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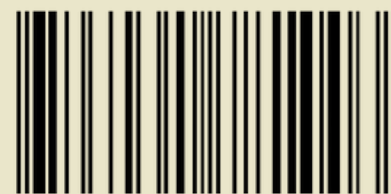
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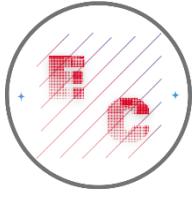


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**IMPACT OF THE FAMILY-RESPONSIBLE COMPANY (EFR) STANDARD ON  
MENTAL HEALTH AND JOB PERFORMANCE: AN EMPIRICAL STUDY IN AGUAS  
DE CARTAGENA S.A.**

**IMPACTO DE LA NORMA EMPRESA FAMILIARMENTE RESPONSABLE (EFR) EN  
LA SALUD MENTAL Y EL DESEMPEÑO LABORAL: UN ESTUDIO EMPÍRICO EN  
AGUAS DE CARTAGENA S.A.**

**Javier Alfonso Mendoza Betin**

**Colombia**

**Impact of the Family-Responsible Company (EFR) standard on mental health and job performance: an empirical study in Aguas de Cartagena S.A.**

**Impacto de la norma Empresa Familiarmente Responsable (EFR) en la salud mental y el desempeño laboral: un estudio empírico en Aguas de Cartagena S.A.**

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**ABSTRACT**

This study analyzes the impact of the Family-Responsible Company (EFR) Standard on the mental health and job performance of employees at Aguas de Cartagena S.A., using the structural equation modeling (SEM) technique. Through a qualitative-quantitative approach, the relationship between the implementation of the standard, psychological well-being, productivity, and organizational commitment was evaluated. The results show that the EFR enhances performance, reduces stress, and strengthens talent retention. A predictive model with high statistical fit is validated, establishing the EFR standard as a key strategy for organizational sustainability. Finally, future research is proposed on its impact in other sectors and its integration with neuroscience and artificial intelligence.

**Keywords:** mental health; job performance; work-life balance; EFR standard; structural equation modeling (SEM)

## RESUMEN

Este estudio analiza el impacto de la Norma Empresa Familiarmente Responsable (EFR) en la salud mental y el desempeño laboral de los empleados de Aguas de Cartagena S.A., utilizando la técnica de ecuaciones estructurales (SEM). A través de un enfoque cuali-cuantitativo, se evaluó la relación entre la implementación de la norma, el bienestar psicológico, la productividad y el compromiso organizacional. Los resultados evidencian que la EFR mejora el desempeño, reduce el estrés y fortalece la retención del talento humano. Se valida un modelo predictivo con alto ajuste estadístico, estableciendo la Norma EFR como una estrategia clave para la sostenibilidad organizacional. Finalmente, se proponen futuras investigaciones sobre su impacto en otros sectores y su integración con la neurociencia y la inteligencia artificial.

**Palabras clave:** salud mental; desempeño laboral; equilibrio entre el trabajo y la vida personal; norma EFR; ecuaciones estructurales (SEM)

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## INTRODUCTION

In a constantly evolving work context, the relationship between mental health and job performance has gained unprecedented relevance. Various international studies (Bakker & Demerouti, 2007; OECD, 2023; Organización Mundial de la Salud, 2022) have shown that mental disorders such as anxiety and depression not only affect employees' quality of life but also have a significant impact on the productivity and sustainability of organizations. In Latin America, and particularly in Colombia, this issue has been recognized in the National Mental Health Policy (Ministerio de Salud y Protección Social, 2015), which highlights the need for work environments that promote psychological well-being as a key factor for organizational success.

Despite the growing attention to this topic, knowledge gaps remain in the literature that limit a comprehensive understanding of the relationship between mental health and job performance. Previous studies have addressed the psychosocial factors that influence workers' well-being (Cartwright & Cooper, 1997; Maslach & Jackson, 1981; Murthy, 2023), as well as the impact of organizational models on job satisfaction and productivity (De Neve et al., 2023; Dolan & García, 2006; *Frontiers in Public Health*, 2023). However, in the Colombian context, and particularly in the Caribbean region, questions persist regarding the effectiveness of business strategies designed to mitigate the negative effects of work stress and enhance employee performance.

In this regard, the Family-Responsible Company standard (EFR, by its Spanish acronym) emerges as a management model aimed at fostering work–life balance among employees within organizations. Its implementation has been promoted internationally as an effective strategy to optimize productivity, reduce absenteeism, and strengthen organizational commitment (Fundación Másfamilia, 2019). Despite its benefits, the applicability and impact of this standard in the Colombian business context have been little explored, which justifies the need for an empirical study to assess its effectiveness in improving job performance and workers' well-being.

This article aims to analyze the impact of the EFR standard on the mental health and job performance of employees at Aguas de Cartagena S.A., using a structural equation modeling (SEM) approach. Based on a mixed qualitative–quantitative methodology, the study seeks to establish causal relationships between work–life balance practices, psychological well-being, organizational commitment, talent retention, and productivity. The results of this study will not only contribute to advancing knowledge in the fields of organizational psychology and human talent management but will also provide empirical evidence for the formulation of business strategies that promote a healthier and more efficient work environment.

Based on the above, this study becomes a key reference for future research on the integration of work–life balance policies in the Colombian business sector and their impact on optimizing organizational performance, ultimately reflecting the epistemological stance of the author of this research.

## **Theoretical framework**

The relationship between mental health and job performance has been the subject of study for the past decades, highlighting the importance of a work environment that fosters employees' psychological well-being, in line with Chang (2024), Nielsen et al. (2017), and Verywell Health (2024). The following is an analysis of the body of literature on both constructs, integrating contributions from representative international authors, as well as Colombian and Caribbean regional scholars over the past 30 years.

This research conducts a literature review—approximate but related to the relevant paradigms—beginning with a simultaneous analysis of mental health and job performance during the last three decades. To this end, approaches are examined at three geographical levels, addressing their general conceptualization as well as the associated factors and components in each context. Subsequently, the existing knowledge gaps are identified, and a new scenario of analysis based on the EFR Standard is proposed. Finally, the hypotheses derived from the study are formulated.

### **Mental health and job performance: an international perspective**

At the global level, the World Health Organization (Organización Mundial de la Salud, 2022) has emphasized that mental disorders, including depression and anxiety, are significant causes of disability, affecting work productivity. It is estimated that each year 12 billion workdays are lost due to these disorders, representing an economic loss of approximately USD 1 trillion

(Organización Mundial de la Salud, 2022) and £100 billion annually in the United Kingdom (Blake, 2023).

The (*World Federation for Mental Health [WFMH], 2017*) and Kawakami et al. (2023) have underscored the need for workplaces that promote mental health, pointing out that healthy work environments benefit both employees and employers.

The international analysis of the constructs helps to understand the relationship between psychosocial and organizational factors and workers' well-being. Various models have emerged to explain how mental health influences productivity and job performance, among which the following stand out:

**Work stress and mental health.** Work stress has been identified as one of the main causes of deteriorating mental health and job performance (Spector & Cooper, 2002). Karasek (1979) developed the demand–control model, which establishes that jobs with high demands and low autonomy increase stress levels, negatively affecting health and performance. This model has been widely validated across different work environments and has served as a basis for intervention strategies.

Marmot et al. (1991) in their Whitehall studies, demonstrated that hierarchical relationships and control over work are key determinants of mental health and job performance. Their findings suggest that workers with less autonomy and social support present higher levels of stress and work-related illnesses.

**Burnout syndrome and work engagement.** Burnout has been widely studied in organizational contexts. Maslach and Jackson (1981) developed the Maslach Burnout Inventory, which conceptualized the syndrome in three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment. Their research highlighted how burnout negatively impacts workers' motivation, commitment, and productivity, becoming a key factor in turnover and absenteeism, findings echoed by Schaufeli & Bakker (2004).



In contrast, Bakker & Demerouti (2007) introduced the Job Demands–Resources model, emphasizing that organizational resources (autonomy, feedback, social support) can reduce the impact of stress and foster work engagement, thereby improving performance. This model has been widely studied in organizational psychology and workplace well-being (Linnan, 2024).

**Organizational factors and their impact on mental health.** The psychological contract between employers and employees is another determinant of mental health and performance. Levinson (1972) introduced this concept to describe mutual expectations in organizational settings. According to his theory, when these expectations are unmet, tensions arise that can affect motivation, commitment, and psychological health.

From a management perspective, Dolan & García (2006) proposed the Managing by Values approach, arguing that alignment between personal and organizational values improves job satisfaction and psychological well-being, positively impacting performance. Similarly, Pfeffer (1998) and, more recently, Medina-Garrido et al. (2023a,b), analyzed how management practices can influence employee mental health, suggesting that certain organizational cultures may harm workplace well-being.

**Interventions and strategies for workplace well-being.** Organizational interventions aimed at improving mental health and performance have been the subject of numerous studies. Cartwright & Cooper (1997) and Medina-Garrido et al. (2023c) analyzed the impact of work stress on occupational health and promoted strategies to reduce it, including work flexibility and the strengthening of positive leadership. Likewise, research has investigated how companies can implement well-being programs to improve productivity and mitigate the negative effects of stress.

Rojas-Estapé (2023) proposed neuroscience-based strategies to improve workplace mental health, emphasizing the importance of “vitaminic routines” (positive habits such as exercise, meditation, and interpersonal relationships) in regulating stress and work performance.

The reviewed literature demonstrates that the relationship between mental health and job performance in the global context is complex and multifactorial (Richmond, 2024). The Demand–Control model (Karasek, 1979) and the Job Demands–Resources model (Bakker & Demerouti, 2007) have provided insights into how work conditions affect mental health and productivity. In addition, studies on burnout (Maslach & Jackson, 1981) and the psychological contract (Levinson, 1972) have highlighted the importance of psychosocial factors in workplace well-being.

Organizations can improve employee performance through strategies based on values management (Dolan & García, 2006), leadership strengthening, and workplace well-being programs (Cartwright & Cooper, 1997). Finally, recent approaches such as those by Rojas-Estapé (2023) highlight the role of neuroscience and healthy habits in promoting workplace well-being.

This analysis provides an important basis for studying the relationship between mental health and job performance internationally, highlighting the role of organizational interventions in improving well-being and productivity.

### **Mental health and job performance in Colombia**

In Colombia, mental health in the workplace has gained relevance in public policy. The Ministerio de Salud y Protección Social, through the National Mental Health Policy, recognizes the high prevalence of mental disorders among workers and their impact on productivity (Gutiérrez-Avendaño, 2019).

National studies have shown that mental health problems in workers manifest as absenteeism, decreased performance, and increased workplace accidents. For instance, the 2015 National Mental Health Survey reported that major unipolar depression is one of the main causes of disability in the country.

In essence, the relationship between mental health and job performance has been a subject of growing interest in Colombia, with research addressing psychosocial, organizational,

and epidemiological factors. Based on these studies, risk patterns, intervention strategies, and guidelines for promoting healthy workplaces have been identified.

**Workplace mental health in Colombia.** Research on workplace mental health has become increasingly relevant in academic and governmental agendas in Colombia. Lesmes (2023) reviewed recent research in this field, highlighting the need to update intervention models and strengthen public policies to support psychological health in the workplace. Similarly, Sierra-Castellanos & Velásquez-Murcia (2020) underscored the importance of health promotion and prevention strategies, emphasizing the role of working conditions in the emergence of psychological disorders.

From a historical perspective, Téllez-Bedoya (2021) examined the evolution of the concept of mental health in Colombia and its impact on labor policies, showing how regulatory changes have influenced workers' well-being over time. In this line, Gutiérrez-Avendaño (2019) highlighted the incorporation of mental hygiene into public health in the first half of the 20th century, laying the foundation for preventive models in the workplace.

**Psychosocial risk factors and job performance.** Analyzing psychosocial risk factors has been central to workplace mental health research. Lopera (2015) examined the conceptualization of mental health in the policy instruments of the Organización Mundial de la Salud (2024) and their application in Colombia, evidencing the need to adapt global strategies to the national reality.

Meanwhile, the (Ministerio de Trabajo and Universidad Javeriana, 2016) developed protocols for psychosocial risk intervention, providing tools for identifying and mitigating risks affecting employees' well-being. These initiatives have been fundamental for implementing prevention and treatment programs for workplace psychological disorders.

From a critical perspective, Mojica-Perilla (2014) analyzed the discourse on mental health in Colombia, emphasizing how social representations have shaped the perception and management of workplace psychological issues. This research highlights the need to

reformulate corporate communication and education strategies to better manage stress and employees' emotional health.

**Impact on healthcare workers.** One of the sectors most affected by mental health problems in Colombia is healthcare. A 2021 study by Universidad Javeriana, commissioned by the Ministerio de Salud y Protección Social, analyzed the impact of the COVID-19 pandemic on healthcare workers' well-being, showing significant increases in anxiety, depression, and work-related stress. This highlighted the importance of policies supporting this sector, given its critical societal role.

Over a decade earlier, Rodríguez & Kohn (2009) had already contributed to understanding the epidemiology of mental disorders in Latin America and the Caribbean, including Colombia, providing key data on prevalence and its impact on workplace performance.

**National surveys and public policy.** The Ministerio de Salud y Protección Social (2015, 2018) conducted National Mental Health Surveys, providing essential data on the prevalence of psychological disorders and their workplace implications. These studies enabled the design of more effective intervention and prevention strategies adapted to Colombia's needs.

Overall, research on workplace mental health in Colombia has advanced significantly, with historical, epidemiological, and organizational approaches identifying factors that affect employees' psychological well-being. Studies by Lesmes (2023), Sierra-Castellanos & Velásquez-Murcia (2020), and the (Ministerio de Salud y Protección Social, 2015) have shown the importance of prevention and intervention strategies in workplace settings.

Research by Lopera (2015) and the (Ministerio de Trabajo and Universidad Javeriana, 2016) has contributed tools for managing psychosocial risks in organizations. In the healthcare sector, Rodríguez & Kohn (2009) underscored the vulnerability of this workforce, calling for specific support and well-being policies.

The data gathered through the National Mental Health Survey (Ministerio de Salud y Protección Social, 2015) and related studies has consolidated a clear picture of mental health in

Colombian workplaces. These findings are fundamental for formulating public policies and organizational strategies aimed at improving workers' quality of life and, consequently, their performance.

### **Mental health and job performance in Colombia's Caribbean Region**

In the Colombian Caribbean region, recent research has examined workplace factors influencing workers' mental health. Guerra-Zúñiga et al. (2023) identified that work pressure, overload, and lack of organizational support are determinants of anxiety and depression symptoms among employees in various companies in the region.

These findings highlight the need for intervention strategies that foster healthy work environments and strengthen psychological well-being in the region.

Further studies, such as Alandete-Castro et al. (2023), revealed that healthcare workers are particularly vulnerable, especially those with long shifts or night duties, with chronic fatigue and anxiety directly affecting decision-making and performance. Peiró et al. (2018) and Plazas et al. (2023) similarly analyzed stress in the healthcare sector, showing its impact on both professionals and the quality of patient care.

**Construction of the discourse.** Gómez (2020) critically analyzed how Colombian authors have defined and applied the concept of mental health in organizations, noting the influence of imported models not always suited to the socioeconomic and cultural reality of the Caribbean. The Observatorio de Salud Mental desde el Bienestar at Universidad del Norte (2023) also studied patterns and trends in the region, linking workplace mental health to issues such as suicide prevention.

**Strategies for prevention and promotion.** Plazas et al. (2023) suggested implementing stress management programs in the healthcare sector, while Alandete-Castro et al. (2023) recommended workday adjustments and active breaks. The Observatorio de Salud Mental desde el Bienestar (2023) at Universidad del Norte emphasized the role of organizational support networks, highlighting their effectiveness in reducing anxiety and depression.

Together, these findings confirm that multiple psychosocial risks affect workers' well-being and performance in the Caribbean. Preventive policies and structured interventions are thus crucial to mitigate these impacts.

### **Knowledge gaps and argumentative position**

Within the literature review of the past 30 years, the researcher has identified, drawing on the theory of argumentation proposed by Schuster (2006) and the “method of material subtraction,” seven knowledge gaps that limit a full understanding of the mental health–performance relationship.

In this regard, the argumentative process is sustained on three fundamental pillars: first, the clear and logical exposition of the identified gaps, based on a review of the literature; second, the empirical contrast that demonstrates the absence of sufficient evidence in these areas; and third, the formulation of a future research proposal that addresses one of these gaps in order to advance the theoretical and applied development of the relationship between mental health and job performance.

Thus, argumentation becomes an essential means to support the need for new studies that expand existing knowledge and foster the design of more effective strategies in the workplace and health domains. In conclusion, up to this point in the analysis, the following knowledge gaps are identified based on the argumentative methods discussed:

1. Lack of longitudinal studies in Colombia and the Caribbean. Although studies document the prevalence of mental disorders at work, they are mainly cross-sectional; longitudinal research on the long-term impact of organizational interventions on employees' mental health is lacking.
2. Limited integration of neuroscience into workplace well-being management. Recent studies, such as Rojas-Estapé (2023), explore neuroscience applied to workplace mental health, but its use in Colombia is minimal, with no research linking stress

biomarkers and psychological well-being to organizational management strategies in Caribbean companies.

3. Insufficient studies on telework and hybrid models. Remote and hybrid work have reshaped job dynamics and stress factors, yet in Colombia and the Caribbean there is little empirical evidence on their long-term effects on mental health and productivity.
4. Few studies on mental health in specific economic sectors (e.g., SMEs, informal labor). Current studies focus mainly on healthcare workers, but little is known about the impact of psychosocial factors on mental health and job performance in sectors such as construction, public services, informal commerce, education, and agribusiness in the Caribbean region.
5. Lack of analysis of organizational culture's impact on mental health. Although Dolan and García (2006) explored values-based management, in Colombia and the Caribbean there are no detailed studies on how organizational culture affects mental health and talent retention.
6. Absence of research on AI's psychological effects in workplaces. The rise of AI has created uncertainty, anxiety, and changes in work perception, yet no studies in the Caribbean region address how automation and digitalization affect employees' emotional stability and performance.
7. Lack of integration of the Family-Responsible Company (EFR) Standard in workplace well-being studies. The EFR Standard promotes work–life balance, but no studies assess how its application in Colombian companies affects mental health and job performance.

These gaps demand empirical research to design effective organizational strategies.

### **The EFR standard and hypotheses**

The Family-Responsible Company Standard (EFR), developed by Fundación Másfamilia, promotes work–life balance within organizations. Internationally, it has shown positive effects on

productivity, absenteeism, and commitment. In Colombia, several companies have adapted it with favorable results, though evidence remains scarce.

This study focuses on Aguas de Cartagena S.A., certified under the EFR Standard less than two years ago. The aim is to analyze the standard's impact on employees' mental health and performance using structural equation modeling (SEM).

### **Hypotheses:**

- H1: Implementing work–life balance policies under the EFR Standard transforms organizations successfully.
- H2: Promoting a healthy work environment under the EFR Standard improves employees' well-being and performance.
- H3: Temporal and spatial flexibility promoted by the EFR Standard increases satisfaction and productivity.
- H4: Integrating the EFR Standard into organizational culture strengthens commitment and talent retention.
- H5: Training and awareness on work–life balance optimize performance management.

### **Research objective and contribution**

The objective is to analyze the impact of the EFR Standard on the mental health and job performance of employees at Aguas de Cartagena S.A., by identifying causal relationships between work–life balance practices, psychological well-being, organizational commitment, and productivity.

This research aspires to be a reference for international, national, and local debates, contributing to both academic reflection and the productive sector.

## **METHOD**

The practical exercise was carried out through an exploratory approach designed specifically for this study, with a six-month follow-up scheme from January to June 2025. The



methodology was based on the application of the Structural Equation Modeling technique (PLS-SEM) and the Project Management approach, which made it possible to define an appropriate methodological strategy for the research.

### **Design**

The phases of the process were planned and executed with flexibility, allowing adaptation to emerging needs and situations that arose during implementation. This facilitated the generation of relevant data and information through the selected technique.

The methodological design was organized in two stages:

#### **Stage 1. Data treatment and analysis plan**

- a. Design of the data-collection instrument based on the reviewed literature, the researcher's epistemological position, and the identified knowledge gap.
- b. Expert judgment evaluation.
- c. Pilot test administration.
- d. Analysis of results and data treatment.

#### **Stage 2. Administration of instruments and structural equation models**

- a. Administration of the instrument to the established sample.
- b. Analysis of variable contrasts.
- c. Estimation of the predictive model.
- d. Calculation of the Goodness-of-Fit index (GOF).
- e. Estimation of model parameters.

### **Participants**

During the validation stage, a pilot test was administered to a purposive sample of 10 members of the management team at Aguas de Cartagena S.A., selected from the target population. Subsequently, in the final administration phase (April to June 2025), 120 of the company's 642 employees were surveyed, including the 10 managers who took part in the pilot test.

This sample was considered sufficient to ensure the validity of the results, following the methodological guidelines proposed by Hair et al. (2010) and Kline (2015), who indicate that a sample of 120 participants is adequate for applying structural equation modeling in exploratory studies.

### **Instruments**

The ad hoc data-collection instrument was designed based on the theoretical review, the author's cognitive position, and the identified knowledge gaps, and is presented in the appendix to the document. Before final administration, it underwent a twofold validation process:

**Content validity by expert judgment:** Three judges evaluated the instrument according to Lynn's (1986) criteria. The assessment showed high validity and a high level of agreement, with a probability of chance agreement of 0.041, in accordance with Hernández-Nieto's (2011) scale.

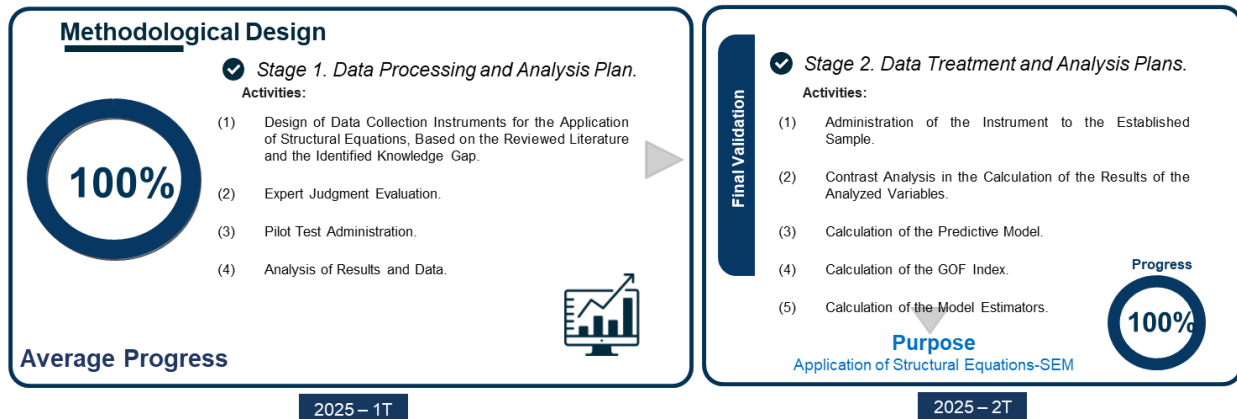
**Reliability and factorial validation through pilot testing:** The instrument was administered to the 10 managers noted above. No irregularities or outliers were detected, and the average completion time was 12 minutes.

In summary, during the implementation of the data treatment and analysis plan, detailed procedures were employed—as illustrated in Figure 1—including calculation of the sizes of the purposive and statistical samples corresponding to the research.

### **Figure 1**

*Diagrammatic scheme of the data treatment and analysis plan, including the scrutiny samples*

## Methodological Strategy



**Note:** Own elaboration (2025)

Stage 2 is addressed in the research findings.

## RESULT

The findings of this research are based on a rigorous analysis of the data collected and processed throughout the previously described methodological stages. Through the application of structural equations and the Project Management approach, the formulated hypotheses were tested, identifying patterns, interactions, and relevant effects among the variables studied. In this section, the results obtained after data processing are presented in detail, including the estimation of predictive models, fit indicators, and key parameters, providing a comprehensive understanding of the analyzed factors and their impact within the investigated context. The organization of the results follows the structure of the research design, highlighting both theoretical contributions and their practical implications.

During the instrument validation phase, initially focused only on the dependent variables detailed later, expert content judges suggested the incorporation of an independent variable to assess the impact of the implementation of the EFR Standard. This recommendation strengthened the relevance of the instrument, enabling a more comprehensive evaluation of the relationship between the dependent variables and their influence on the independent variable.

The inclusion of this new dimension not only improved the validity of the design but also provided a more robust and meaningful analysis of the results obtained.

The contrast analysis to evaluate the impact of the dependent variables (Successful organizational transformation, employee performance and well-being, job satisfaction and productivity, commitment and retention of human talent, and optimization of performance management) on the independent variable (Implementation of the EFR Standard) was conducted using SPSS and PLS, technological platforms appropriate for exploratory research. According to Cohen (1998), the  $f^2$  of the five observable variables showed a significant relationship with  $R^2$ , which reached 80.12%, indicating a strong association and high relevance among the variables analyzed.

**Table 1**

*The Effects of Dependent Variables on the Independent Variable*

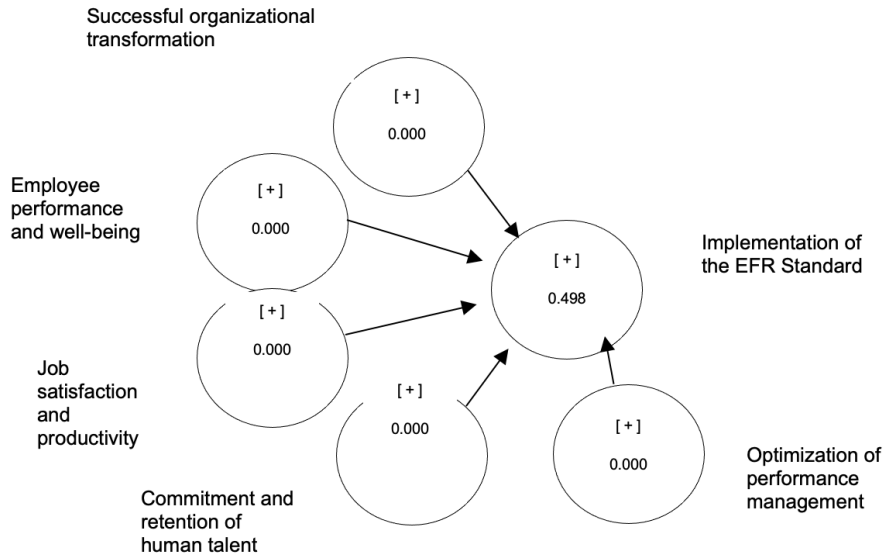
Variables	Effects $f^2$	Total Effect
Successful organizational transformation	0.336	Adequate or Relevant
Employee performance and well-being	0.316	Adequate or Relevant
Job satisfaction and productivity	0.318	Adequate or Relevant
Commitment and retention of human talent	0.302	Adequate or Relevant
Optimization of performance management	0.305	Adequate or Relevant

**Note:** Based on proprietary measurements analyzed using SPSS and PLS (2025)

In the analysis of the structural equation model (SEM) using PLS, it is essential that  $Q^2$  values be greater than zero to validate an endogenous latent construct. As shown in Figure 2, the  $Q^2$  obtained in this model was 0.498, exceeding the required threshold. This result reinforces and validates the predictive capacity of the proposed model.

**Figure 2**

*Predictive model*



**Note:** Based on proprietary measurements analyzed using SPSS and PLS (2025)

The goodness-of-fit index (GOF) was applied to the model with the aim of assessing its ability to accurately represent the empirical data. This index, with values ranging between 0 and 1, establishes benchmarks for interpretation: 0.10 (low), 0.25 (medium), and 0.36 (high), allowing for the determination of the overall validity of the model. The analysis carried out showed that the model is parsimonious and consistent with the observed data. For its calculation, the geometric mean of the average communality or average variance extracted (AVE) was used together with the average of the  $R^2$  values, which allowed for the consolidation of the model's validation.

**Table 2**

*Computation of the Goodness-of-Fit (GOF) Index*

Constructs	AVE	R2
Successful organizational transformation	0.663	
Employee performance and well-being	0.602	
Job satisfaction and productivity	0.652	

Commitment and retention of human talent	0.651	
Optimization of performance management	0.650	0.7396
Average Values	3.775	0.7396
AVE * R2	0.4944	
GOF = $\sqrt{\text{AVE} * \text{R}2}$	0.7032	

**Note:** Based on proprietary measurements analyzed using SPSS and PLS (2025)

The standardized root mean square residual (SRMR) index, calculated between the observed results and the hypothesized covariance matrices, was 0.047. Under this condition, it is deemed acceptable ( $\text{SRMR} \leq 0.09$ ); consequently, the model demonstrates good fit. In turn, the Chi-square value was 1913.085, and the normed fit index (NFI) yielded 0.787, which also indicates that the measurement model is adequate.

**Table 3**

*Model estimators*

Model estimators	
SRMR	0.047
d_ULS	1.622
d_G1	0.914
d_G2	0.767
Chi-Square	1.913.085
NFI	0.787

**Note:** Based on proprietary measurements analyzed using SPSS and PLS (2025)

Finally, Table 4 shows the correlation coefficients of the latent variables, which allows us to infer that there was a strong correlation between the exogenous latent variables and the endogenous observed variables.

**Table 4**

*Correlation of latent and observable variables*

Variables	SOT	EPW	JSP	CRH	OPM
Successful organizational transformation	<b>1.000</b>				
Employee performance and well-being	0.251	<b>1.000</b>			
Job satisfaction and productivity	0.268	0.263	<b>1.000</b>		
Commitment and retention of human talent	0.264	0.261	0.278	<b>1.000</b>	
Optimization of performance management	0.268	0.297	0.275	0.306	<b>1.000</b>

**Note:** Based on proprietary measurements analyzed using SPSS and PLS (2025)

The analysis of the measurement model validated its feasibility as a confirmatory model, demonstrating that all the formulated hypotheses were statistically significant and, consequently, accepted. The findings of this research confirm that the evaluated factors had a positive influence on the construct of EFR Standard implementation, thereby contributing to the strengthening of its theoretical generalization. Nevertheless, the extent of this generalization will depend on future research adopting similar methodological approaches.

## DISCUSSION

The article made it possible to analyze the state of the art of the constructs: mental health, job performance, and the EFR Standard. Likewise, it effectively addressed the proposed objective: to analyze the impact of the implementation of the EFR Standard on the mental health and job performance of the employees of Aguas de Cartagena S.A., through a structural equation modeling approach. The research provides empirical evidence of the positive impact of the EFR Standard, suggesting that the implementation of work–life balance policies not only successfully transforms the organization, but also strengthens employee satisfaction, productivity, commitment, and retention, thereby consolidating a healthier and more efficient work environment.

The qualitative–quantitative methodological approach adopted filled a gap in the existing literature by evaluating the common factors in an integral and multifactorial manner from the perspective of the EFR Standard. This method not only enabled the rigorous interpretation of the results in light of the hypotheses posed, but also provided a solid framework for future research. The predictive model developed and validated demonstrates that the EFR Standard is a key factor in optimizing organizational performance, highlighting the importance of its adoption by companies interested in improving their work climate and operational sustainability.

Continuing with the methodological perspective, the predictive model exhibited a goodness-of-fit (GOF) index of 0.7032, supporting its statistical robustness and confirming the relevance of the EFR Standard in the organizational culture of Aguas de Cartagena S.A. Moreover, the  $R^2$  value (80.12%) indicates a strong dependence among the variables analyzed, validating the hypothesis that the implementation of work–life balance strategies fosters employee well-being and performance.

When comparing these findings with previous studies, consistency is observed with theoretical models such as the Job Demands–Resources model (Bakker & Demerouti, 2007) and the Values-Based Management approach (Dolan & García, 2006), both of which emphasize the role of working conditions in optimizing organizational performance. Parallels can also be drawn with the positions of the Organización Mundial de la Salud (2022) and the World Federation for Mental Health (2017), which underscore mental health as a cornerstone of business productivity.

On the other hand, differentiated approaches were identified. Karasek (1979), with his demand–control model, argued that stress increases when high job demands are combined with low autonomy, negatively affecting performance and mental health. Levinson (1972) proposed the concept of the psychological contract, warning that the lack of fulfillment of expectations between employers and employees generates tensions detrimental to motivation and well-being. More recently, Rojas-Estapé (2023) introduced the neuroscientific approach of “vitamin



routines,” showing how healthy habits such as meditation and exercise enhance resilience and job performance.

Furthermore, the correlation coefficients analyzed in this research indicate that employees with better working conditions exhibit higher levels of performance, in line with the arguments of Cartwright & Cooper (1997), and Maslach & Jackson (1981), regarding the influence of psychosocial factors on productivity. At the national level, the results reinforce previous studies in Colombia and the Caribbean, such as those by Alandete Castro et al. (2023), Guerra-Zúñiga et al. (2023), and Lesmes (2023), which warn that the absence of reconciliation strategies increases stress, absenteeism, and staff turnover. However, a distinctive aspect of this study is its focus on the application of the EFR Standard in a Colombian organizational context, representing a novel contribution to the existing academic corpus. In this way, the epistemological position of the author of this work is supported.

### **Limitations and future research**

Despite the robustness of the model, it is necessary to acknowledge some limitations of the study. First, the sample analyzed corresponds exclusively to a company in the public services sector, which may restrict the generalization of the results to other industries. Second, the research was based on a cross-sectional design, which prevents the establishment of long-term causality. Future studies should focus on longitudinal research that evaluates the sustained impact of the EFR Standard across different economic sectors and cultural contexts.

On another front, gaps in knowledge were identified that limit a comprehensive understanding of the relationship between mental health and job performance. In particular, the lack of studies on the application of neuroscience in organizational well-being management, the impact of teleworking on mental health, and the effect of artificial intelligence in the workplace represent opportunities for future research.

In conclusion, this study not only reinforces the importance of work–life balance as a key strategy in human talent management, but also opens new lines of research in the field of

mental health and workplace well-being. The integration of organizational policies based on the EFR Standard may represent a competitive advantage for companies seeking to improve their operational efficiency through the well-being of their employees.

Finally, the author states that Artificial Intelligence tools were employed as complementary support in the development of this article. However, it is clarified that at no time did such tools replace the processes of reflection, analysis, or intellectual construction, which were entirely carried out by the author. Likewise, it is declared that this work is the result of original and independent effort, and that it has not been previously published on any Artificial Intelligence electronic platform.

## CONCLUSION

This research sets a precedent in the empirical application of the EFR Standard in Colombia, demonstrating its positive impact on mental health and job performance in organizational contexts. The findings validate the effectiveness of work–life balance models and strengthen the case for comprehensive policies that encompass not only labor flexibility, but also positive leadership and well-being programs.

The predictive model developed, with robust fit and explanatory indicators, reinforces the importance of the EFR Standard as a transformative strategy in human talent management. Consequently, it is recommended that organizations seeking operational sustainability, talent retention, and improvement of the work climate consider its implementation from a systemic and strategic perspective.

It also reflects the effective transfer of knowledge between Veolia (formerly Suez) and Acucar, thanks to the managerial support that promoted the adoption of the EFR Standard as a tool to improve productivity (Mendoza-Betín, 2021).

## Declaration of conflict of interest

The researcher declares that there is no conflict of interest related to this research.

## Author contribution statement

Javier Alfonso Mendoza Betin: conceptualization, formal data analysis, investigation, methodology, project administration, resources, software, supervision, validation, visualization, writing – original draft, review and editing.

## Statement on the use of Artificial Intelligence

The author declares that Artificial Intelligence was used as a support tool for this article, and that this tool in no way replaced the intellectual task or process. The author expressly states and acknowledges that this work is the result of their own intellectual effort and has not been published on any electronic artificial intelligence platform.

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ANNEXES

The preliminary list of factors analyzed in the study, based on an important part of the contributions of Fundación Másfamilia (2019), Medina-Garrido et al. (2023a,b,c) and Mendoza Betin (2021), as recommended by one of the three content judges.

Código	Factores
OGD	<b>Optimización Gestión de Desempeño</b>
OGD_1	¿Consideras que la implementación de la norma EFR ha mejorado la eficiencia en la evaluación y retroalimentación del desempeño laboral dentro de la empresa?



- OGD\_2 ¿Sientes que la flexibilidad laboral promovida por la norma EFR ha permitido un mejor equilibrio entre tus responsabilidades y el cumplimiento de tus objetivos de desempeño?
- OGD\_3 ¿La implementación de la norma EFR ha influido en la reducción de factores que afectaban tu productividad, como el estrés laboral o la sobrecarga de tareas?
- OGD\_4 ¿Consideras que la empresa ha optimizado la gestión del desempeño a partir de la implementación de la norma EFR?
- TOE **Transformación Organizacional Exitosa**
- TOE\_1 ¿Consideras que la empresa ha brindado suficiente información y capacitación sobre la norma EFR y sus beneficios?
- TOE\_2 ¿Sientes que la implementación de la norma EFR ha generado cambios positivos en la cultura organizacional y el clima laboral?
- TOE\_3 ¿Consideras que la empresa ha promovido adecuadamente la aplicación de la norma EFR en sus políticas laborales?
- TOE\_4 ¿Crees que la implementación de la norma EFR ha mejorado la comunicación y el trabajo en equipo dentro de la empresa?
- SPL **Conciliación Laboral y Salud Mental**
- SPL\_1 ¿Consideras que la empresa ofrece suficientes recursos y programas de apoyo para la gestión del estrés y el bienestar emocional?
- SPL\_2 ¿Consideras que la implementación de la norma EFR ha mejorado en tu equilibrio entre la vida laboral y personal?
- SPL\_3 ¿Consideras que las medidas de conciliación laboral (flexibilidad horaria, teletrabajo, permisos, entre otras) han mejorado tu bienestar psicológico?
- SPL\_4 ¿Te sientes apoyado/a por la empresa en cuanto a tu bienestar emocional y psicológico?
- DBE **Desempeño Laboral y Productividad**
- DBE\_1 ¿Percibes que la implementación de la norma EFR ha mejorado tu desempeño laboral?
- DBE\_2 ¿Consideras que las estrategias de conciliación laboral implementadas han influido en tu capacidad para alcanzar tus objetivos y metas laborales?

DBE_3	¿Consideras que la implementación de la norma EFR ha mejorado tu entorno de trabajo actual?
DBE_4	¿Crees que la flexibilidad en los horarios y la posibilidad de teletrabajo han influido positivamente en tu productividad?
CRT	<b>Compromiso Organizacional y Retención del Talento</b>
CRT_1	¿Te sientes comprometido/a con la empresa y sus valores organizacionales?
CRT_2	¿Sientes que la implementación de la norma EFR ha fortalecido tu sentido de pertenencia y compromiso con la empresa?
CRT_3	¿Consideras que la implementación de la norma EFR ha reducido la intención de los empleados de cambiar de trabajo?
CRT_4	¿Crees que la empresa brinda suficientes oportunidades de desarrollo profesional y crecimiento dentro de la organización?

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