adjustment, the modified model achieved an excellent fit across all indices: chi-square = 0.484 (df = 1, p = 0.487), indicating a non-significant difference between the observed and expected covariance matrices; chi-square/df ratio = 0.484 (well below the ≤ 3.0 threshold); RMSEA = 0.000 (perfect fit, below ≤ 0.08 criterion); RMR = 0.001; SRMR = 0.0026 (both well below ≤ 0.05 threshold); CFI = 1.000; TLI = 1.000 (perfect incremental fit, exceeding ≥ 0.90 criteria); NFI = 0.999 (approaching perfect fit); and GFI = 0.999 with AGFI = 0.994 (both exceeding ≥ 0.90 thresholds). These results provide strong empirical support for the four-factor structure of psychological capital (hope, self-efficacy, resilience, and optimism) in this occupational context, with minimal but theoretically sound modifications resolving all initial fit concerns and validating the PsyCap construct among Thai flight attendants.

Conclusion and Discussion

The data demonstrate that self-efficacy, hope, resilience, and optimism are not only related but are almost inseparable in this context. These findings underscore the importance of cultivating all four qualities simultaneously, as strengthening one is likely to enhance the development of the others. This interconnectedness can be particularly valuable in psychological interventions, educational settings, and organizational development and management programs aimed at building positive psychological capital (PsyCap) among flight attendants.

The standardized loadings from the confirmatory factor analysis (CFA) provide valuable insights into the relative contributions of each PsyCap (PsyCap) component among flight attendants. In this study, hope demonstrated the strongest association with the higher-order PsyCap construct (standardized loading = 0.85), followed by efficacy (0.74), resilience (0.69), and optimism (0.59). These findings have important implications for understanding the psychological resources that are most salient to flight attendants in their professional contexts. The CFA results suggest that the PsyCap measurement model is well-supported, with the four components (hope, efficacy, resilience, and optimism) making meaningful contributions to the higher-order construct. This is consistent with the theoretical framework of PsyCap, which posits that these components are interrelated and contribute to overall psychological well-being.

The prominence of hope as the most influential component suggests that goal-directed energy and the perceived ability to find pathways to achieve those goals are particularly critical for flight attendants' mental health. This is because their work environment is inherently unpredictable, with factors such as flight delays, medical emergencies, and passenger conflicts requiring them to think quickly and adapt rapidly. The nature of their work—characterized by irregular schedules, high responsibility for passenger safety, and frequent exposure to stressful or unpredictable situations—may make the ability to set clear goals and maintain motivation especially valuable for them. Hope, as conceptualized by Snyder et al. (1991), encompasses both agency (goal-directed determination) and pathways (planning to achieve goals), which are likely essential for flight attendants who must adapt quickly to changing circumstances and maintain high standards of service and safety.

Efficacy, or the belief in one's capability to execute tasks successfully, is also strongly associated with PsyCap. For flight attendants, self-efficacy can be fostered through rigorous training and accumulated experience, enabling them to handle emergencies, provide effective customer service, and collaborate as part of a team. This association highlights the importance of cultivating confidence in one's abilities, which can be achieved through a combination of formal education and hands-on experience. In the context of flight attendants, self-efficacy is critical for ensuring passengers' safety and well-being during emergencies.

Resilience has emerged as a key contributor to psychological capital (PsyCap). This finding aligns with the demands of the aviation industry, where flight attendants must frequently recover from disruptions, manage challenging passenger interactions, and cope with fatigue and jet lag. Thus, the ability to bounce back from adversity is a vital psychological resource for this group. In this context, resilience refers to the capacity of flight attendants to adapt to and withstand the stressors associated with their job, such as dealing with difficult passengers or navigating turbulent flights. This ability to cope with adversity is essential for maintaining mental health and well-being.

Optimism showed the lowest, albeit substantial, loading on psychological capital (PsyCap). This is likely because optimism is an important aspect of PsyCap, but its relatively lower association may reflect the reality-oriented mindset required in aviation. While optimism can be beneficial in many situations, its overexpression can potentially conflict with the need for vigilance and adherence to safety protocols in high-risk environments such as aviation.

These results highlight the complexity of PsyCap among flight attendants, with hope and resilience emerging as particularly significant components of this construct. This complexity is evident in the dynamic interplay and mutual influence among the various elements of PsyCap—hope, resilience, efficacy, and optimism—which collectively shape individual and group outcomes within the organization. The Job Demands-Resources Model (Demerouti et al., 2001; Bakker & Demerouti, 2007) integrates these components by positioning PsyCap as a personal resource that buffers job demands, enhances work engagement, and facilitates resource gain spirals, while Luthans' Positive Organizational Behavior framework (2002; 2007) establishes PsyCap's developmental potential as state-like capacities that can be enhanced through training and experience. From an organizational management perspective, understanding these interconnections is crucial for designing effective human resource strategies and leadership practices. Interventions aimed at enhancing PsyCap in this population may benefit from a targeted focus on fostering hope and resilience, while also supporting self-efficacy and promoting optimism through organizational culture, supportive leadership, and professional development programs. Such initiatives can be integrated into broader talent management and employee engagement frameworks, contributing to a more resilient and adaptable workforce.

Future research should further investigate how these PsyCap components influence not only individual job performance, well-being, and retention, but also team dynamics, organizational commitment, and overall organizational effectiveness within the aviation sector. By aligning PsyCap development with organizational goals and management practices, airlines can create a more supportive environment that enhances both employee satisfaction and operational performance.

Limitations of the Study

The present study has several limitations. First, the research was confined to flight attendants in Thailand, with data sourced from a single commercial airline, which may limit the generalizability of the findings to flight attendants in other countries, airlines, or cultural contexts. Additionally, the cross-sectional design, which involves data collection at a single point in time, restricts the ability to infer causality or observe changes in PsyCap over time; a longitudinal approach would provide deeper insights into its development and fluctuations. Reliance on self-reported questionnaires introduces the possibility of social desirability bias, which may affect the accuracy of reported psychological capital (PsyCap) levels. Furthermore, the study provides limited demographic information about the sample, including age, gender, and years of experience, which limits the examination of how these factors may influence psychological capital (PsyCap). The absence of control for potential confounding variables, including job satisfaction, organizational culture, and work conditions, also limits the robustness of the findings. Finally, this study did not extensively explore the influence of Thai

cultural factors on PsyCap, which may significantly shape the experiences and perceptions of flight attendants in this context.

Recommendations for Future Research

1) PsyCap should be compared across different airlines or types of airline businesses, such as regional or low-cost airlines, as well as other service sectors, including hotel frontline employees and healthcare workers.

2) A second-order confirmatory factor analysis should be conducted to examine the factor loadings and importance of the subcomponents within each principal component.

3) Each variable was studied separately, and its effectiveness in stimulating or enhancing other positive organizational characteristics (such as work engagement or job satisfaction) and reducing negative behaviors toward the organization (such as absenteeism, turnover intention, or counterproductive behavior) was evaluated.

4) Promoting PsyCap among flight attendants will be essential to enhance work performance and maintain sustainable psychological well-being. External factors such as gender, economic status, and work environment should also be taken into account. Moreover, PsyCap should be clearly utilized as a mechanism linking to employees' psychological well-being.

References

Avey, J., Reichard, R., Luthans, F., & Mhatre, K. (2011). Meta-analysis of the impact of positive PsyCap on employee attitudes, behaviors, and performance. *Human Resource Development Quarterly, 22*(2), 127-152.

Bakker, A., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology, 22*(3), 309-328.

Bentler, P. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*(2), 238-246.

Bentler, P., & Bonett, D. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88*(3), 588-606.

Brislin, R. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1*(2), 185-216.

Browne, M., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods & Research, 21*(2), 230-258.

Byrne, B. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). London: Routledge.

Cheng, J., Chen, C., Teng, H., & Yen, C. (2018). Tour leaders' job crafting and job outcomes: The moderating role of perceived organizational support. *Tourism Management Perspectives, 27*, 32-41.

Demerouti, E., Bakker, A., Nachreiner, F., & Schaufeli, W. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86*(3), 499-512.

Fu, L., & Charoensukmongkol, P. (2022). Benefits of PsyCap on host country nationals' support and burnout of Chinese expatriates in Thailand: The moderating effect of personal characteristics. *Asia-Pacific Journal of Business Administration, 14*(2), 265-284.

Hair, J., Black, W., Babin, B., & Anderson, R. (2019). *Multivariate data analysis* (8th ed.). Massachusetts: Cengage Learning.

Han, E., & Cai, L. (2024). Impact of psychological capital on organizational commitment and turnover intention: Evidence from Korean flight attendants. *Iran Journal of Public Health, 53*(7), 1578-1587.

Henning, S. (2015). The wellness of airline cabin attendants: A systems theory perspective. *African Journal of Hospitality, Tourism and Leisure, 4*(2), 1-11.

Hu, L., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1-55.

Karatepe, O., & Karadas, G. (2015). An empirical investigation of psychological capital among flight attendants. *Journal of Air Transport Management, 42*, 193-205.

Kenny, D. (2024). *SEM: Measuring Model Fit*. Retrieved from https://davidakenny.net/cm/fit.htm.

Kline, R. (2023). *Principles and practice of structural equation modeling* (5th ed.). New York: Guilford Press.

Lowery, A., & Cassidy, T. (2022). Health and well-being of first responders: The role of PsyCap, self-compassion, social support, relationship satisfaction, and physical activity. *Journal of Workplace Behavioral Health, 37*(2), 87-105.

Luthans, F. (2002). Positive organizational behavior: Developing and managing psychological strengths. *Academy of Management Executive, 16*(1), 57-72.

Luthans, F., & Youssef, C. (2007). Emerging positive organizational behavior. *Journal of Management, 33*(3), 321-349.

Luthans, F., Youssef, C., & Avolio, B. (2007). *PsyCap: Developing the human competitive edge*. Oxford: Oxford University Press.

Luthans, F., Youssef-Morgan, C., & Avolio, B. (2015). *PsyCap and beyond*. Oxford: Oxford University Press.

McNeely, E., Mordukhovich, I., Tideman, S., Gale, S., & Coull, B. (2018). Estimating the health consequences of flight attendant work: Comparing flight attendant health to the general population in a cross-sectional study. *BMC Public Health, 18*, 346.

Snyder, C., Irving, L., & Anderson, J. (1991). Hope and Health. In C. Snyder, & D. Forsyth. (eds.). *Handbook of Social and Clinical Psychology: The Health Perspective* (pp. 285-305). London: Pergamon Press.

Stajkovic, A., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin, 124*(2), 240-261.

Sumalrot, T., Suwanwong, C., Pimthong, S., Surakarn, A., Chiangkhong, A., & Khunakorncharatphong, A. (2023). The development and effectiveness of web-based psychological capital intervention on the mental well-being of tourism workers during the COVID-19 pandemic. *BMC Psychology, 11*, 138.

Suwanvatin, P., Watakakosol, R., Iamsupasit, S., Wiwattanapantuwong, J., & Tsuneyuki, A. (2022). Relation between psychological capital and health-related issues among service professionals: A systematic review. *Tohoku Psychologica Folia, 81*, 1-13.

Terwee, C., Dekker, F., Wiersinga, W., Prummel, M., & Bossuyt, P. (2003). On assessing responsiveness of health-related quality of life instruments: Guidelines for instrument evaluation. *Quality of Life Research, 12*(4), 349-362.

Tucker, L., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika, 38*, 1-10.

van de Vijver, F., & Tanzer, N. (2004). Bias and equivalence in cross-cultural assessment: An overview. *European Review of Applied Psychology, 54*(2), 119-135.

Zhang, X., Li, Y., Ma, S., Hu, J., & Jiang, L. (2014). A structured reading materials-based intervention program to develop EFL graduate students' metacognitive awareness and metacognitive strategies. *Journal of Education and Learning, 3*(1), 82-94.

Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Conflicts of Interest: The authors declare that the research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.