



Critical elements of success to prevent psychosocial risk factors in airport work

Elementos críticos de éxito para prevenir factores de riesgo psicosocial en el trabajo aeroportuario

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ABSTRACT:

The objective of the study is to establish the critical elements of success (CES) to prevent psychosocial risk factors in airport work. The study covers four phases (April 2017 - December 2018), beginning with the evaluation of psychosocial factors (N = 59 airport workers: sierra and jungle of Peru), once validation and application of seven data collection instruments were performed (Phase I: 4, Phase III: 3). Results guide 14 CES for work climate (WC), 11 in organizational culture (OC), and nine on execution and content of tasks. The main CSE for WC are promotion of involvement and communication; in OC, prevention of workplace violence, and performance evaluation based on competencies and values.

Keywords: Airport management; critical elements of success; prevention of psychosocial factors. Peruvian airports.

RESUMEN:

El objetivo del estudio es establecer los elementos críticos de éxito (ECE) para prevenir los factores de riesgo psicosocial en el trabajo aeroportuario. Abarca cuatro fases (abr 2017 - dic 2018), iniciando con evaluación de factores psicosociales (N=59 trabajadores aeroportuarios: sierra y selva peruana), previa validación y aplicación de siete instrumentos de recolección de datos (Fase I: 4, Fase III: 3).

Resultados orientan a 14 ECE para clima laboral (CL), 11 en cultura organizacional (CO), y nueve sobre ejecución y contenido de tareas. Principales ECE para CL es: promoción del involucramiento y comunicación; en CO: prevención de violencia laboral, y evaluación del desempeño basado en competencias y valores.

Palabras clave: Gestión aeroportuaria; Elementos críticos de éxito; Prevención de factores psicosociales. Aeropuertos peruanos.

1. Introduction

In a context where the nature of work changes due to austerity policies, occupational health has diverse demands and is inequitable (Kröger et al., 2015; Landsbergis et al., 2018). Although managing occupational safety and health (OSH) is a competitive advantage because it is a parameter to consider companies as socially responsible (Aragón & Rocha, 2009; Rodríguez et al., 2018), it requires changes towards different strategic global approaches, whose crucial aspect is a set of activities to identify the topic management and critical areas (Plasencia et al., 2017; Rivera et al., 2018).

The prevention of psychosocial risks at work (PPSRW) is essential because: (a) it is based on economic, political, organizational and job design aspects (Plasencia et al., 2017, Segarra et al., 2017); (b) because it derives mainly from the risk factors related to the organizational culture and climate that include working conditions (Beck & Lenhardt, 2019), an aspect that has a greater impact due to organizational competitiveness and the tendency to reduce costs in occupational health; and (c) because it is a global problem where new risk factors emerge that need to be addressed from new approaches (Vévoda et al., 2018).

However, the implementation of plans aimed at modifying risk-generating factors, which includes preventive and corrective measures as a result of the evaluation (Segarra et al., 2017) or psychosocial intervention, require identifying the critical elements of success (CES) to prevent psychosocial risk factors in airport work applied from the critical success factors approach proposed by Daniel (1961).

Critical elements of success (CES) approach

According to the CES approach, only a limited number of factors, conditions or internal and external actions are key or essential to guarantee adequate management (Daniel, 1961), and although they vary according to the type of organization, the bases will always be common (Gil & Ibarra, 2014). Likewise, for an individual or work area to materialize the organizational objectives, these must be adequately defined (Alonso, 2010; Plasencia et al., 2017), periodically evaluated and adapted to the exchange rate (Gil & Ibarra, 2014).

The studies that describe the application methodologies in CES consider eight development techniques (Gil & Ibarra, 2014; Leidecker & Bruno, 1984), of which approximately half are adaptable in the prevention of psychosocial risk factors in environmental settings of airport work: (a) company assessment (Leidecker & Bruno, 1984; Gil & Ibarra, 2014; Villegas, 2005), the starting point of this study; (b) hierarchical analysis according to dimensions and indicators associated with the CES (Ahmed et al., 2018; Loonam et al., 2018); (c) reference of the internal processes according to the CES (Dávila et al., 2017; Marrero, 2001); and (d) measurement and final evaluation associated with a set of key indicators transformed into a latent non-observable variable (Alonso, 2010; Plasencia et al., 2017).

Although the evidence in the last decade has not yet shown studies that use the CES approach in the prevention of psychosocial risks in airport work, there are studies linking these elements in information technologies and communications (Mazzeo et al. al., 2016), in SMEs and projects (Méndez et al., 2017; Molena et al., 2017; Monje, 2018); in corporate sustainability and tourism (Alonso, 2010), in finance (Dávila et al., 2017), in college management (Abregú & Sebastián, 2012; Galarza et al., 2015); in makeup and diverse services industry (Guerrero, 2012; Hernández et al., 2015; Mesa & Toro, 2015; Plasencia et al., 2017); in corporate social responsibility (Plasencia et al., 2017; Sangle, 2010), in occupational safety and health (Landsbergis et al., 2018); in quality design and management, risks and business systems (Ahmed et al., 2018; Goharshenasan & Shahin, 2017; Loonam et al., 2018), in the construction industry (Chileshe & Kikwasi, 2014; Martínez et al, 2016), in social housing (Oyebanji et al., 2017), and in agricultural logistics (Marrero, 2001).

The antecedents on intra and extra labor psychosocial factors considered common, often not considered a priority in the initial diagnoses (Rivera, et al., 2018), are addressed independently but extracted as common contributory elements of analysis for PPSRW. These are grouped as follows: (a) autonomy for decision-making and empowerment; (b) communication and feedback; (c) training and education for change; (d) culture and organizational climate; (e) business ethics; (f) stress management and emotional intelligence; (g) motivation; and (h) managerial support (table 1). All of them are viable, safe and economical common factors to apply in PPSRW. Authors such as Loonam et al. (2018), Dávila et al. (2017), Kalshoven et al. (2011), Longenecker (2015), Basaglia et al. (2010), Boudrias & Brunet (2010), Gregory et al. (2009), Riggie et al. (2009), Rosemann (2008), Zimerman et al. (2008), Zelmer & Gibson (2006), Facunmojo et al. (2010), Viswesvaran et al. (2005), Al-Mashari et al. (2003); Sarker & Lee (2003) and Wong & Law (2002) organize this background since initial studies to the most recent.

Table 1

Independent contributory factors in prevention of psychosocial risks at work. Period 1999-2018

Authors (years)	Elements
Boudrias et al. (2010) Zelmer & Gibson (2006)	Autonomy for decision-making and empowerment
Mesa & Toro (2015) Zimmerman et al. (2008) Rosemann (2008)	Communication and feedback
Loonam et al. (2018) Umble et al. (2003)	Instruction and training for change
Basaglia et al. (2010) Gregory et al. (2009)	Positive organizational culture and climate
Kalshoven et al. (2011) Johnson & Jackson (2009)	Ethics in work and organizational values
Viswesvaran et al. (2005) Facunmoju et al. (2005) Wong & Law (2002)	Stress management and emotional intelligence
Dávila et al. (2017) Longenecker (2011)	Motivation
Riggle et al. (2009) Al-Mashari et al. (2003) Sarker & Lee (2003)	Management support

The importance of the study as well as being a parameter in corporate social responsibility, lies in the fact that a set of factors identifies only those critical or essential elements (Goharshenasan & Shahin, 2017) and, where the best chances of success reside that the related companies to the airport activity can focus their attention and resources. According to Rodríguez & De Montserrat (2017), the issue is also of interest because it identifies and integrates CES from a holistic perspective of prevention, reserving OSH oversight when essential in the face of a substantial risk for workers or third parties, except in the aptitude reports and those pre-established at risk (Mohamed et al., 2019). The proposed methodological framework has a place within the OSH regulations in the national and international psychosocial field (Kröger et al., 2015; Rivera et al., 2018; Segarra et al., 2017), which once implemented, will sustainably contribute to PPSRW improvement.

The objective of the study is to establish the CES to prevent psychosocial risk factors in airport work.

2. Methodology

Analysis unit: management from three companies, which displayed relative success in the Peruvian sierra and jungle region (airports "A", "B" and "C"), dedicated to airport services linked to the process of evaluation of psychosocial and ergonomic risks from April 2017 to December 2018. 59 airport workers participated in the first and second phases.

2.1. Procedure

Phase I: Design and validation of data collection instruments

i) Task performance interview guide (TPIG): composed of nine questions of three different levels of response and systematically distributed within two other binding instruments. It was validated by three experts based on seven endpoints ($W = 0.791$, $p < 0.027$) with global average: $\bar{x} = 9.19$ points (minimum required is $\bar{x} \geq 7.0$ points). To evaluate the reliability by stability of responses, it was applied to 23 workers in two stages ($Rho = 0.89$, $p < 0.001$); and the qualitative responses were transformed into ordinal values and these into enneatypes (1 to 9) to determine risk levels (absent, moderate, high).

ii) Task content interview guide (TCIG): composed of eight questions with response levels, distribution, validation, number of experts and assessment criteria similar to instrument (i), presenting good validity ($W = 0.786$, $p < 0.029$) with global average of assessment: $\bar{x} = 9,38$

points (minimum required is $\bar{x} \geq 7.0$ points). The reliability according to stability of responses applied in two stages and to 23 workers was appropriate ($Rho = 0.81, p < 0.01$); and the determination of risk levels were similar to instrument (i).

iii) Organizational culture interview guide (OCIG): composed of 26 questions with response levels, distribution, validation, number of experts and assessment criteria similar to instrument (i), presenting good validity ($W = 0.751, p < 0.031$) with global average: $\bar{x} = 9.19$ points (minimum required is $\bar{x} \geq 7.0$ points). The reliability according to stability of responses applied in two stages to 23 workers was appropriate ($Rho = 0.78, p < 0.037$); and the determination of risk levels was similar to instrument (i).

iv) Work climate scale (WCS): 50 Likert items distributed indistinctly and written in the opposite direction (always = 1 point, none or never = 5 points). It evaluates five factors (self-realization, involvement, supervision, motivation, and working conditions). For instance: (a) involvement, aimed at knowing the perception of workers about the identification and commitment to organizational values, commitment to the organization and key success factor (subject of this study); (b) self-realization, which evaluates the perception of personal and professional development, opportunities for progress, and activities that allow learning and developing professionally. It is part of a battery of instruments that assess health at work and that are validated in the study area by Abregú & Galve (2010) according to expert criteria ($r_s = 0.801, p < .01$); according to construct validity (they explain 64.1% of the total variance, Bartlett sphericity test: $p < 0.0001$). Adequate reliability according to global internal consistency: $\alpha = 0.835$, according to equivalence: $K-R21 = 0.92$ when the limit is $K-R21 \geq 0.61$; and high utility ($ESm = 3.72$), the maximum limit for tests of 48-89 items: $ESm \leq 4.00$ (Gronlund, 2008, pp. 22-23, 126-129). Risk levels were similar to the instrument (i) from the following scores: 50 - 95 points no risk, 96 - 204 moderate risk, and 205 - 250 high risk.

Phase II: Psychosocial risk assessment

Four instruments of data collection were applied voluntarily, anonymously and sequentially to the universe of analysis units ($n = 59$), evaluating the levels and frequency of psychosocial risks, the distribution of frequencies between risks in the three airports and in the four psychosocial factors (task performance, task content, organizational culture, and work environment).

Phase III: Variable integration

First, in addition to the application of four instruments used in phase II, three additional instruments were designed and validated to assess the following determining factors:

i) Work stress scale (WSC): composed of 26 items of four graduations (ascending, inverse, and combined forms) with amplitude of 26 to 104 scores and with standardized scales for the area, with a cut-off point for mild stress at 44 points (Abregú & Galve, 2010). Its validity was adequate according to the cross-cultural convergent criterion (Peru-Spain) between stress and quality of life factors, whose direct negative relationship establishes a greater emotional well-being and better community integration when there is less intensity and repercussion of stress ($r = -0.551$ or $r = -0.438, p < 0.01$). In the construct validity, the nine factors explain up to 71.1% of the total variance (Abregú & Galve, 2010); and their reliability for internal consistency evaluated in homogeneous samples ($n = 252$) was adequate (global: $\alpha = 0.791$) (acceptable reliability is $\alpha = 0.70-0.80$) (George & Mallery, 2013). The determination of the risk levels were similar to the GET instrument and from the following scores: 26-44 points no risk, 45-85 moderate risk; 86-104 high risk.

ii) Abbreviated scale on emotional intelligence at work (SEIW): formed by 11 items of four levels (54.5% with descending score) and transforming enneatypes were grouped into three levels of emotional intelligence in the EI-study (38-44 high IE, 18-37 acceptable or adequate EI; to 17 low EI, with a cut-off point of 17 points. It was validated by three experts based on seven evaluation criteria ($W = 0.791, p < 0.027$) with a global average: $\bar{x} = 9.19$ points (minimum required is $\bar{x} \geq 7.0$ points). Proper reliability was determined by internal consistency in 40 participants (overall: $\alpha = 0.712$, according to elements: $\alpha = 0.783$) (Cronbach's alpha is acceptable at $\alpha = 0.70-0.80$) (George & Mallery, 2013).

iii) Abbreviated scale on resilience (SR): organized by ten items of four levels (3 descending) that transformed enneatypes equals: high capacity (34-40 points), 17-33 adequate or appropriate, 10-16 low capacity (cut point: 16 points). It was validated according to technique, criteria and participants of the SEIW ($W = 0.771, p < 0.027$), with global average: $\bar{x} = 8.21$ points (minimum required $\bar{x} \geq 7.0$ points). The technique and participants for reliability were similar to the SEIW

instrument (adequate reliability, global: $\alpha = 0.731$, according to elements: $\alpha = 0.762$) (acceptable at $\alpha = 0.70-0.80$) (George & Mallery, 2013).

Secondly, the multidimensional scaling metric, the cofenetics or joint correlation (CC) among the four psychosocial risk factors, the variability in the main component to determine the factor that affects the improvement or evolution of the other risk, psychosocial factors in airport work, and the frequency of observation units associated with the degree or weight of positive or negative influence were determined. A dendrogram was also designed to determine the subgroups with similar or heterogeneous psychosocial characteristics.

Phase IV: CES identification

Outlier data was identified and the distribution of multivariate data was evaluated for the hierarchical analysis of CES (Watson, 2017). The adequacy of the sample was evaluated for the factor analysis; applying the Kaiser-Meyer-Olkin test (KMO) and the Bartlett sphericity test (Levy & Varela, 2003). The method of exploratory factor analysis was applied to identify CES using the principal component technique and using three criteria: (a) extraction of components with eigenvalues greater than one unit, with factor weights equal to or greater than 0.70 for more than ten components and 0.80 for under six components (Hair et al., 2014); (b) that they appear in a single factor and total variance $\geq 65.0\%$ contained in the matrix of correlations of the variables or items analyzed (Streiner et al., 2015); and (c) the varimax rotation method was applied (Levy & Varela, 2003) to improve the interpretation of said matrix. The information was processed using the SPSS v.17® software and the multivariate graphic analysis of components and conglomerates through the InfoStat/E® program.

3. Results

A. Display identification

Table 2 shows the satisfactory deployment of prevention in psychosocial factors in airport work as follows: (a) there is no high risk in any of the units of analysis (UA); (b) the frequency of no risk predominates in the four psychosocial factors, the minimum being 55.9% in OC and even more than three quarters (76.3%) in task performance; (c) the analysis of frequency distribution between moderate and no risk in the three airports and in the four psychosocial factors indicate homogeneity (task performance: $p < 0.643$, task content: $p < 0.384$, OC: $p < 0.157$; : $p < 0.044$); although the latter with a slight difference than the rest given a greater variation between both risk levels (87.0% versus 13.0%).

Regarding stress conditions at work, attention skills predominate in 80.0% of the workers, the opinion of unnoticed people in three quarters (75.0%), and 67.5% feel tranquil and relaxed even in adverse work situations.

Table 2
Absolute and relative frequency distribution of psychosocial factors according to risk level. Period Apr 2017- Dec 2018

Risk level	Task execution		Tasks Content		Organizational culture		Working environment		Total
	Absent	Mode-rate	Absent	Mode-rate	Absent	Mode-rate	Absent	Mode-rate	
Airport "A"	19 (82.6)	4 (17.4)	18 (78.3)	5 (21.7)	16 (69.6)	7 (30.4)	20 (87.0)	3 (13.0)	23 (39.0)
Airport "B"	12 (70.6)	5 (29.4)	10 (58.8)	7 (41.2)	7 (41.2)	10 (58.8)	9 (52.9)	8 (47.1)	17 (28.8)
Airport "C"	14 (73.7)	5 (29.4)	12 (63.2)	7 (36.8)	10 (52.6)	9 (47.4)	15 (78.9)	4 (21.1)	19 (32.2)
X² (p)	0.884 (p< 0.643)		1.968 (p< 0.374)		3.707 (p< 0.157)		6.248 (p< 0,044)		
Total	45	14	40	19	33	26	44	15	59

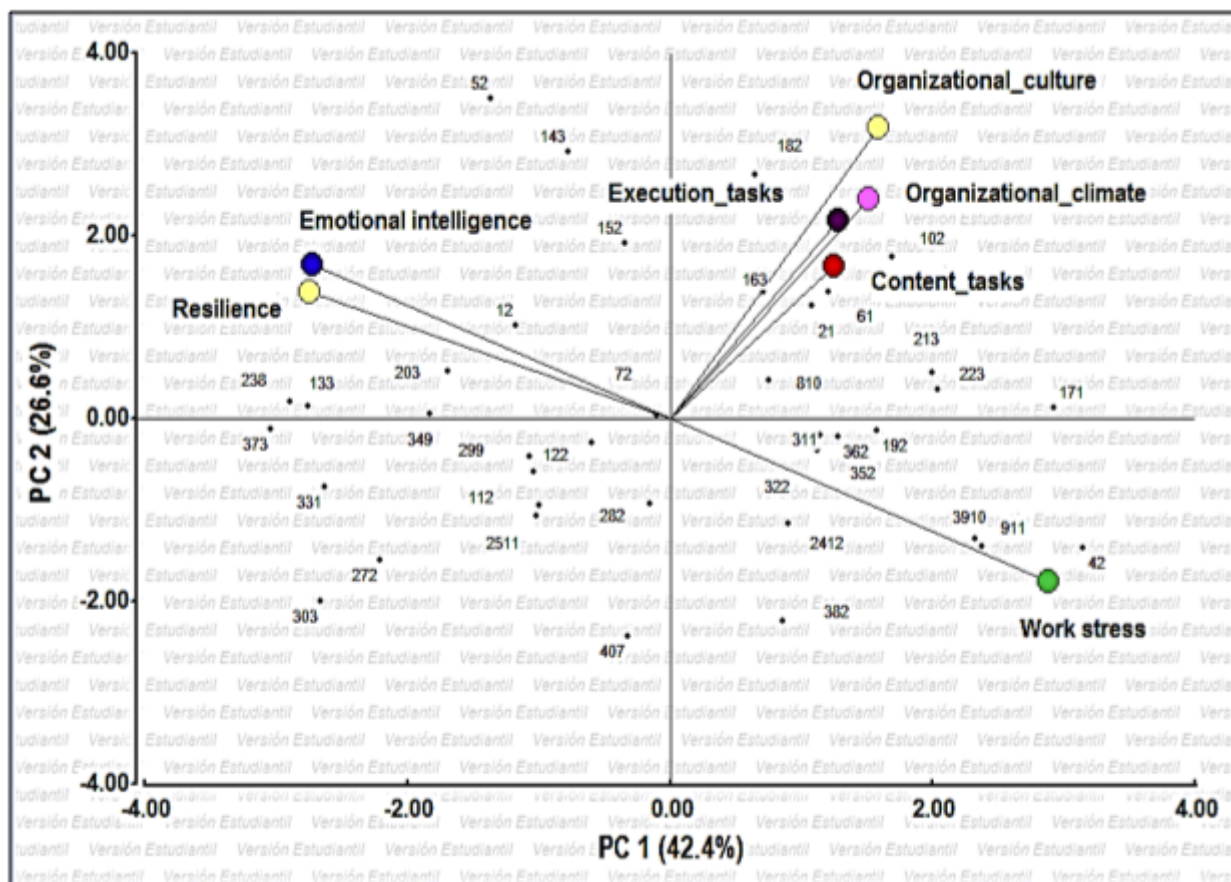
B. Variable integration

According to multidimensional scaling metric and cofenetics or joint correlation (CC) among the four psychosocial risk factors, the three moderating variables (stress, EI and resilience), and between the UA (n = 59) is high (CC = 0.925). OC is the factor that generates the greatest variability in the main component (CV = 23.96%) and the factor that predominately affects the improvement or evolution of the rest of the psychosocial risks in airport work, which represents 26.6% of the global variation (figure 1).

Half of the AUs are not exclusively associated with any specific factor, but are influencing in the same degree or weight in all the psychosocial risk factors, although EI or resilience are the determinants for a greater variability in psychosocial risks. The increase or decrease in both the frequency and the intensity of stress will always be a function of the employee's EI and resilience, and in addition WC. The total variability (69.0%) that explains the frequency and intensity of psychosocial risks are similar in the four psychosocial factors as in the two determining factors (Figure 1).

There is high positive correlation (r = 0.65) between OC and WC, as well as with task performance (r = 0.50). There is moderate correlation between WC and task performance and content (r = 0.24, r = 0.17). There is a high positive correlation (r = 0.72) between EI and resilience. In contrast, EI, resilience, and stress are highly correlated but in a negative sense (r = -0.93, r = -0.87) (figure 1).

Figure 1
Main components according to Euclidean distance in airport workers (small points), psychosocial factors and determinant variables (circles) spatially distributed in PC1 and PC2 (explain 69% of the total variability)



According to the dendrogram, airport workers are organized into three conglomerates or groups with common psychosocial characteristics in each: 42.5% belong to the first conglomerate, 52.5% to the second, and 5.0% to the third group. The UA that have the Euclidean distance smaller than the rest are for 35.3% in the first conglomerate and 33.3% for the second.

C. CES to prevent psychosocial risk factors

The set of psychosocial factors and determining factors present appropriate sampling adequacy and sphericity measures (table 3). Both the highest cumulative variance (83.4%), and the number of dimensions as components correspond to WC, becoming the essential factor for the deployment

of the prevention of psychosocial risks at airport work (PPSRW). Meanwhile, the determining factor with the greatest contribution (76.1%) as dimensions and components is work stress (table 3).

Table 3
Number of dimensions by psychosocial factor and determinants according to statistics of sampling adequacy, sphericity and cumulative variance

Psychosocial factor	K-M-O ¹	Bartlett's test (p) ²	Accumulated variance (%)	Number	
				Dimen-sions	Compo-nents
Working environment	0.685	0.0001	83.43	9	50
Organizational culture	0.597	0.0001	77.94	5	26
Task execution	0.503	0.048	72.15	3	10
Tasks Content	0.526	0.001	70.98	4	9
Determinants					
Work stress	0.556	0.0002	76.12	9	26
Resilience	0.522	0.006	65.50	2	10
Emotional intelligence	0.564	0.004	62.25	3	11

¹ Kaiser-Meyer-Olkin sample adequacy measure (significance p > 0.50).

² Significance p < 0.05.

CES associated with work climate (WC): for successful prevention of the WC factor, CES ranked in order of factorial importance (figure 2) are related to the following activities: (a) the promotion of the involvement to achieve worker commitment and business success; (b) standard availability and extension, procedures and work guidelines as a work condition; (c) supervision with support to overcome obstacles; (d) good communication system at all levels; (e) task fulfillment that allow personal and

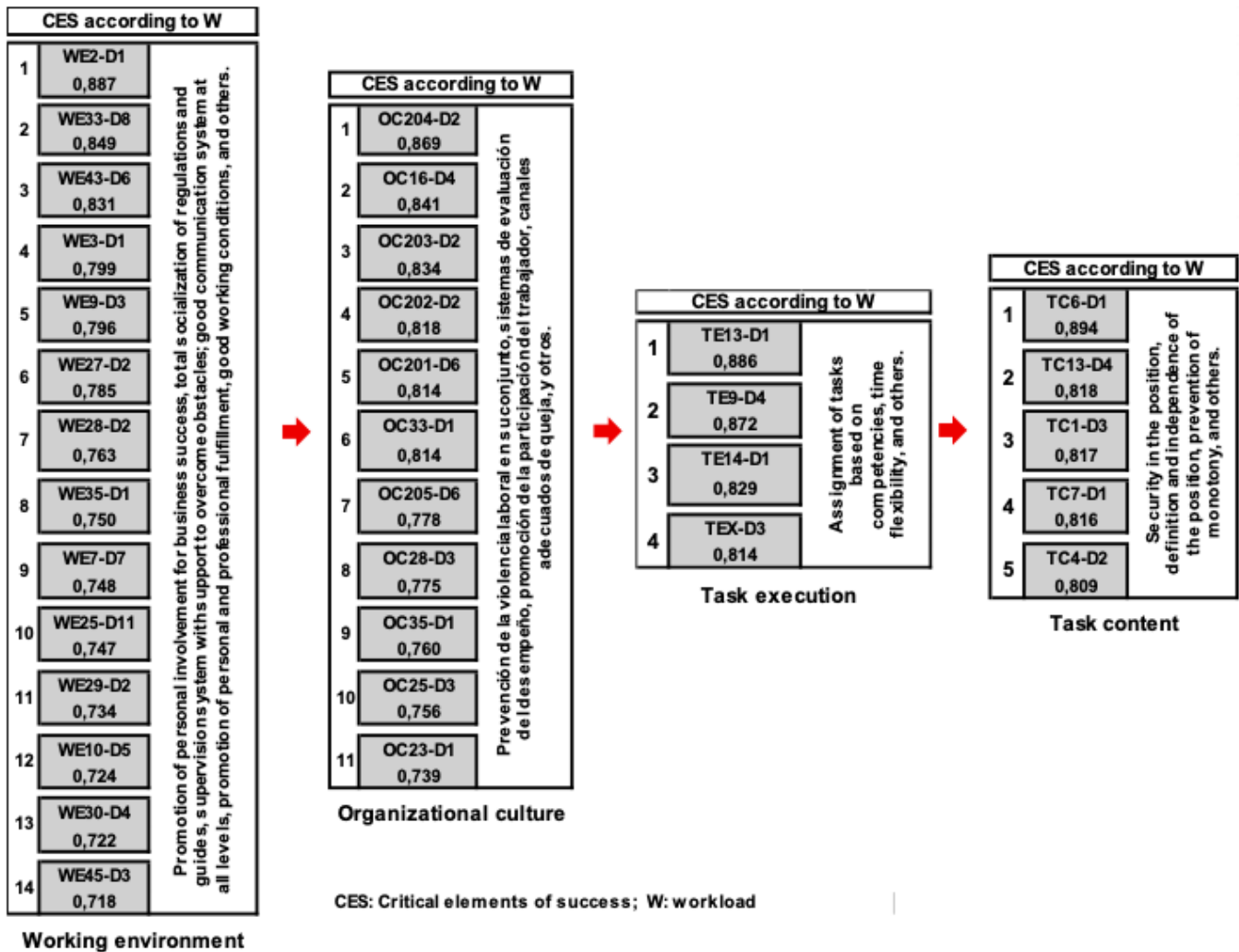
professional development; f) the assurance of supervisory systems for task monitoring and control; (g) attractive remuneration; (h) overcoming and dealing with problems; (i) assignment of challenging goals for self-realization; (j) guaranteed good resource administration (supervision) and; (k) the availability of technologies to facilitate work.

CES associated to organizational culture (OC): for successful prevention regarding OC, CES ranked in Figure 2 are linked to prevention activities of work place violence as a whole and at all levels, the performance evaluation system based on competencies and values, the promotion of worker participation, and the presence of adequate channels of complaint (figure 2).

CES associated to task performance (TP): for the prevention of the TP factor, priority CES are related to task assignment activities based on competencies and values, and on flexible hours (Figure 2).

Figure 2

Sequence and hierarchy of CES for the prevention of psychosocial risks



CES associated to task content (TC): for the optimal performance in the prevention of the TC factor, CES ranked in order of importance (Figure 2) show the prioritization of activities related to health and safety, the definition of tasks that avoid conflict and monotony, and independence.

Among the determining factors such as the ability to tolerate stress, EI and worker resilience that can contribute to the prevention of psychosocial risk factors are:

CES associated to the ability to cope with work stress (WS): for WS prevention, CES ranked according to the value of the factorial load (FL) are related to the interventions aimed at dissipating the opinion of the people, muscular relaxation and the anxiety, appetite regulation, irritability and anger control in the face of difficulties at work, and concentration and memory.

CES associated to emotional intelligence (EI): for the prevention regarding EI, CES ranked according to FL are the skills to show the corporate image in all circumstances (FL: 0.866), being friendly at all times (FL: 0.835), raise spirits even in situations of decline (FL: 0.830), and to dispel negative thoughts at work (FL: 0.825).

CES associated to resilience (R): for proper prevention regarding R, CES are oriented to the need to consider a strong and tolerant person (FL: 0.846); skills to recover lost time after a significant work time setback (FL: 0.845); and the skills to see the positive side of things when there are labor difficulties (FL: 0.837).

4. Discussion

Taking into account that the PPSRW in airports is oriented as a starting point to WS's CES, there are certain controversies with the literature in the last decade because the approach is not yet being clearly applied in the sector. Through a global approach, Basaglia et al. (2010) and Gregory et al. (2009) point out that the WC and OC as a whole would be the fundamental factors in the management of psychosocial risks. In nonspecific studies, three of the fourteen CES are considered as the main factors: (a) The promotion of involvement allows the creation of identity and commitment of personnel (Ng et al., 2012) with scope of managerial support (Al-Mashari et al., 2003; Riggle et al., 2009; Sarker & Lee, 2003); where, theoretically, a company with good WC encourages such involvement and active staff participation, the managers spend more time

sharing and making their employees feel important to achieve the objectives and solve the problems, while the workers receive support and feel proud of what they do. (b) The communication system, which despite being considered in most of the antecedents as the main factor for organizational development, especially in occupational health, the evaluation of performance and productivity (Mesa & Toro, 2015; Rosemann, 2008; Zimmerman et al., 2008), is the second CES for risk prevention related to WC in this study. (c) The fulfillment of tasks for personal and professional development that corresponds to Dávila et al. (2017) and Longenecker (2011).

OC is considered the second factor for PPSRW, and its CES are: (1) the prioritization of the prevention of workplace violence, which is consistent with the business support described in 16 recommendations (Pasquel & De la Vega, 2011); (2) the performance evaluation system based on competencies and values (BCV), which is characterized by being accessible, observable, predictable, comparable and reaffirmed in business ethics (Johnson & Jackson, 2009; Kalshoven et al., 2011); aside from being part of a set of activities for autonomy and decision-making, and empowerment (Boudrias & Brunet, 2010; Zelmer & Gibson, 2006).

Regarding task performance, CES linked to task to BCV tasks allocation activities, which are consistent with the studies of Boudrias & Brunet (2010) and Zelmer & Gibson (2006), are firstly associated, especially with the values to promote desirable behaviors oriented to organizational development (Kenny, 2014), and with activities for autonomy in decision-making and empowerment. Secondly, there is time flexibility as part of motivational incentives, which reflects the shared interests (workers: labor improvement and motivation vs. company: cost reduction), that is, a balance between the needs of the worker and the benefits of the organization in costs and efficiency (Dávila et al., 2017; Longenecker, 2011). CES to prevent risks related to task content include safety and health at work, and the definition of tasks that avoid conflict and monotony, but maintain independence, as shown in several studies (Plasencia et al., 2017; Rivera et al., 2018; Segarra et al., 2017).

As the joint analysis between OC, WC and task performance indicates significant association ($p < 0.001$), also among the determining factors: WS vs. EI ($r = -0.93$) and between resilience ($r = -0.87$), in addition to a majority frequency in cases of WS tolerance with predominance of attention skills (80.0%), and feelings of tranquility and relaxation even in adverse work situations (67.5%). This is explained in the conceptual model of Abraham (2000), where at a higher level of EI the perception and emotional regulation, and mitigation of negative responses are greater; and can set priorities and achieve higher compliance rates in behavioral safety (Lam & Kirby, 2002; Olawoyin, 2018). The first WC's CES would be supported by the majority presence of cases of adequate resilience, groups characterized by having colleagues to trust, who help to develop autonomously, who are willing to take responsibility for their actions, and are motivated by the organization (Lee et al., 2013).

Hence, the personnel involved in satisfactory PPSRW would be part of the group of healthy companies. Lee et al. (2013) consider five basic elements: professional trajectory, social environment, physical and mental health, financial security and commitment to the community, as well as integrating training and education for change (Loonam et al., 2018; Umble et al., 2003), communication and feedback (Mesa & Toro, 2015; Rosemann, 2008; Zimmerman et al., 2008), and stress management and emotional intelligence (Facunmojo S. et al., 2010; Viswesvaran et al., 2005; Wong & Law, 2002). It becomes necessary to know the baseline, CES and strategic objectives, build motivating and committed leadership, create a WC and favorable environment to promote participation, and develop programs based on evidence. Results coincide with those of Lee et al. (2013), who establish that employee welfare depends on the degree of satisfaction for what they do, and on the people who guide their growth and promote their health (Solé, 2017), and those, in sum, would be the essential elements to achieve the global well-being and the quality of life at work.

Research limitations: As the study was conducted in national and regional airports with small samples of workers and managers compared to the larger population in Peruvian international airports, the results may not be generalizable.

Research strengths: it is unique in its nature in the country and with important theoretical contribution that identifies and characterizes CES for the prevention of psychosocial risks in the management of health and safety at work, beginning with an evaluation process of psychosocial and ergonomic factors with prior design and validation of seven instruments for data collection.

Recommendations: Airport managers should focus on joint prevention programs in the four psychosocial factors. Identified CES will be useful to the extent that the managements follow up

and focus their attention and resources for its application. In future research, CES should be considered for the prevention and corrective intervention of ergonomic, biological, physical and chemical risks in airport work, and adapt the results in other types of companies and contexts.

5. Conclusions

The prevention of psychosocial risks in airport work is oriented to 14 critical elements of success (CES) for work climate (WC), followed by 11 CES in the organizational culture (OC), nine on task performance (TP) and task content (TC). The main CES for the prevention of risks related to the WC, in the first place, is the promotion of the involvement with managerial support, which allows to create personnel identity and commitment; secondly, the communication system; and thirdly, the fulfillment of tasks transformed into personal and professional development.

Regarding OC, there is the prevention of workplace violence, the performance evaluation system based on competencies and values (BCV), and the activities for autonomy, decision-making and empowerment; the latter also applies to TP.

Regarding TP, CES are linked to task assignment based on competences and values (BCV), to promote behaviors oriented to organizational development; followed by time flexibility as part of motivational incentives and shared interests (worker-company). CES related to TC prevention include safety and health at work, and the definition of tasks that avoid conflicts and monotony.

Complementarily, a significant positive association was found between WC and OC, and a significant negative association between WS vs. EI and R, characterized by workers with skills for stress tolerance with a predominance of attention skills (80, 0%) and with feelings of tranquility and relaxation in adverse situations (67.5%), in addition to greater emotional regulation, and setting priorities for safety based on behavior. It was also determined that resilience is supported by having colleagues from the environment in whom to trust, who help to develop autonomously, who are willing to take responsibility for their actions and to be motivated by the organization.

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