



Examining Employees' Psychological Empowerment Levels in Terms of Demographic and Occupational Characteristics: The Case of Antalya Airport

Çalışanların Psikolojik Güçlendirme Düzeylerinin Demografik ve Mesleki Özellikler Açısından İncelenmesi: Antalya Havalimanı Örneği

ABSTRACT

The aim of this study is to determine the psychological empowerment levels of employees at Antalya Airport and to examine whether these levels differ significantly according to demographic and occupational characteristics. Data were collected from 226 employees working for three different ground handling organizations operating at Antalya Airport. The 12-item Psychological Empowerment Scale, developed by Spreitzer (1995) and adapted into Turkish by Sürgevil et al. (2013), was used for data collection. Reliability analysis, exploratory factor analysis, independent-samples t-test, and one-way analysis of variance were employed to analyze the data. When the homogeneity of variance assumption was not met, Welch's test and the Games-Howell multiple comparison test were applied. The findings revealed that employees' psychological empowerment levels differed significantly according to age, professional experience, and position, whereas no significant differences were found in terms of gender, marital status, educational level, or department. In particular, employees aged 18–25 and those with five years or less of professional experience exhibited lower levels of psychological empowerment, while employees in managerial/supervisory positions reported higher levels of psychological empowerment than those in officer/worker positions. The findings highlight the importance of organizational practices aimed at supporting psychological empowerment, particularly among employees in the early stages of their careers and those in non-managerial positions.

Keywords: Psychological Empowerment, Civil Aviation, Airport Employees, Ground Handling.

ÖZET

Bu araştırmanın amacı, Antalya Havalimanı çalışanlarının psikolojik güçlendirme düzeylerini belirlemek ve bu düzeylerin demografik ve mesleki özellikler açısından anlamlı farklılık gösterip göstermediğini incelemektir. Araştırma kapsamında Antalya Havalimanı'nda faaliyet gösteren üç farklı yer hizmetleri kuruluşunda görev yapan 226 çalışandan veri elde edilmiştir. Verilerin toplanmasında Spreitzer (1995) tarafından geliştirilen ve Sürgevil vd. (2013) tarafından Türkçeye uyarlanan 12 maddelik Psikolojik Güçlendirme Ölçeği kullanılmıştır. Verilerin analizinde güvenilirlik analizi, açıklayıcı faktör analizi, bağımsız örneklem t-testi ve tek yönlü varyans analizinden yararlanılmış; varyansların homojenliği varsayımının sağlanmadığı durumlarda Welch testi ve Games-Howell çoklu karşılaştırma testi uygulanmıştır. Araştırma sonucunda çalışanların psikolojik güçlendirme düzeylerinin yaş, mesleki deneyim ve pozisyona göre anlamlı biçimde farklılaştığı; cinsiyet, medeni durum, eğitim durumu ve çalışılan departmana göre ise anlamlı bir farklılık göstermediği belirlenmiştir. Özellikle 18–25 yaş grubundaki ve beş yıl ve altında mesleki deneyime sahip çalışanların psikolojik güçlendirme düzeylerinin daha düşük olduğu, yönetici/şef pozisyonundaki çalışanların ise memur/işçi pozisyonundaki çalışanlardan daha yüksek psikolojik güçlendirme düzeyine sahip olduğu görülmüştür. Bulgular, özellikle kariyerinin ilk yıllarında bulunan ve yönetsel olmayan pozisyonlarda çalışanların psikolojik güçlendirme algılarının desteklenmesine yönelik örgütsel uygulamaların önemine işaret etmektedir.

Anahtar Kelimeler: Psikolojik Güçlendirme, Sivil Havacılık, Havalimanı Çalışanları, Yer Hizmetleri.

INTRODUCTION

Psychological empowerment is defined as a subjective, cognitive, and attitudinal process that contributes to employees' feelings of effectiveness, competence, and empowerment in performing their tasks, and is regarded as an important construct that contributes to employees' motivation and sense of purpose in the workplace (Llorente-Alonso et al., 2024, p. 1759). Conceptualized as a cognitive state related to intrinsic task motivation, psychological empowerment comprises the dimensions of meaning, competence, self-determination, and impact (Spreitzer, 1995, p. 1444). Employees who perceive these cognitive elements at high levels are reported to be able to behave more proactively in their work roles without constantly waiting

Serdar Kızılcın¹

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¹ Lecturer, Uşak University, Civil Aviation Vocational School, Uşak, Türkiye. ORCID: 0000-0002-8209-2804



for managerial intervention (Kuzu, 2023, p. 1128). Indeed, in the organizational behavior literature, psychological empowerment is considered an important construct associated with various employee outcomes, such as innovative behavior, in service-intensive sectors (Dawood et al., 2025, p. 86).

The importance of psychological empowerment becomes more pronounced in work environments where employees face intense operational requirements and varying service demands. High levels of psychological empowerment have been reported to support proactive behaviors and service-oriented performance among employees working under substantial operational pressures (Long et al., 2022, p. 3). Providing employees with a certain degree of decision-making autonomy may also support the intrinsic motivation necessary to deliver high-quality service in response to diverse and often unpredictable passenger expectations. Psychological empowerment is critically important in intensive and dynamic service environments, as it enables employees to manage the complex job demands they encounter (Agarwal et al., 2024, p. 354). Accordingly, examining this phenomenon becomes particularly important in international transportation hubs such as Antalya Airport, where high passenger traffic and diverse operational processes are managed simultaneously.

Nevertheless, employees' levels of psychological empowerment may vary according to individual and occupational characteristics. Considering demographic characteristics such as age, tenure, and educational level together with occupational roles has been noted as important for understanding employees' perceptions of psychological empowerment in dynamic work environments (Derdin & Unur, 2024, p. 343). Findings in the psychological empowerment literature concerning demographic and occupational characteristics such as gender, age, education, tenure, and position have not always been consistent (Mangundjaya et al., 2024, pp. 14–15; Llorente-Alonso et al., 2024, p. 1761). This highlights the importance of examining psychological empowerment across different employee groups and organizational contexts in terms of demographic and occupational characteristics.

Studies conducted in the aviation sector have examined the relationships between psychological empowerment and job performance, turnover intention, self-leadership, and various employee outcomes. In addition, some studies have examined airport employees' levels of psychological empowerment in terms of certain demographic characteristics. However, there remains a need to develop further evidence on the psychological empowerment levels of ground handling employees by considering not only demographic characteristics but also work-related characteristics such as professional experience, department, and organizational position. Accordingly, this study aims to examine whether the psychological empowerment levels of employees working for three different ground handling organizations operating at Antalya Airport differ significantly according to gender, age, marital status, educational level, professional experience, department, and position. The study is expected to contribute to the literature by providing a comprehensive examination of demographic and occupational differences in psychological empowerment within the ground handling context and, in particular, by presenting comparative findings across groups with different levels of experience, departments, and positions.

CONCEPTUAL FRAMEWORK

The concept of empowerment began to gain prominence in organizational management as employees were granted greater initiative and increased participation in decision-making processes. However, the recognition that empowerment could not be explained solely by delegating authority to employees increased interest in its psychological dimension. As a result of this development, two main approaches—structural empowerment and psychological empowerment—have emerged in the empowerment literature. While structural empowerment refers to employees' access to information, resources, support, and opportunities within the organizational structure, psychological empowerment focuses on the extent to which employees perceive themselves as empowered (Boudrias et al., 2014, p. 438; Cho & Faerman, 2010, p. 34; Menon, 2001, p. 156).

The studies of Conger and Kanungo (1988), Thomas and Velthouse (1990), and Spreitzer (1995) have played an important role in the development of the psychological empowerment approach. Conger and Kanungo (1988, p. 474) conceptualized empowerment as a motivational process aimed at enhancing employees' sense of self-efficacy. Thomas and Velthouse (1990, p. 667) further developed this approach by examining empowerment within the framework of intrinsic task motivation and drawing attention to its cognitive elements. In Thomas and Velthouse's (1990) cognitive model, empowerment is conceptualized as a cyclical process involving environmental events, individuals' task assessments, and behaviors. Information derived from environmental events shapes individuals' cognitive assessments of their tasks, which in turn play a role in initiating and sustaining behavior (Thomas & Velthouse, 1990, pp. 669–671). Building on this theoretical foundation, Spreitzer (1995) examined psychological empowerment in the workplace and developed a comprehensive approach to its measurement.

According to Spreitzer (1995, p. 1444), psychological empowerment is a motivational construct consisting of four cognitive dimensions: meaning, competence, self-determination, and impact. Although these dimensions are distinct, together they constitute the overall construct of psychological empowerment. Meaning refers to the congruence between an individual's values and the purposes of the work activities performed; competence refers to an individual's belief in their ability to successfully perform work activities using their skills; self-determination refers to the perception of having choice and initiative in initiating and sustaining work behaviors; and impact refers to an individual's perception of being able to make a difference in the work environment and organizational outcomes. These four dimensions jointly contribute to the overall experience of psychological empowerment; although the absence of any one dimension does not completely eliminate the experience of empowerment, it may reduce its overall level (Spreitzer, 1995, p. 1444). Thus, psychological empowerment reflects an active orientation in which employees perceive themselves as capable of shaping their work and work environment, rather than adopting a passive attitude toward their work roles.

Psychological empowerment is closely related to how employees perceive the authority and opportunities provided by the organization. Therefore, sharing authority, information, skills, resources, and rewards with employees within the organizational structure may contribute to their experience of empowerment (Dewettinck et al., 2003, p. 15; Spreitzer, 2008, p. 63). From this perspective, while structural empowerment practices provide employees with the necessary organizational conditions, psychological empowerment reflects how these conditions are perceived and experienced by employees. In this respect, the mere existence of structural arrangements such as delegation of authority or participation in decision-making does not, by itself, guarantee that employees will feel psychologically empowered; individuals' subjective and cognitive assessments of these conditions are also important (Jones, 1990, p. 86).

The development of employees' perceptions of psychological empowerment depends not only on individual assessments but also on the organizational conditions in which they work. Spreitzer (1996, pp. 487–488) identifies access to information and resources, reduced role ambiguity, socio-political support, and a participative organizational structure among the social-structural characteristics that support psychological empowerment. Therefore, psychological empowerment can be regarded as a construct that requires consideration of both employees' individual perceptions and the conditions provided by the work environment.

Psychological empowerment is associated with various positive outcomes for both employees and organizations. Research on the subject indicates that psychological empowerment is related to important employee outcomes such as job satisfaction, organizational commitment, and job performance (Maynard et al., 2012, p. 1248). In addition, psychologically empowered employees are reported to develop a more active orientation toward their work, take greater initiative in performing their tasks, and engage in behaviors that contribute to the achievement of organizational goals (Spreitzer et al., 2005, p. 542).

The importance of psychological empowerment may become even more pronounced in service sectors characterized by intensive employee–customer interaction. Employees' sense of empowerment is important for enabling service employees to respond to changing customer needs and expectations, develop solutions to the problems they encounter, and exercise initiative when necessary during the service process. Indeed, empowered employees in the service sector have been reported to be more flexible and productive, to behave more proactively in satisfying customers, and thereby to contribute to the quality of service interactions (Shahril et al., 2013, p. 91). In this respect, psychological empowerment is an important organizational behavior variable that should be considered in work environments where employees face intensive operational processes and demanding service requirements.

Because psychological empowerment reflects employees' subjective assessments of their work, it is also examined in relation to individual and occupational characteristics. Indeed, meta-analytic research on psychological empowerment has evaluated the relationships between psychological empowerment and employee characteristics such as education, organizational tenure, and organizational position (Llorente-Alonso et al., 2024, p. 1761). Similarly, empirical studies examining psychological empowerment across different demographic characteristics have shown that findings regarding variables such as gender, age, education, tenure, and position are not always consistent; significant differences have been found for some characteristics, whereas no significant differences have been observed for others (Mangundjaya et al., 2024, pp. 14–15). Furthermore, a study conducted among service-sector employees, including airline employees, found that levels of psychological empowerment could differ according to gender and type of service sector (Hechanova et al., 2006, pp. 76–77).

These findings demonstrate the importance of examining psychological empowerment across different employee groups and work contexts. Accordingly, the present study examines the psychological empowerment levels of employees at Antalya Airport in terms of gender, age, marital status, educational level, professional experience, department, and position.

METHOD

Aim and Scope of the Study

The aim of this study is to determine the psychological empowerment levels of employees at Antalya Airport and to examine whether these levels differ significantly according to demographic and occupational characteristics. Accordingly, employees' psychological empowerment levels were compared in terms of gender, age, marital status, educational level, professional experience, department, and position. In this study, psychological empowerment was examined using the overall psychological empowerment score.

Population and Sample

The population of the study consists of employees working for ground handling organizations operating at Antalya Airport. Within the scope of the study, employees of three different ground handling organizations operating at Antalya Airport were reached, and usable data were obtained from 226 employees. Convenience sampling was used to select the participants, and the research data were collected on a voluntary basis. The participants were employees working in the Passenger Services, Operations Services, and Ramp Services departments.

Limitations of the Study

Several limitations should be considered when evaluating the findings of this study. First, the fact that the study was conducted solely among ground handling employees working at Antalya Airport limits the generalizability of the findings to other airports, organizational structures, and working conditions. Second, the participants were selected using convenience sampling, and data collection was conducted on a voluntary basis. In addition, some employees' concerns that participation in the survey might be viewed negatively by their employers constituted a limitation in terms of access to the study sample. Third, the small number of participants in some subgroups limits the stability of the findings. In particular, the results for the postgraduate education group and the group with less than one year of professional experience should be interpreted with caution, as these groups included only 7 and 8 participants, respectively. Finally, because the data were based on employees' self-reports, the findings reflect participants' subjective assessments of psychological empowerment.

Data Collection Instrument

A questionnaire was used as the data collection instrument in the study. The questionnaire consisted of two sections. The first section included demographic and occupational questions concerning participants' gender, age, marital status, educational level, professional experience, department, and position. In the second section, the 12-item Psychological Empowerment Scale, developed by Spreitzer (1995) and adapted into Turkish by Sürgevil et al. (2013), was used to determine employees' levels of psychological empowerment. The scale items were rated on a five-point Likert scale ranging from "1 = Strongly disagree" to "5 = Strongly agree," with higher scores indicating higher perceived psychological empowerment.

Research Hypotheses

The hypotheses developed in line with the aim of the study are presented below:

- H₁: Employees' psychological empowerment levels differ significantly by gender.
- H₂: Employees' psychological empowerment levels differ significantly by age.
- H₃: Employees' psychological empowerment levels differ significantly by marital status.
- H₄: Employees' psychological empowerment levels differ significantly by educational level.
- H₅: Employees' psychological empowerment levels differ significantly by professional experience.
- H₆: Employees' psychological empowerment levels differ significantly by department.
- H₇: Employees' psychological empowerment levels differ significantly by position.

Data Analysis

The data obtained within the scope of the study were analyzed using the SPSS 27 statistical software package. First, the reliability of the Psychological Empowerment Scale was assessed using Cronbach's alpha coefficient, and exploratory factor analysis was conducted to examine its construct validity. The distributional characteristics of the data were evaluated based on skewness and kurtosis values, and the psychological empowerment scores were found to be approximately normally distributed.

Independent-samples t-tests were used to determine whether participants' psychological empowerment levels differed by gender, marital status, and position, while one-way analysis of variance (ANOVA) was used to examine differences by age, educational level, professional experience, and department. The homogeneity of variances was assessed using Levene's test. When the assumption of homogeneity of variances was not met, Welch's test was employed, and the Games–Howell multiple comparison test was used to identify differences between groups. The level of statistical significance was set at $p < .05$, and Cohen's d and eta-squared (η^2) effect sizes were calculated to assess the magnitude of the differences.

RESULTS

Reliability Analysis

Cronbach's alpha coefficient was calculated to assess the reliability of the Psychological Empowerment Scale used in the study. The results of the analysis are presented in Table 1.

Table 1: Reliability Analysis Results for the Psychological Empowerment Scale

Item	Corrected Item–Total Correlation	Cronbach's Alpha if Item Deleted
PE1	.849	.963
PE2	.889	.962
PE3	.848	.963
PE4	.863	.963
PE5	.863	.963
PE6	.834	.964
PE7	.729	.966
PE8	.811	.964
PE9	.818	.964
PE10	.804	.964
PE11	.805	.964
PE12	.815	.964
Overall Scale	—	.967

As shown in Table 1, the overall Cronbach's alpha coefficient for the Psychological Empowerment Scale was calculated as .967. The corrected item–total correlations ranged from .729 to .889. In addition, when any item was deleted from the scale, Cronbach's alpha coefficients ranged from .962 to .966 and did not exceed the overall reliability coefficient of .967. These results indicate that the scale has a high level of internal consistency and that there is no indication that any item should be removed from the scale.

Exploratory Factor Analysis

Exploratory factor analysis was conducted to examine the construct validity of the Psychological Empowerment Scale used in the study. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were used to assess the suitability of the data for factor analysis. The results of the analysis are presented in Table 2.

Table 2: Exploratory Factor Analysis Results for the Psychological Empowerment Scale

Item/Indicator	Factor Loading	Communality (h^2)
PE1	.864	.746
PE2	.904	.817
PE3	.860	.740
PE4	.878	.771
PE5	.879	.773
PE6	.848	.720
PE7	.741	.549
PE8	.825	.680
PE9	.832	.692
PE10	.821	.674
PE11	.823	.677
PE12	.832	.692
Indicator	Value	
KMO	.935	
Bartlett's Test of Sphericity	$\chi^2(66)=3368.340; p<.001$	
Eigenvalue	8.815	

Total Variance Explained	71.092%
Factor Extraction Method	Principal Axis Factoring

As shown in Table 2, the KMO measure of sampling adequacy was .935, indicating that the data were suitable for factor analysis. Bartlett's test of sphericity was also statistically significant [$\chi^2(66) = 3368.340$, $p < .001$]. Principal Axis Factoring yielded a single factor with an eigenvalue greater than 1, which explained 71.092% of the total variance. The factor loadings ranged from .741 to .904, while the communalities ranged from .549 to .817. Although the Psychological Empowerment Scale developed by Spreitzer (1995) originally consists of four dimensions, the items in the present study loaded highly on a single factor, and the scale demonstrated high internal consistency. This finding was not interpreted as evidence that the original four-dimensional theoretical structure of the scale is invalid; rather, it was considered to indicate that, in the present sample, the items converged on a dominant general psychological empowerment factor. Accordingly, considering the purpose of the study and the factor structure obtained, subsequent analyses were conducted using the overall psychological empowerment score.

Descriptive Statistics and Normality Analysis

Descriptive statistics for psychological empowerment levels, along with the skewness and kurtosis values examined to assess the normality of the data, are presented in Table 3.

Table 3: Descriptive Statistics and Normality Values for the Psychological Empowerment Scale

Variable	N	Min.	Max.	Mean	SD	Skewness	Kurtosis
Psychological Empowerment	226	1.17	5.00	3.42	1.06	-0.607	-0.950

The skewness and kurtosis values were considered in assessing the normality of the data. According to George and Mallery (2010), skewness and kurtosis values between -2 and $+2$ are considered acceptable for normality. In this study, the skewness value was $-.607$ and the kurtosis value was $-.950$. Accordingly, the data were considered to be approximately normally distributed, and parametric tests were employed.

Demographic and Occupational Characteristics of the Participants

Frequency and percentage distributions regarding the participants' demographic and occupational characteristics are presented in Table 4.

Table 4: Findings on the Demographic and Occupational Characteristics of the Participants

Variable	Category	n	%
Gender	Female	107	47.3
	Male	119	52.7
Age	18–25 years	48	21.2
	26–35 years	104	46.0
	36–45 years	55	24.3
	46 years and over	19	8.4
Marital status	Married	106	46.9
	Single	120	53.1
Educational level	High school	58	25.7
	Associate degree	78	34.5
	Bachelor's degree	83	36.7
	Master's degree or higher	7	3.1
Professional experience	Less than 1 year	8	3.5
	1–5 years	72	31.9
	6–10 years	81	35.8
	11–15 years	45	19.9
	16 years or more	20	8.8
Department	Passenger Services	114	50.4
	Operations Services	73	32.3
	Ramp Services	39	17.3
Position	Manager/Supervisor	28	12.4
	Officer/Worker	198	87.6
Total		226	100.0

As shown in Table 4, of the 226 employees who participated in the study, 47.3% were female and 52.7% were male. The largest age group consisted of employees aged 26–35, accounting for 46.0% of the participants. Of the participants, 53.1% were single and 46.9% were married. In terms of educational level, bachelor's degree holders constituted the largest group at 36.7%, followed by associate degree holders at 34.5%. Regarding professional experience, the majority of participants had 6–10 years (35.8%) or 1–5 years (31.9%) of experience. In terms of department, 50.4% of the participants worked in Passenger Services, 32.3% in Operations Services, and 17.3% in Ramp Services. Regarding position, 12.4% of the participants worked in managerial/supervisory positions, while 87.6% worked in officer/worker positions.

Examination of Psychological Empowerment Levels According to Demographic and Occupational Characteristics

The results of the analyses conducted to determine whether participants' psychological empowerment levels differed significantly according to their demographic and occupational characteristics are presented below.

Psychological Empowerment Levels by Gender

Table 5: Comparison of Psychological Empowerment Levels by Gender

Gender	n	Mean	SD	t	df	p	Cohen's d
Female	107	3.30	1.09	-1.512	224	0.132	-0.201
Male	119	3.52	1.02				

An independent-samples t-test was conducted to determine whether participants' psychological empowerment levels differed by gender. The assumption of homogeneity of variances was met (Levene = 2.950, $p = .087$). The results showed that although male employees had a higher mean psychological empowerment score ($M = 3.52$, $SD = 1.02$) than female employees ($M = 3.30$, $SD = 1.09$), the difference was not statistically significant [$t(224) = -1.512$, $p = .132$]. In addition, the effect size was found to be small (Cohen's $d = -.201$). Accordingly, H1 was not supported.

Psychological Empowerment Levels by Age

Table 6: Comparison of Psychological Empowerment Levels by Age Group

Age Group	n	Mean	SD	Welch F	df1	df2	p	η^2
18–25 years	48	2.64	1.16	15.715	3	86.571	<.001	.165
26–35 years	104	3.49	1.04					
36–45 years	55	3.78	0.78					
46 years and over	19	3.94	0.44					

A one-way analysis of variance was conducted to determine whether participants' psychological empowerment levels differed across age groups. The assumption of homogeneity of variances was not met (Levene = 12.883, $p < .001$); therefore, the results of Welch's ANOVA were used. The analysis revealed that psychological empowerment levels differed significantly across age groups [Welch $F(3, 86.571) = 15.715$, $p < .001$]. Examination of the effect size indicated that the difference among age groups had a large effect ($\eta^2 = .165$). The Games–Howell multiple comparison test conducted to determine which groups differed showed that employees aged 18–25 had significantly lower levels of psychological empowerment than those aged 26–35, 36–45, and 46 years and over ($p < .001$). In addition, employees aged 46 years and over had significantly higher levels of psychological empowerment than those aged 26–35 ($p = .013$). No statistically significant differences were found in the other group comparisons ($p > .05$). Accordingly, H2 was supported.

Psychological Empowerment Levels by Marital Status

Table 7: Comparison of Psychological Empowerment Levels by Marital Status

Marital Status	n	Mean	SD	t	df	p	Cohen's d
Married	106	3.46	1.00	0.596	224	.552	0.079
Single	120	3.38	1.11				

An independent-samples t-test was conducted to determine whether participants' psychological empowerment levels differed by marital status. The assumption of homogeneity of variances was met (Levene = 2.853, $p = .093$). The results showed that although married employees had a slightly higher mean psychological empowerment score ($M = 3.46$, $SD = 1.00$) than single employees ($M = 3.38$, $SD = 1.11$), the difference was not statistically significant [$t(224) = 0.596$, $p = .552$]. In addition, the effect size was found to be very small (Cohen's $d = 0.079$). Accordingly, H3 was not supported.

Psychological Empowerment Levels by Educational Level

Table 8: Comparison of Psychological Empowerment Levels by Educational Level

Educational Level	n	Mean	SD	Welch F	df1	df2	p	η^2
High school	58	3.50	1.03	2.089	3	28.217	.124	.031
Associate degree	78	3.17	1.15					
Bachelor's degree	83	3.56	0.97					
Master's degree or higher	7	3.77	1.07					

A one-way analysis of variance was conducted to determine whether participants' psychological empowerment levels differed according to educational level. The assumption of homogeneity of variances was not met (Levene = 3.621, $p = .014$); therefore, the results of Welch's ANOVA were used. The analysis revealed that psychological empowerment levels did not differ significantly according to educational level [Welch $F(3, 28.217) = 2.089$, $p = .124$]. The effect size was found to be small ($\eta^2 = .031$). However, given the small number of participants in the master's degree or higher group ($n = 7$), the findings for this group should be interpreted with caution. Accordingly, H4 was not supported.

Psychological Empowerment Levels by Professional Experience

Table 9: Comparison of Psychological Empowerment Levels by Professional Experience

Professional Experience	n	Mean	SD	Welch F	df1	df2	p	η^2
Less than 1 year	8	2.32	0.99	45.832	4	38.834	<.001	.517
1–5 years	72	2.40	0.93					
6–10 years	81	3.99	0.67					
11–15 years	45	4.01	0.48					
16 years or more	20	3.86	0.67					

A one-way analysis of variance was conducted to determine whether participants' psychological empowerment levels differed according to professional experience. The assumption of homogeneity of variances was not met (Levene = 5.298, $p < .001$); therefore, the results of Welch's ANOVA were used. The analysis revealed that psychological empowerment levels differed significantly across professional experience groups [Welch $F(4, 38.834) = 45.832$, $p < .001$]. Examination of the effect size indicated that the difference among professional experience groups had a large effect ($\eta^2 = .517$).

The Games–Howell multiple comparison test conducted to determine which groups differed showed that employees with less than 1 year of professional experience had significantly lower levels of psychological empowerment than those with 6–10 years ($p = .011$), 11–15 years ($p = .011$), and 16 years or more ($p = .016$) of experience. Similarly, employees with 1–5 years of professional experience had significantly lower levels of psychological empowerment than those with 6–10 years, 11–15 years, and 16 years or more of experience ($p < .001$). In contrast, no statistically significant difference was found between the less than 1 year and 1–5 years groups or among the 6–10 years, 11–15 years, and 16 years or more groups ($p > .05$). However, given the small number of participants with less than 1 year of professional experience ($n = 8$), the findings for this group should be interpreted with caution. Accordingly, H5 was supported.

Psychological Empowerment Levels by Department

Table 10: Comparison of Psychological Empowerment Levels by Department

Department	n	Mean	SD	F	p	η^2
Passenger Services	114	3.32	1.07	0.936	.394	.008
Operations Services	73	3.49	1.05			
Ramp Services	39	3.55	1.05			

A one-way analysis of variance (ANOVA) was conducted to determine whether participants' psychological empowerment levels differed according to the department in which they worked. The assumption of homogeneity of variances was met (Levene = 0.297, $p = .743$). The results showed that the mean psychological empowerment score was 3.32 (SD = 1.07) for employees in Passenger Services, 3.49 (SD = 1.05) for employees in Operations Services, and 3.55 (SD = 1.05) for employees in Ramp Services. The observed differences in mean scores among the groups were not statistically significant [$F(2, 223) = 0.936$, $p = .394$]. In addition, the effect size was found to be very small ($\eta^2 = .008$). This finding indicates that employees' psychological empowerment levels did not differ significantly according to the department in which they worked. Accordingly, H6 was not supported.

Psychological Empowerment Levels by Position

Table 11: Comparison of Psychological Empowerment Levels by Position

Position	n	Mean	SD	t	df	p	Cohen's d
Manager/Supervisor	28	4.01	0.38	6.363	109.452	<.001	0.647
Officer/Worker	198	3.33	1.10				

An independent-samples t-test was conducted to determine whether participants' psychological empowerment levels differed according to position. The assumption of homogeneity of variances was not met (Levene = 52.610, $p < .001$); therefore, the t-test results assuming unequal variances were used. The analysis revealed that employees in managerial/supervisory positions had a significantly higher mean psychological empowerment score ($M = 4.01$, $SD = 0.38$) than employees in officer/worker positions ($M = 3.33$, $SD = 1.10$) [$t(109.452) = 6.363$, $p < .001$]. The effect size was found to be moderate (Cohen's $d = 0.647$). Accordingly, H_7 was supported.

Overall Evaluation of the Research Hypotheses

Table 12: Overall Results of the Difference Analyses for Psychological Empowerment Levels

Variable	Test Used	Test Statistic	p	Effect Size	Result
Gender	Independent-samples t-test	$t(224) = -1.512$	.132	$d = -0.201$	Not significant
Age	Welch ANOVA	$F(3, 86.571) = 15.715$	<.001	$\eta^2 = .165$	Significant
Marital status	Independent-samples t-test	$t(224) = 0.596$	.552	$d = 0.079$	Not significant
Educational level	Welch ANOVA	$F(3, 28.217) = 2.089$	.124	$\eta^2 = .031$	Not significant
Professional experience	Welch ANOVA	$F(4, 38.834) = 45.832$	<.001	$\eta^2 = .517$	Significant
Department	One-way ANOVA	$F(2, 223) = 0.936$	.394	$\eta^2 = .008$	Not significant
Position	Independent-samples t-test (equal variances not assumed)	$t(109.452) = 6.363$	<.001	$d = 0.647$	Significant

CONCLUSION AND RECOMMENDATIONS

When the analyses conducted to determine whether participants' psychological empowerment levels differed according to demographic and occupational characteristics were evaluated as a whole, psychological empowerment levels were found to differ significantly according to age, professional experience, and position. In contrast, no statistically significant differences were identified in terms of gender, marital status, educational level, or department. Regarding the effect sizes of the significant differences, the effect associated with age was large ($\eta^2 = .165$), while the effect associated with professional experience was particularly large ($\eta^2 = .517$). The effect size of the difference associated with position was also found to be moderate (Cohen's $d = .647$).

Regarding gender, male employees had a slightly higher mean psychological empowerment score than female employees; however, this difference was not statistically significant. This finding is consistent with several studies indicating that gender does not constitute a significant source of variation in psychological empowerment. In Spreitzer's (1996) study, gender was not a significant variable in the regression model explaining psychological empowerment, while Park and Hassan (2018) similarly found no significant relationship between gender and psychological empowerment. Likewise, Bulut (2023), who conducted research among employees in the aviation sector, found that psychological empowerment levels did not differ significantly by gender. In contrast, Ngqeza and Dhanpat (2021), Mangundjaya et al. (2024), Wang et al. (2022), and Hechanova et al. (2006) found that male employees had significantly higher levels of psychological empowerment than female employees. Thus, although the higher mean psychological empowerment score among male employees in the present study is similar in direction to the findings of these studies, it differs in that the difference did not reach statistical significance. Taken together, these results suggest that gender does not consistently emerge as a differentiating variable in psychological empowerment across different samples and work contexts.

Regarding age, employees' psychological empowerment levels differed significantly across age groups, with employees aged 18–25 exhibiting lower levels of psychological empowerment than those in the older age groups. This finding is generally consistent with the results reported by Wang et al. (2022). Their study found significant differences in psychological empowerment across age groups, with some older age groups reporting higher mean levels of psychological empowerment. Similarly, Dawood et al. (2025) found that employees aged 18–30 had significantly lower levels of psychological empowerment than those aged 31–40, 41–50, and over 50. In addition, Juyumaya (2022) identified a positive and significant relationship between

age and psychological empowerment. In contrast, Mangundjaya et al. (2024) found no significant differences in psychological empowerment by age, while age did not emerge as a significant variable in Spreitzer's (1996) regression model explaining psychological empowerment. Therefore, although the findings of the present study indicate that the relationship between age and psychological empowerment may vary across samples and organizational contexts, they are consistent with studies suggesting that younger employees may exhibit lower levels of psychological empowerment.

Regarding marital status, married employees had a slightly higher mean psychological empowerment score than single employees; however, the difference was not statistically significant. In the study conducted by Wang et al. (2022), psychological empowerment levels differed significantly according to marital status, with married employees reporting higher mean psychological empowerment scores than single employees. Thus, the present finding is similar to Wang et al. (2022) in terms of the direction of the group means but differs in that the difference did not reach statistical significance. Bulut's (2023) study of aviation-sector employees also identified a significant difference according to marital status; however, in contrast to the present study, single employees exhibited higher levels of psychological empowerment than married employees. Therefore, the differing directions of findings concerning marital status in the literature suggest that psychological empowerment does not exhibit a consistent pattern based on marital status.

The results concerning educational level indicated that employees' psychological empowerment levels did not differ significantly according to educational level. This finding is consistent with the results reported by Mangundjaya et al. (2024). Similarly, the meta-analysis conducted by Llorente-Alonso et al. (2024) found no significant relationship between education and psychological empowerment, while Park and Hassan (2018) also reported that the relationship between educational level and psychological empowerment was not significant. In contrast, Spreitzer (1996) found that educational level positively and significantly predicted psychological empowerment. Dawood et al. (2025) found that high school graduates had significantly lower levels of psychological empowerment than university and postgraduate graduates, whereas Wang et al. (2022), despite identifying significant differences across educational groups, found a pattern in which higher educational attainment did not always correspond to higher psychological empowerment. Bulut (2023), who examined aviation-sector employees, also identified a significant difference according to educational level and found that associate degree holders exhibited higher levels of psychological empowerment than the other educational groups. The variation across studies, both in terms of the significance of differences and the ordering of groups, indicates that higher educational attainment cannot be directly associated with higher levels of psychological empowerment. However, given the limited number of participants with a master's degree or higher in the present study ($n = 7$), the findings concerning educational level should be interpreted with caution.

Regarding professional experience, employees' psychological empowerment levels differed significantly across professional experience groups. In particular, employees with less than one year and those with 1–5 years of professional experience had significantly lower levels of psychological empowerment than employees with six years or more of experience. The particularly large effect size associated with professional experience ($\eta^2 = .517$) indicates a pronounced distinction among the experience groups. This finding is largely consistent with the results reported by Dawood et al. (2025), who found that employees with less than five years of experience had significantly lower levels of psychological empowerment than those with 5–10 years and more than 10 years of experience. Similarly, the meta-analysis conducted by Llorente-Alonso et al. (2024) identified a positive and significant, albeit small, relationship between organizational tenure and psychological empowerment. The qualitative study conducted by Sobrino-De Toro et al. (2019) also showed that employees with less professional experience expressed more limited perceptions of psychological empowerment, whereas more experienced employees provided more positive assessments of psychological empowerment. In contrast, Mangundjaya et al. (2024) and Wang et al. (2022) found no significant differences in psychological empowerment according to professional experience or length of service, while Park and Hassan (2018) found no significant relationship between tenure and psychological empowerment. Despite the mixed findings in the literature, considering the large effect size associated with professional experience in the present study together with the findings of Dawood et al. (2025), Llorente-Alonso et al. (2024), and Sobrino-De Toro et al. (2019), the lower psychological empowerment levels of less experienced employees represent an important finding that warrants particular attention in the ground handling context.

Regarding department, no statistically significant differences were found in psychological empowerment levels among employees working in Passenger Services, Operations Services, and Ramp Services. This result is consistent with the findings of Dawood et al. (2025), who similarly found no significant differences in psychological empowerment among employees working in different departments. However, rather than

comparing departments, Hechanova et al. (2006) compared different service sectors and found that psychological empowerment levels differed significantly across sectors, with airline employees exhibiting lower levels of psychological empowerment than employees in some other service sectors. Taken together, these findings suggest that although perceptions of psychological empowerment may vary across different sectors, they may be relatively similar across departments within the same work environment.

Regarding position, employees in managerial/supervisory positions had significantly higher levels of psychological empowerment than employees in officer/worker positions. The moderate effect size associated with this difference (Cohen's $d = .647$) indicates that the distinction according to position is noteworthy. However, this finding differs from some studies in the literature. Mangundjaya et al. (2024) found no significant differences in employees' psychological empowerment levels according to position. Similarly, the meta-analysis conducted by Llorente-Alonso et al. (2024) found no significant relationship between organizational level and psychological empowerment. Although Boudrias et al. (2004) did not directly compare the psychological empowerment levels of managerial and non-managerial employees, they noted that hierarchical level may be a relevant variable in explaining differences in the structure of psychological empowerment. From this perspective, the higher levels of psychological empowerment among managers/supervisors in the present study are important in demonstrating that perceptions of psychological empowerment may vary according to organizational position. The greater opportunities that managerial and supervisory positions may provide for participation in decision-making, assuming responsibility, and influencing organizational processes compared with officer/worker positions may be considered a possible explanation for this finding. However, given the cross-sectional nature of the study, the observed difference cannot be directly attributed to position.

When the significant findings of the study are considered together, psychological empowerment levels appear to differ particularly according to age, professional experience, and organizational position. Among these variables, the particularly large effect size associated with professional experience ($\eta^2 = .517$) highlights the pronounced differences among experience groups in terms of psychological empowerment. In addition, the lower psychological empowerment levels of employees aged 18–25 compared with older age groups and the higher levels among employees in managerial/supervisory positions compared with those in officer/worker positions underscore the importance of considering employees' demographic and occupational characteristics together when examining perceptions of psychological empowerment. Nevertheless, because age, professional experience, and position may be interrelated characteristics and because of the cross-sectional design of the study, these differences should not be interpreted as causal relationships.

The particularly large effect size associated with professional experience and the lower psychological empowerment levels found among employees with five years or less of experience suggest that organizational practices may initially focus on this employee group. Accordingly, developing structured orientation and mentoring practices to support less experienced employees' adaptation to their jobs and operational processes may be beneficial. In shift-based work settings, systematic knowledge and experience sharing between more and less experienced employees, regular feedback, and training opportunities that support professional development may be considered within this framework. When assigning mentoring responsibilities, considering not only seniority but also characteristics such as openness to knowledge sharing, supportive communication, and the ability to encourage the development of new employees may enhance the effectiveness of such practices.

The significantly higher psychological empowerment levels of employees in managerial/supervisory positions compared with those in officer/worker positions constitute another finding that should be considered in practice. Accordingly, participatory practices that enable employees in non-managerial positions to contribute to solving problems related to their areas of responsibility and improving work processes may be encouraged. Supporting employees' access to the information and resources necessary to perform their duties, establishing mechanisms through which they can communicate their views and suggestions to management, and encouraging them to assume responsibility and exercise initiative to the extent permitted by the nature of their duties and safety procedures may be considered within this framework. Such practices may help strengthen non-managerial employees' perceptions that they can contribute to organizational processes.

The role of managers should also be considered in supporting psychological empowerment. In particular, managers and supervisors may be encouraged to provide employees with regular feedback, encourage them to express their views and suggestions, support their development, and share responsibility when appropriate. Park and Hassan (2018) suggest that empowering leadership behaviors demonstrated by managers may cascade down through managerial levels and that senior managers may serve as role models in this process. Accordingly, incorporating empowering leadership practices into leadership development programs for

managers and supervisors in ground handling organizations may contribute to creating a managerial environment that supports employees' perceptions of psychological empowerment.

At the same time, practices aimed at supporting psychological empowerment should be designed with due consideration for the boundaries established by the safety, security, and standard operating procedures of ground handling activities. Employee empowerment should not be understood as relaxing operational rules or task boundaries; rather, it should involve increasing employees' access to information, seeking their input, supporting their participation in problem-solving processes, and enabling them to exercise an appropriate degree of initiative within their areas of responsibility and within existing procedures. In this way, psychological empowerment practices can be implemented in a manner consistent with the standardization and safety requirements of aviation operations.

Future research may include larger and, where possible, probability-based samples from different airports and ground handling organizations to examine the present findings across different organizational and operational contexts. In addition, longitudinal research designs may be employed to investigate changes in psychological empowerment levels over time and, in particular, to examine how differences associated with age, professional experience, and organizational position develop over time. Future studies may also incorporate organizational factors such as leadership, organizational support, and access to information and resources alongside demographic and occupational characteristics to provide a more comprehensive explanation of differences in employees' psychological empowerment levels.

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