Colegio de Estudios Superiores de Administración

The impact of utilizing emotions to facilitate performance and understanding the universality of suffering on operational effectiveness

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Administración de Empresas

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Summary

The thesis explores the impact of using emotions and understanding the universality of suffering on operational effectiveness in organizations. Within the context of global competitiveness, the work focuses on how emotional intelligence and empathy influence organizational performance, proposing that understanding emotions and common suffering in the workplace can improve team productivity and cohesion.

The research introduces concepts of emotional intelligence such as self-control and empathy, which are essential for decision-making, problem-solving, and social interaction at work. It further emphasizes that simple emotional management is not enough to improve operational effectiveness; it must be combined with a deep understanding of human suffering to foster a collaborative and effective environment.

The methodology involves surveying workers from various Colombian sectors and using Structural Equation Modeling to analyze variable relationships. Findings indicate that understanding the universality of suffering, rather than emotions alone, most significantly enhances operational effectiveness, fostering a culture of empathy that strengthens team cohesion and emotional well-being.

The thesis concludes that companies should adopt policies that promote emotional intelligence and the recognition of suffering, as these factors not only improve the work environment but also strengthen competitiveness and operational efficiency. It is recommended that organizations in Colombia invest in emotional intelligence training and promote a work environment where empathy and mutual support are valued.

Keywords: Emotional intelligence, operational effectiveness, empathy, organizational competitiveness, emotional well-being.

Introduction

Competitiveness became a crucial part of the business world. With each passing day, enterprises and countries put into action various strategies and measures to guarantee they were the leaders of their industry. Some of these techniques included investing and focusing on quality, cost, reliability, flexibility, and how fast operations and processes were carried out (Tegethoff et al., 2019). For instance, the World Competitiveness Center determined a global ranking based on different factors that determined the country's position.

However, we had to fully understand the importance of this concept to companies and economies. Competitiveness encompassed the capacity to deliver the appropriate goods and services of excellent quality at favorable prices and within specified timeframes (Heseltine, 1994). It involved satisfying customer needs more efficiently and effectively than rival companies. A competitive entity thrived, while an uncompetitive one faced the risk of insolvency unless it enhanced its performance. Therefore, companies and countries had to prioritize competitiveness and take the required measures to improve their rank in the global market (Heseltine, 1994).

The repercussions when a country's businesses failed to compete effectively in global markets impeded the nation's ability to draw investments, create jobs, and generate wealth (Heseltine, 1994). Therefore, the primary measure of success was not just the trade balance but the standard of living, often represented as real Gross Domestic Product per capita. Competitiveness was universally recognized as a vital benchmark for assessing the prosperity of countries, industries, and businesses (Porter, 1990).

The World Economic Forum defined competitiveness as the combination of institutions, policies, and factors influencing productivity (Res, 2014). Finally, firms and industries had to exhibit competitiveness in domestic and international markets. Given the competitive and dynamic landscape of the time, achieving success had to come hand in hand

with a competitive advantage. Therefore, companies had to have a unique set of resources, capabilities, or market positioning that allowed a company to outperform its competitors. It entailed continually creating and maintaining superior performance, which could be achieved through cost leadership and differentiation (Tegethoff et al., 2023).

We also had to mention the importance of having a high absorption capacity and innovation, as they were crucial in attaining competitiveness in the business world. The capacity to understand all the key players and factors that influenced the environment and affected the results, enabled an immense learning capability, thus increasing innovation. All the needed information for a new approach was available (Fajardo et al., 2023).

Analyzing Colombia's competitiveness position on the World Competitiveness Center ranking showed an anguishing circumstance. Since 2019, this country's position had descended from 52nd to 58th (Tegethoff et al., 2020), and an even more worrying score was that the country's business efficiency had dropped more than ten places, from 47th to 59th in the last five years (IMD, 2023).

Given the rankings, Colombia needed to explore unconventional alternatives and strategies to reclaim its previous position and aim for higher ones. One such revolutionary approach could have been using emotions to enhance performance and achieve competitiveness and operational effectiveness. Emotional intelligence played a crucial role in creating a competitive environment. It involved skills such as empathy, self-awareness, and emotional regulation, which could improve decision-making, problem-solving, and interpersonal relationships in the workplace. By doing so, Colombia could have boosted competitiveness by devising comprehensive and operationally efficient plans. (Santa, 2023)

Therefore, the ability to perceive and understand the emotions of others boosted an employee's commitment to being operationally effective. This dedication on the employees'

part led to companies that can differentiate themselves and achieve, operational effectiveness more easily, which translated into a competitive advantage. (Santa et al., 2023)

Lastly, understanding the universality of suffering in the organizational environment was essential to stimulate performance and competitiveness. By grasping this feeling, the growth of emotional intelligence was fostered, directly impacting operational efficiency. Identifying and addressing suffering within the organization strengthened connections among team members and established a more productive work environment.

Moreover, this focus on emotional well-being enhanced the corporate reputation. It facilitated talent attraction and retention, gaining the trust of both customers and business partners and solidified the competitive position in the market (Santa et al., 2023).

As a result, it was vital to undertake a methodical investigation into the research question: "What is the impact of utilizing emotions to facilitate performance and understanding the universality of suffering on operational effectiveness?". The study began with an introduction and theoretical background, followed by the methodology and results of the data analysis, and concluded with the discussion and limitations.

For this reason, the study investigated how understanding emotions and the universality of suffering directly impacted operational effectiveness and organizational performance. Additionally, the relationship between these factors and competitiveness in the business environment was explained. Furthermore, various concepts and tools was presented to help understand the relationship between the variables.

Objectives

General Objective

Evaluated the interrelationship between the following variables:

- Use of emotion to facilitate performance.
- Understanding the universality of suffering.
- Operational effectiveness

Specific Objectives

- Evaluated the impact that using emotion to facilitate performance had on operational effectiveness.
- Evaluated the impact of understanding the universality of suffering on using emotion to facilitate performance.
- Evaluated the impact of understanding the universality of suffering on operational effectiveness.

Theoretical background

Operational effectiveness

Operational effectiveness referred to an organization's capability to install mechanisms that allowed it to outperform its competition, gaining the capacity to surpass customers' expectations. To achieve operational effectiveness, mechanisms had to be established and linked to core capabilities, thereby enhancing productivity, quality, and efficiency (Santa et al., 2014).

This variable provided the perfect space to unlock organizational success and the chance for the organization to outperform competitors in speed and quality. Thus, this variable relied on the fundamental capabilities of the organization to develop systems and strategies that surpassed customer anticipations. Achieving operational effectiveness required the organization to assess, control, and enhance its processes. It was essential but also applied to quality leadership and was one of the main drivers of business success. (Porter, 1996; Tegethoff et al., 2019).

To further comprehend this variable, five performance dimensions impacted operational effectiveness. These were cost, quality, reliability, flexibility, and speed. They defined the dimensions to measure the impact (Tegethoff et al., 2019; Belekoukias et al., 2014).

Cost performance involved reducing waste and inefficiencies to achieve the highest quality at the lowest possible cost, which led to a complete optimization of the available resources (Russell & Taylor, 2008).

Quality had several definitions depending on the context. From a product-oriented perspective, quality entailed ensuring that products or services adhered to established standards by customer specifications (Santa et al., 2023; Cimatti, 2016). However, quality extended

beyond commonly delivering defect-free products or services; it also involved meeting customer needs or surpassing their expectations, as mentioned before (Russell & Taylor, 2008).

Moreover, reliability was a critical dimension for operational effectiveness, as it was closely linked to customer satisfaction and assessed the effectiveness of processes and the delivery of value by the company. Also, flexibility was vital in changing markets and environments, as it measured how a company could respond effectively to change (Nurdiani et al., 2018).

To excel in a competitive environment based on speed, an organization needed fundamental strengths in quick decision-making, rapid adjustment, and strong internal connections. This last dimension was decisive because, in a dynamic market, needs were constantly changing, and companies had to have the ability to respond quickly to these changes while maintaining quality to remain relevant (Russell & Taylor, 2008).

It is noteworthy that gaining operational effectiveness was a challenging task or a short-term goal. To master this variable, enterprises had to dominate and perfect through mechanisms of the five dimensions previously mentioned. Consequently, excelling in some of the objectives and being competitive gives an organization an edge in the market (Tegethoff et al., 2020).

Use of emotion to facilitate performance

Emotional intelligence is recognized as a form of intelligence that enables individuals to distinguish and understand their own emotions as well as those of others, thus allowing them to process information that guides thoughts and actions effectively (Fuentes et al., 2015). Understanding people and behaving wisely in social situations are key aspects of what is known as social intelligence. In 1993, Gardner concluded that emotional intelligence comprises two components: interpersonal and intrapersonal intelligence (Gardner, 2012). Interpersonal intelligence refers to the ability to identify, differentiate, and recognize the emotions of others,

while intrapersonal intelligence involves the skill to manage a wide range of complex emotions (Santa et al., 2023; Herpertz, 2022).

Thus, emotional intelligence is a skill related to human behavior aimed at understanding others and gaining respect through empathy. As suggested by Sara & Arla (2004), this skill involves identifying and using emotional information to influence others, facilitating and enhancing both individual and group performance (Day et al., 2004).

The main pillars of emotional intelligence, according to various studies, are self-emotional appraisal (SEA), others' emotional appraisal (OEA), regulation of emotion (ROE), and use of emotion (UOE) (Madaan et al. 2020).

The ability to assess and express one's own emotions involves naturally understanding and conveying intense emotions (SEA). On the other hand, understanding others' emotions entails the ability to analyze, comprehend, and respond to their emotions (OEA). Furthermore, self-regulation of emotion is the ability to manage one's own emotions (ROE), while using emotions to improve performance (UOE) refers to the skill of employing emotions to enhance both individual and group performance. These four dimensions determine the development of emotional connections between individuals (Santa et al., 2023).

Recent research suggests that emotional intelligence is vital in workplace settings (Lyons, 2005). Emotional intelligence, as defined, includes a range of emotional skills involving the accurate perception and expression of emotions, integrating emotions with cognitive processes, understanding emotions, and managing them effectively (Lyons, 2005).

The relationship between emotional intelligence (EI) and operational effectiveness is complex and mediated by various factors, including Organizational Citizenship Behavior (OBC), leadership styles, and team dynamics. Emotional intelligence positively affects organizational citizenship behavior, which in turn enhances operational effectiveness. This relationship is especially strong when EI is mediated by OCB, suggesting that individuals with

high EI are more likely to engage in behaviors that support the organization beyond formal job requirements, thus improving overall operational effectiveness (Abdullahi et al., 2020).

As mentioned before, the impact of emotional intelligence on operational effectiveness is also mediated by leadership styles. While EI does not significantly affect transformational leadership, it partially influences transactional leadership, which directly impacts operational effectiveness. This implies that leaders with high EI are better able to handle transactional leadership tasks, and lead to improved operational outcomes. Additionally, leaders' EI is crucial in predicting subordinates' task performance and OCB, especially in cultures with high power distance and collectivism, further contributing to operational effectiveness (Santa et al., 2023).

As a matter of fact, emotional intelligence plays a significant role in team performance and effectiveness. Teams with high collective EI experience less internal conflict and greater cohesion, innovation, and performance. This positive team dynamic directly contributes to operational effectiveness by fostering a collaborative and efficient work environment. Additionally, applying EI metrics in team settings, such as assessing mean, standard deviation, and other indicators, can provide deeper insights into how EI influences team performance and, consequently, operational effectiveness (Farh et al., 2012).

Furthermore, emotional intelligence facilitates the formation of cross-functional teams, which indirectly boosts operational effectiveness. These teams leverage diverse skills and perspectives, leading to more innovative solutions and efficient processes. However, EI does not significantly impact the development of inter-organizational networks, suggesting that its primary influence on operational effectiveness is through internal team dynamics rather than external collaborations (Santa et al., 2022). In specific contexts like the military, emotional intelligence is critical for managing emotions in high-stress situations, enhancing task performance, and fostering effective teamwork. This application of EI in operational contexts

underscores its importance in achieving mission success and operational efficiency (Khraban, 2022).

Emotional intelligence enhances teamwork effectiveness and job performance, especially in complex managerial contexts. Employees with high EI are better equipped to handle emotional labor and job demands, resulting in improved operational outcomes.

According to various studies, emotions can influence cognitive processes and human performance, and integrating emotions and cognition may be crucial for success in different tasks. This variable is valuable in workplace settings, significantly contributing to interpersonal understanding, emotional self-regulation, and overall performance (Farh et al., 2012).

In conclusion, emotional intelligence significantly contributes to operational effectiveness through its impact on organizational citizenship behavior, leadership styles, team dynamics, and context-specific applications. By fostering a supportive and collaborative work environment, individuals and teams with high EI can drive operational success and achieve a competitive advantage.

Consequently, the first hypothesis stated that:

- H1: Using emotions to facilitate performance would positively affect operational effectiveness.

Understanding the universality of suffering

The universality of suffering could be understood through various definitions, as this feeling was experienced differently among individuals. Nevertheless, "We recognize first of all that suffering is a virtually universal experience, for it cuts across all boundaries that tend to divide us as human beings: by country, culture, region, race, gender, age, wealth, intelligence and lifestyle" (Kautz, 2011, p.2). To understand suffering, it was necessary to address four

main aspects: its origin, purpose, and meaning, as well as how to manage both our pain and that of others within our societies, communities, and globally.

The information showcased demonstrated that every human being had witnessed the suffering of others indirectly. While we might temporarily avoid feeling it, there was no permanent escape by seeking refuge in a safe place (Kautz, 2011, p.2).

In workplace contexts, suffering refers to the physical, emotional, and psychological distress experienced by employees due to various factors within their work environment. This distress can stem from individual, family, economic, and organizational sources, significantly affecting employee well-being and overall organizational health (Kanov, 2020)

This phenomenon is more prevalent than often recognized; in fact, nearly half of workers in a European survey reported discomfort due to their working conditions. Workplace suffering is an issue that impacts labor rights and the promotion of safe and decent work environments, as highlighted by the Sustainable Development Goals (SDGs) (Gismera et al., 2019).

Despite the existence of best practices to prevent suffering, there is often reluctance to address it once it has occurred. It is an inevitable and costly reality in organizational life, yet it remains underestimated and inadequately addressed in management theories and practices. While tools like self-assessment scales and questionnaires are used to measure workplace suffering, these rarely capture the full scope of the problem, including the political, strategic, and economic factors that exacerbate it (Allard-Poesi et al., 2017)

In specific sectors, such as primary health care, workers report high levels of professional burnout and dissatisfaction with their work context, despite some aspects of job satisfaction. This highlights the complex and multifaceted nature of workplace suffering and the need for a comprehensive approach to understanding and mitigating it. Common causes of suffering in the workplace include psychosocial stressors, the exacerbation of mental health

issues due to working conditions, poor work environments, and a general lack of attention to this issue in organizational settings (Driver, 2007).

Following this perspective, SEE learning (Social, Emotional, and Ethical) was a program that encompassed the ability to identify suffering, acknowledge its universal impact, empathize with those enduring it, embrace discomfort, and be driven to take action to relieve that distress. Within the framework of SEEL (Social, Emotional, and Ethical learning), the correlation between recognizing suffering and actively working to alleviate it was pivotal in nurturing empathetic and socially conscious individuals (Gu et al., 2020).

Identifying suffering and nurturing empathy were fundamental aspects of developing emotional intelligence, as underscored in discussions surrounding the widespread nature of suffering and initiatives such as the SEE learning program. Emotional intelligence, which encompassed self-awareness, self-regulation, and empathy, was crucial for effective leadership. Leaders with high emotional intelligence could unite teams, influence organizational outcomes, and enhance operational efficiency. Therefore, organizations needed to prioritize cultivating emotional intelligence to seek competitive advantage. These efforts were instrumental in creating a workplace culture that acknowledged and responded to suffering, fostered empathy, and nurtured effective leadership, ultimately leading to improved performance and success (Santa et al., 2023; Khan, 2021).

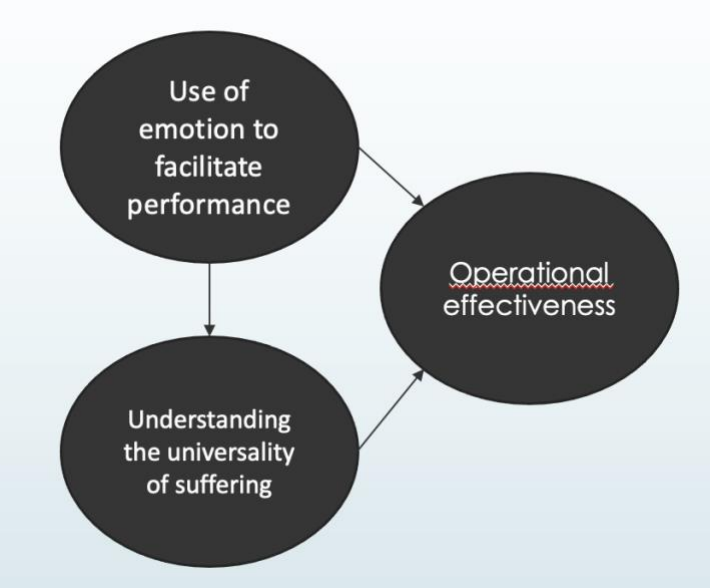
Understanding suffering as a universal experience was crucial for developing emotional intelligence, a fundamental skill in effective leadership and organizational success. Tools that emphasized the importance of recognizing and addressing suffering promote personal well-being, enhanced individual and group performance, and fostered an empathetic work culture, thus strengthening operational effectiveness (Santa et al., 2023; Alon, 2005).

Consequently, comprehending the universality of suffering not only impacted emotional intelligence but also had a significant effect on overall organizational performance.

Therefore, our second and third hypotheses postulated:

- H2: Use of emotion to facilitate performance has an impact in understanding the universality of suffering.
- H3: Understanding the universality of suffering improved operational effectiveness.

Figure 1. Research model with hypotheses



Note: Author's own elaboration

Methodology

This study aimed to confirm and correlate relationships between variables to better understand the impact of using emotions to enhance performance and the universality of suffering in operational effectiveness. Although there was little evidence on these specific variables, similar investigations had been conducted in other countries (Santa et al., 2023; Mehralian et al., 2014; Lyons et al., 2005).

To achieve this, the research followed a structured approach involving three phases: theoretical design, data collection, and analysis and conclusions. The study used a self-administered questionnaire designed to gather responses from business users in Colombia. The survey instrument, measurement constructs, and a best-fit model were developed based on the guidelines of Hair et al. (2010). Structural Equation Modeling (SEM) was utilized, which allowed for the determination of relationships. The sample was conducted by convenience, meaning that the respondents were selected based on their easy access and availability, without following a random selection process, which allowed for quicker data collection (Casal et al., 2003).

The questionnaire included a demographic section (industry sector, company size, company classification, respondent's education, and profession) followed by a set of conceptual variables for the structural equation model. These variables were operationalized through a five-point Likert scale (Strongly agree - Strongly disagree). Prior to data collection, the questionnaire underwent face and content validity assessments to ensure its effectiveness. Out of the collected responses, 76 were deemed valid for analysis. The data collected was then subjected to both descriptive and inferential statistical analyses to test the proposed model and hypotheses.

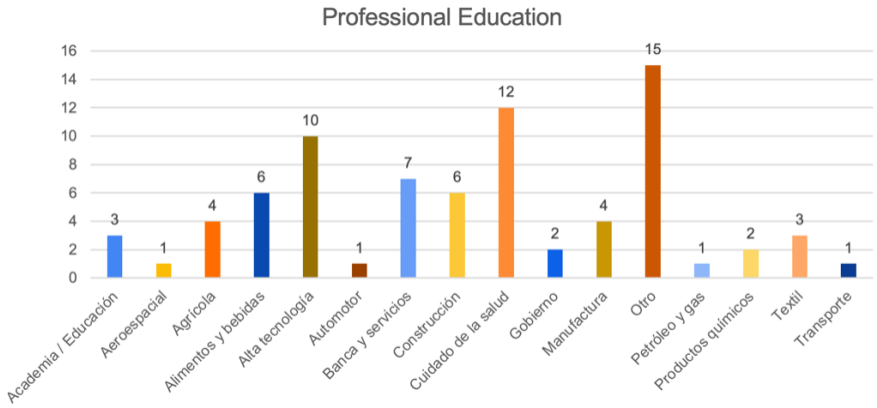
The variables in this research are grounded in well-established theories. Emotional intelligence is based on the framework provided by Santa et al. (2023), which explores the role

of emotional intelligence, cross-functional teams, and interorganizational networks in driving operational effectiveness. Operational effectiveness is anchored in the strategic insights discussed by Tegethoff et al. (2023), where the integration of additive technologies and innovation serve as key factors. Lastly, compassion draws from the Sussex-Oxford Compassion Scales developed by Gu et al. (2020), offering a validated measure of both self- and other-directed compassion.

Demographic Results and Analysis

Demographic questions are essential for contextualizing survey results, as they allow a deeper understanding by placing responses in the context of participants' characteristics. For instance, perceptions of a product may vary based on income level or geographic location. Additionally, demographic data provides critical insights for informed decision-making. By understanding the specific needs and preferences of different groups, businesses or policymakers can design more effective strategies, products, or interventions that are better suited to their target audiences, ensuring a more tailored and successful approach to addressing diverse needs (Ray et al., 2020).

Figure 2. Professional Education

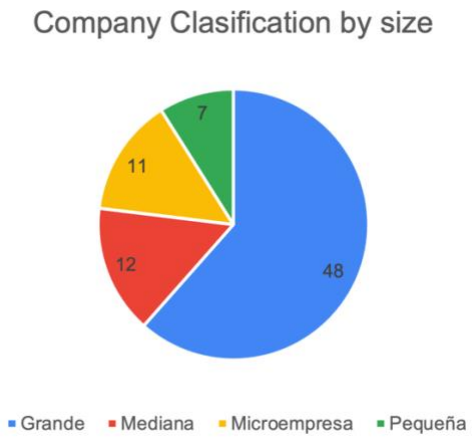


Note: Author's own elaboration

The Professional Education chart shows a diverse distribution of respondents across various industries. The largest representation comes from the "Otro" category with 15 individuals, followed by "Petróleo y gas" (12) and "Alta tecnología" (10). Moderate participation is seen in industries like "Construcción" (7), "Cuidado de la salud" (6), and "Alimentos y bebidas" (4). On the other hand, sectors such as "Aeroespacial", "Banca y

servicios", "Productos químicos", and "Transporte" have minimal representation, with only 1 or 2 participants. This suggests significant involvement from certain sectors, while others are less represented.

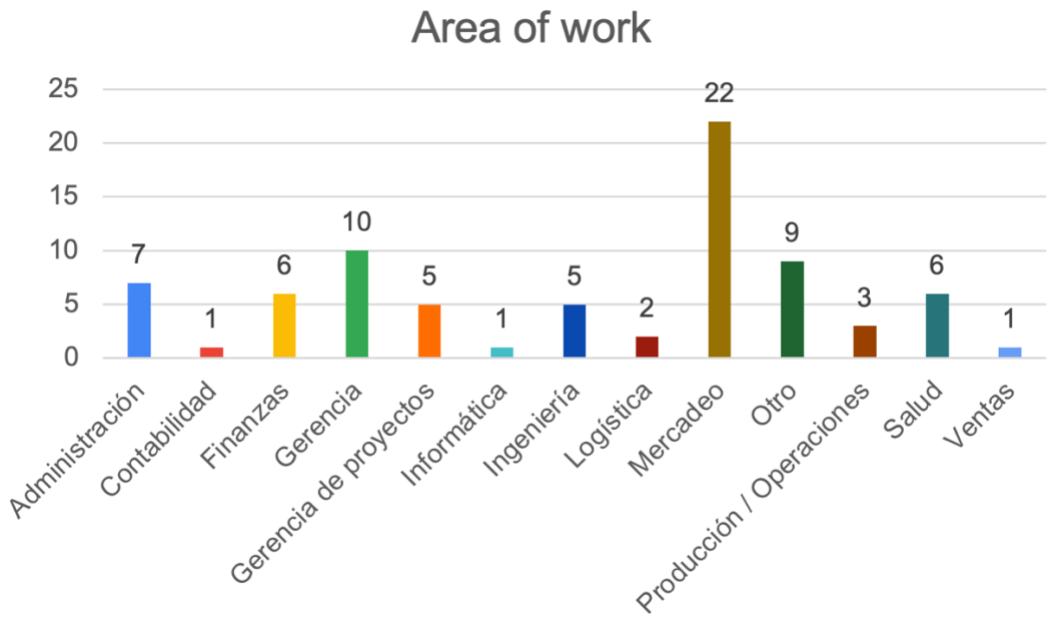
Figure 3. Company Classification by Size



Note: Author's own elaboration

The pie chart displays the classification of companies by size, with four categories: large, medium, small, and microenterprises. Large companies constitute the majority, representing 48% of the total. Medium-sized enterprises account for 12%, while microenterprises make up 11%. Small companies form the smallest segment, comprising 7% of the overall distribution. The chart highlights that large companies dominate in terms of numbers, followed by medium and micro-sized businesses, with small enterprises being the least represented.

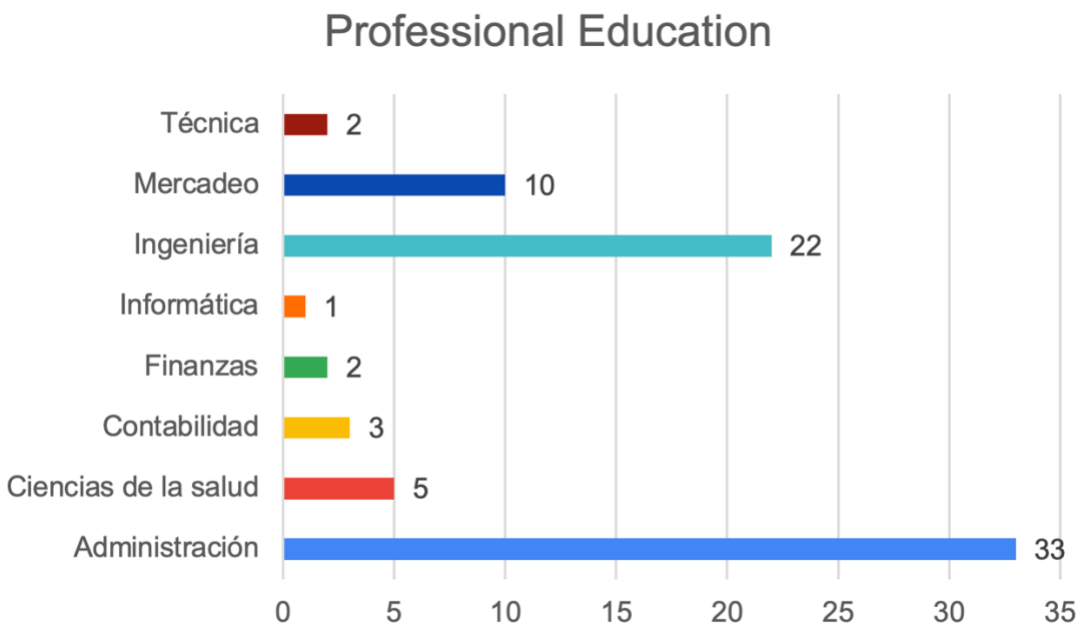
Figure 4. Area of work



Note: Author's own elaboration

The bar chart illustrates the distribution of employees across different areas of work. Marketing (Mercadeo) stands out as the most represented field, with 22 employees. Other areas (labeled as "Otro") also have a significant presence, with 9 employees, followed by General Management (Gerencia) with 10. Administration has 7 employees, while Finance, Sales, and Operations are less represented, with only 1 or 3 employees each. Notably, areas like Project Management (Gerencia de proyectos) and Engineering have 6 and 5 employees, respectively. The chart highlights that Marketing leads the workforce distribution, while some specialized areas, such as Finance and Sales, have minimal representation.

Figure 5. Professional Education



Note: Author's own elaboration

The bar chart presents the distribution of professional education among different fields. Most individuals, 33, have an educational background in Administration, making it the most prevalent. Engineering follows with 22 individuals. Marketing has a notable presence, with 10 people holding qualifications in this area. Health Sciences accounts for 5, while Accounting and Finance have 3 and 2 individuals, respectively. Technical fields and Informatics show smaller representations, with only 2 and 1 person, respectively. This chart emphasizes that Administration and Engineering dominate professional education, while more specialized fields have fewer representatives.

Data Analysis

Software tools such as SPSS and Amos had been employed to verify the conceptual model illustrated in Table 1, focusing on estimating the predictive relationships among the model variables and the fit indices, in addition to assessing the confidence level. Different indices had been used to examine the relationships between continuous latent variables and observed variables, as well as to assess the overall fit of the measurement model. Additionally, internal consistency had been evaluated using Cronbach's alpha coefficient and item-total correlation. All constructs had values exceeding 0.7, the threshold set for basic research (Nunnally and Bernstein, 1978).

The Cronbach's alpha coefficient is a measure of the internal consistency of a set of items or questions in a questionnaire or scale. It is primarily used in social and psychometric research to assess the reliability of a measurement instrument (Amirrudin et al., 2021).

Table 1. Cronbach Alpha

Variable	Number of Items	Cronbach Alpha
Use of Emotion to Facilitate performance	4	0.921
Understanding Universality of suffering	4	0.860
Operational effectiveness	11	0.879

Note: Author's own elaboration

CMIN (Chi-square Minimum) is a statistic used in model analysis, particularly in structural equation models, to assess how well a theoretical model fits the observed data. A low CMIN value indicates a good fit, but it is more informative to examine the CMIN/Degrees of Freedom ratio, where a value less than 2 or 3 suggests an adequate fit (Yaşlıoğlu et al., 2020).

In this case, Table 2 indicates that the results of the **Default model** appear **acceptable** and suggest a good fit. The analysis of whether the results are favorable:

Key Indicators:

1. **CMIN/DF**: The value of **1.571** is a strong indicator. Generally, a value between 1 and 3 is considered acceptable, suggesting that the model fits the data well without being overly complex or too simplistic.
2. **P-value**: While the p-value (.000) is statistically significant (less than 0.05), in this type of analysis, a very low p-value may indicate that the model does not perfectly fit the data. However, the p-value should not be the sole criterion for assessing fit quality, and in this case, the CMIN/DF value points to a reasonable fit.

Overall, **the results are good**, as the **CMIN/DF** value of 1.571 falls within the acceptable range, indicating an adequate fit of the model to the data.

Table 2. CMIN Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	35	158,650	101	,000	1,571
Saturated model	136	,000	0		
Independence model	16	868,835	120	,000	7,240

Note: Author's own elaboration

The **PGFI (Parsimony Goodness of Fit Index)** is a fit index that evaluates model quality by considering its parsimony or simplicity. Unlike other fit indices like GFI, which only measure how well a model fits the data, PGFI includes a penalty for model complexity. This means that PGFI favors models that achieve a good fit with fewer parameters or a simpler structure. PGFI values typically range from 0 to 1, with higher values indicating a better

balance between fit quality and model simplicity. A value above 0.50 is generally considered acceptable (Marsh et al., 2005).

In this case the PGFI (Parsimony Goodness of Fit Index) for the Default model has a value of 0.601, indicating a good balance between the model's complexity and its ability to fit the data. The PGFI penalizes models that are unnecessarily complex, so a value above 0.50 is considered adequate. In this case, the value of 0.601 suggests that the model is relatively parsimonious, achieving a reasonable fit without being overly complex. Compared to the independence model, which has a PGFI of 0.252, the Default model strikes a better balance between simplicity and fit. Therefore, this value reinforces that the model has an efficient structure in terms of parsimony without significantly compromising fit quality.

Table 3. GFI Model

Model	**RMR**	**GFI**	**AGFI**	**PGFI**
Default model	,055	,809	,743	,601
Saturated model	,000	1,000		
Independence model	,329	,285	,190	,252

Note: Author's own elaboration

The baseline comparisons model includes several fit indices: NFI, RFI, IFI, TLI, and CFI. The **NFI (Normed Fit Index)** measures the improvement in the model fit compared to an independent model. The **RFI (Relative Fit Index)**, which adjusts the NFI based on the number of parameters in the model, offers a more precise evaluation. On the other hand, the **IFI (Incremental Fit Index)** compares the fit of the proposed model with a null model and considers the model's complexity. The **TLI (Tucker-Lewis Index or Non-Normed Fit Index)**, like the IFI, penalizes more complex models. Finally, the **CFI (Comparative Fit Index)** is a metric used to evaluate how well a structural equation model (SEM) fits the data by comparing it to a baseline or null model (which assumes no relationships between the

variables). It assesses the model's fit in relation to the observed data, considering the complexity of the model (Moss, 2016). We can see that the indicators are above 0.7, which represents that the model has an adequate fit.

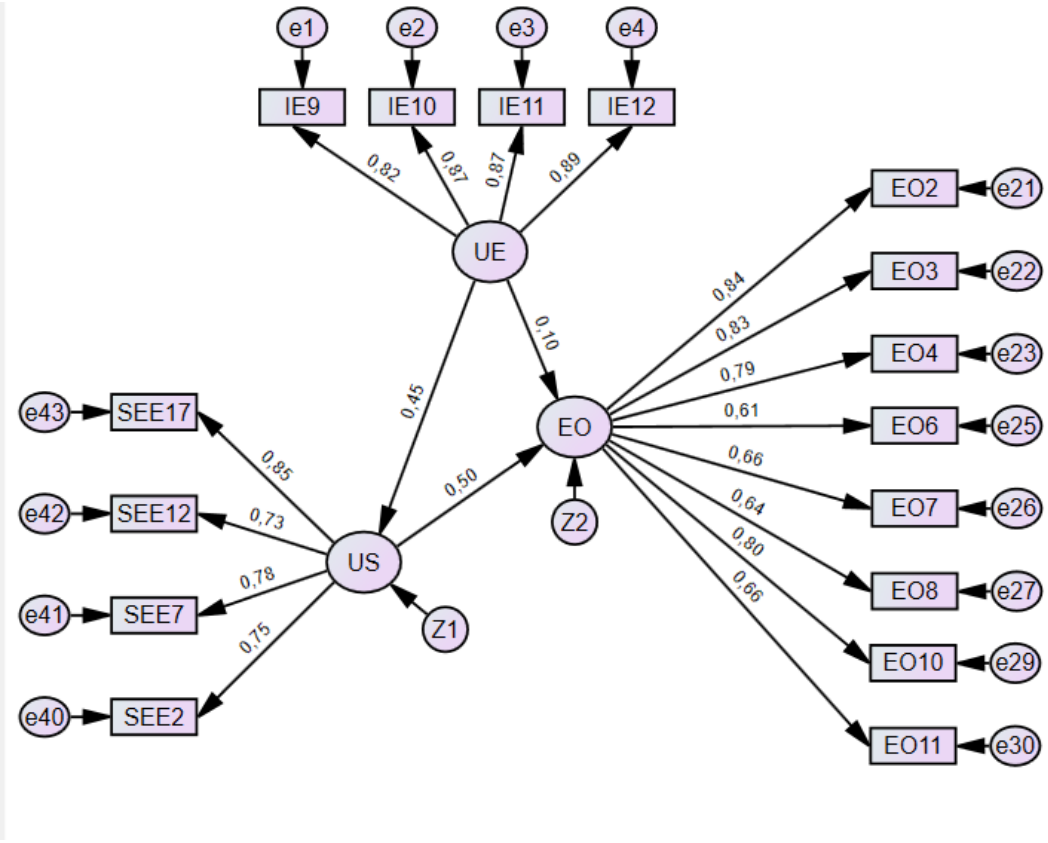
The analysis of the results shows that the default model has a CFI of 0.923, indicating a good fit compared to the independence model. Values above 0.90, as in this case, suggest that the model adequately represents the observed data. Although it is not a perfect fit, like the saturated model with a CFI of 1.000, the value obtained is acceptable and supports the validity of the model in describing the relationships between variables in the analyzed context. This suggests that the model is suitable for reliably interpreting the data.

Table 4. Baseline Comparisons Model

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,817	,783	,925	,909	,923
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

Note: Author's own elaboration

Figure 6. Overall Results



Note: Author's own elaboration

Estimates (Default model) - Scalar Estimates (Default model) - Maximum Likelihood

Table 5. Estimates - Regression Weights:(Default model)

	Estimate	S.E.	C.R.	P	Label Hypthesis
US <--- UE	,289	,083	3,497	***	Not rejected
EO <--- UE	,071	,091	,782	,434	Rejected
EO <--- US	,568	,162	3,503	***	Not rejected

Note: Author's own elaboration

The table 5 shows a structural equation model (SEM) that represents relationships between latent and observed variables. First, the latent variable Understanding the universality of Suffering (US) is influenced by three observed variables (SEE2, SEE7, SEE12, SEE17), with high regression coefficients ranging from 0.73 to 0.85. On the other hand, Use of Emotion

(UE) is another latent variable affected by the observed variables (IE9, IE10, IE11, IE12), all with high loading coefficients, close to or exceeding 0.87.

The latent variable Operational Effectiveness (EO) also influences several observed variables (EO2, EO3, EO4, EO6, EO7, EO8, EO10, EO11), with loading coefficients varying between 0.64 and 0.93. Regarding the relationships between the latent variables in the SEM, US is predicted by UE with a coefficient of 0.289, which is statistically significant ($p < 0.001$). Additionally, EO is influenced by UE and US, although the coefficient between UE and EO is low (0.071) and not significant ($p = 0.434$). In contrast, the coefficient between US and EO is high (0.568) and statistically significant ($p < 0.001$). The statistical significance, reflected in the C.R. values (t-values), indicates that the relationships UE -> US and US -> EO are significant ($p < 0.001$), while the relationship UE -> EO is not ($p = 0.434$).

This suggests that UE directly affects US, and that US has a direct and significant effect on EO, while UE does not have a direct and significant impact on EO. In conclusion, the model suggests that UE has a direct impact on US, which in turn significantly influences EO, implying that the relationship between UE and EO may be mediated by US.

Conclusions

Throughout this research, an in-depth analysis was conducted on the impact of emotional usage and the understanding of the universality of suffering on organizational operational effectiveness. The findings obtained are highly relevant to the business world, offering a more enriched perspective on how organizations can optimize their overall performance by paying greater attention to the emotional well-being of their employees. These factors, often underestimated, are key to creating more human, collaborative, and efficient work environments, with effects extending beyond operational outcomes to employee satisfaction and commitment.

The study demonstrates that emotions, when managed appropriately to enhance performance, along with a deep understanding of the universality of suffering, are essential elements in improving operational effectiveness. This process was validated through an exhaustive analysis of 76 valid responses obtained via an administered questionnaire, providing a solid empirical foundation that supports the proposed theoretical model. The results not only confirm several initial hypotheses but also provide valuable insights into the complex interrelationship between emotions, suffering, and organizational performance, reinforcing the importance of adopting a comprehensive approach to emotional management within companies.

Using emotions to facilitate performance:

One of the central aspects of this research is the consideration of emotions as a key tool in workplace dynamics. It is not only about employees being able to recognize and manage their own emotions but also about understanding and appropriately handling the emotions of their colleagues, thereby creating a more collaborative and functional environment. Emotions have a direct impact on decision-making, problem-solving, and social interactions in the

workplace. Thus, when emotions are consciously and strategically utilized, they can become a driving force for improving team performance and productivity.

The study emphasizes that the use of emotions is not an isolated factor that guarantees improvements in operational effectiveness. In fact, the results of hypothesis H1, which posited a direct impact of emotional usage on organizational effectiveness, were rejected. This indicates that emotions alone are not sufficient to improve operational outcomes. However, the study also suggests that the appropriate use of emotions becomes significantly more relevant when combined with other factors, such as the understanding of suffering, reaffirming the need for a more holistic approach to emotional well-being within companies.

The impact of using emotions to facilitate performance is clearly linked to a better understanding of the universality of suffering. Hypothesis H2, which was not rejected, with a coefficient of 0.289 and a high statistical significance ($p < 0.001$), shows that employees who effectively use their emotions tend to have a better understanding of others' suffering. The impact of using emotions on understanding suffering (0.289) is moderate but significant, emphasizing the importance of developing emotional skills within organizations.

This finding is highly relevant because it indicates that empathy, a product of this understanding, is a determining factor in creating more inclusive and collaborative work environments. For leaders and human resources managers, this conclusion underscores the importance of fostering emotional intelligence in the workplace as an essential tool for team cohesion and organizational well-being.

Understanding the universality of suffering:

Another crucial aspect of this study is the exploration of the universality of suffering and its impact on the operational effectiveness of organizations. Suffering, understood as an inevitable human experience that affects everyone at some point, plays a fundamental role in shaping the work environment. It is impossible to ignore the fact that everyone, at some point,

faces emotional challenges, and when organizations fail to address this suffering, a tense, less productive work environment with high levels of stress is created. However, when companies recognize and proactively address this suffering, they foster a culture of empathy and mutual support, reducing stress and improving employees' overall well-being.

The research concludes that understanding suffering is not only crucial for employees' emotional well-being but also has a direct impact on the operational effectiveness of the organization. Companies that recognize suffering and provide emotional support to their employees can significantly improve productivity and talent retention. In an environment where emotional challenges are adequately addressed, employees feel more valued, supported, and committed to the organization, which translates into higher loyalty to the company and an improvement in operational performance.

The data obtained from hypothesis H3, which posits that understanding the universality of suffering improves operational effectiveness, supports this claim. With a coefficient of 0.568 and a p-value of 0.001, this result is one of the most significant findings of the study. It reveals that when employees and leaders understand and recognize the suffering of others, organizations experience substantial improvements in their operational performance. This finding has profound implications for organizations, suggesting that suffering should not be seen simply as an obstacle but as an opportunity to generate empathy, cohesion, and mutual support within teams.

The impact of understanding suffering on operational effectiveness (0.568) is high, and its statistical significance reinforces the idea that managing suffering within organizations is key to improving operational performance.

Organizations that adopt policies that explicitly address their employees' emotional well-being, promoting the recognition and management of suffering, are able to create a more

human, resilient, and collaborative work environment. This approach facilitates better communication between teams, reduces stress related to work pressure, and increases talent retention, which, in turn, positively impacts the organization's competitiveness and operational efficiency. The ability to identify and address suffering not only improves employees' quality of life but also directly contributes to more efficient and sustainable organizational operations.

Operational effectiveness:

The study found a positive correlation between using emotions to facilitate performance, understanding suffering, and an organization's ability to operate effectively. Operational effectiveness, as shown by the results, does not solely depend on tangible factors such as quality, speed, or costs. While these factors are essential, the analysis suggests that intangible elements like employee morale, emotional intelligence, and the organization's capacity to manage suffering and well-being in the workplace are equally important.

The study highlights that organizations that take a proactive approach to emotional management and employee well-being experience a considerable increase in their operational effectiveness. This is because emotionally healthy employees are more capable of managing stress, resolving conflicts, and working collaboratively, thereby improving the organization's overall efficiency and productivity. A balanced emotional environment is also conducive to innovation, as employees feel more secure in expressing ideas and taking calculated risks.

In examining the link between emotions and operational effectiveness, the thesis found that the hypothesis (H1), which suggested a direct impact of emotions on operational effectiveness, was not supported. This result implies that while emotional intelligence (EI) has value in the workplace, its influence on performance may not be straightforward. One possible explanation is that the impact of emotional intelligence on operational outcomes may rely on additional mediating factors, such as empathy and a thorough understanding of employee challenges. The findings suggest that emotions alone—without being directed toward

interpersonal understanding and empathy—do not directly lead to improved efficiency or productivity.

These insights underscore that emotional intelligence is most effective when it serves as a foundation for building empathy and mutual support within teams. In other words, although managing emotions is crucial, it seems to deliver operational benefits only when it fosters a deeper understanding of others' emotional needs and contexts, thereby enhancing cohesion, motivation, and resilience within the workplace.

This nuanced perspective adds depth to the thesis, indicating that organizations aiming to boost performance through emotional intelligence should adopt a holistic approach, integrating EI training with initiatives that promote empathy, resilience, and a shared understanding of challenges among employees.

Although hypothesis H1— the impact of using emotions on operational effectiveness — shows a low coefficient (0.071) and lacks significance, this suggests that emotions influence effectiveness only when directed through empathy and an understanding of suffering.

The direct impact of emotions on operational effectiveness was thus rejected, the results of the structural equation model (SEM) show that the impact of emotions is mediated by understanding suffering. This reinforces the idea that emotions must be channeled effectively toward greater empathy and understanding of others' emotional contexts to positively influence the organization's operational effectiveness. Without this emotional connection, merely managing emotions will not be sufficient to generate significant improvements in the organization's operations.

Based on the results obtained, it is evident that business leaders and human resources managers must place greater emphasis on the development of emotional skills and the creation of empathetic work environments. Understanding suffering emerges as a key variable for operational effectiveness, suggesting that emotional support programs and policies addressing

employee well-being not only improve the work climate but also boost the company's productivity and competitiveness.

Moreover, leaders must be trained to manage their own emotions and those of their teams, promoting an environment where empathy and mutual support are valued. Organizations that ignore suffering risk experiencing a decline in employee morale, which will negatively affect operations and talent retention.

In summary, this research highlights that an organization's operational effectiveness cannot be approached solely from a technical or structural perspective. Emotional management and understanding suffering are key factors that must be integrated into business strategy to create a more efficient, collaborative, and human work environment. Companies that commit to prioritizing their employees' emotional well-being by adopting support and empathy policies not only improve the quality of work life but also ensure a more competitive, efficient, and sustainable future.

Recommendations for Colombian Companies

Based on the conclusions of this research, Colombian companies can implement several strategies to enhance their operational effectiveness by focusing on the emotional well-being of their employees. Below are specific recommendations derived from the study's findings:

1. Prioritize Emotional Intelligence Training

One of the core insights from this research is the importance of emotional management in the workplace. Colombian companies should invest in emotional intelligence training for both employees and leaders. Training should focus on recognizing, understanding, and managing emotions—both personal and those of colleagues. This approach fosters better communication, problem-solving, and collaboration, which are crucial for enhancing team performance.

Actions:

- **Workshops and Seminars:** Develop a series of structured workshops that cover topics such as self-awareness, emotional regulation, empathy, and interpersonal skills. Use role-playing and real-life scenarios to make the training practical and relatable.
- **Leadership Development Programs:** Incorporate emotional intelligence modules in leadership training. Use assessments to evaluate leaders' emotional intelligence and provide tailored coaching based on their results.
- **Psychological Counseling Services:** Partner with mental health professionals to offer counseling sessions for employees. Ensure that employees can access these services confidentially and without stigma, perhaps by providing an on-site counseling hours.

2. Foster a Culture of Empathy and Understanding

The research highlights the value of understanding the universality of suffering in the workplace. Companies that foster a culture of empathy and emotional support tend to have more cohesive teams, leading to improved operational effectiveness. Colombian organizations should promote an environment where employees feel understood and supported during emotional challenges.

Actions:

- **Open Discussions on Mental Health:** Organize regular forums where employees can share their experiences related to mental health challenges and coping strategies. Consider inviting guest speakers, such as mental health professionals or individuals with lived experiences, to share insights.
- **Training for Leaders:** Implement training programs specifically designed for managers to enhance their ability to recognize and respond to emotional distress among their team members. Use case studies and simulations to help them practice these skills.
- **Employee Assistance Programs:** Establish a comprehensive program that provides resources not only for counseling but also for stress management, financial planning, and legal assistance. Regularly promote these resources through newsletters and internal communications.

3. Integrate Well-Being into Business Strategy

The research indicates that emotional management and empathy directly impact operational performance. To optimize productivity, Colombian companies should integrate employee well-being into their overall business strategy. This means going beyond basic benefits and focusing on holistic support for employees' emotional and mental health.

Actions:

- **Comprehensive Wellness Programs:** Design and implement wellness initiatives that encompass physical health, mental well-being, and work-life balance. This might include fitness challenges, mindfulness workshops, and nutritional counseling.
- **Flexible Work Arrangements:** Develop clear policies that allow for flexible work hours and remote work options. Create a framework for how teams can balance workload and flexibility, ensuring that these arrangements do not negatively impact productivity.
- **Employee Feedback Mechanism:** Regularly survey employees regarding their well-being needs and preferences. Use this feedback to continuously adapt and improve wellness offerings, ensuring they remain relevant and effective.

4. Encourage Leadership by Example

For empathy and emotional management to truly take root in a company, leaders need to set the example. The research shows that leadership that understands and acknowledges the emotional states of employees can lead to higher engagement and performance.

Actions:

- **Active Listening Training:** Provide training focused on active listening techniques for all leadership levels. Use exercises that practice reflecting, paraphrasing, and validating employee concerns.
- **Performance Evaluation Criteria:** Include emotional intelligence and team-building capabilities as key performance indicators for managers during performance reviews. Recognize and reward those who excel in fostering an emotionally supportive environment.

5. Utilize Emotional Data to Improve Employee Engagement

The research suggests that emotions and suffering, when understood, can be leveraged to improve operational effectiveness. Colombian companies can develop mechanisms to track employee emotional well-being and use this data to make informed decisions about engagement and retention.

Actions:

- **Pulse Surveys:** Implement short, frequent pulse surveys to gather real-time feedback on the emotional climate of the workplace. Use tools like Google Forms for ease of collection and analysis.
- **Feedback Loop Creation:** Establish a clear process for how employee feedback will be acted upon, including follow-up communications. For example, if a survey reveals high levels of stress, outline specific steps the company will take to address the issue.

6. Address Suffering Proactively

Understanding and addressing the emotional suffering that employees experience is crucial for improving both their well-being and the company's performance. Colombian companies should approach suffering not as a challenge to productivity but as an opportunity to create more resilient teams through empathy and mutual support.

Action:

- **Mental Health Days Policy:** Create a clear policy that allows employees to take mental health days off without needing to provide detailed explanations. Educate employees about the importance of taking care of their mental health.

7. Recognize the Value of Soft Skills

This research underscores that intangible factors, such as empathy and emotional intelligence, are as important to operational effectiveness as more tangible business metrics like quality and speed. Colombian companies should place greater value on soft skills and incorporate them into recruitment, training, and performance evaluations.

Actions:

- **Soft Skills Assessments in Hiring:** Integrate soft skills assessments into the recruitment process. Use behavioral interview questions that evaluate candidates' emotional intelligence and teamwork capabilities.
- **Recognition Programs:** Develop a recognition program that celebrates employees who demonstrate exceptional soft skills, such as conflict resolution or teamwork. This can be done through awards, shout-outs in team meetings, or featured profiles in company communications.
- **Continuous Education:** Provide ongoing training opportunities that focus on developing soft skills. Partner with educational institutions or experts to offer courses on negotiation, empathy, and effective communication.

8. Create a Safe Space for Emotional Expression

The study stresses that the mere management of emotions is insufficient unless it is paired with empathy. Colombian companies should create an emotionally safe environment where employees feel comfortable expressing their emotions without fear of judgment.

Action:

- **Communication Channels:** Establish multiple avenues for employees to express their emotions, such as anonymous suggestion boxes, regular check-ins with HR, or dedicated platforms for mental health discussions.

9. Leverage Emotional Management for Innovation

An emotionally balanced work environment fosters innovation because employees feel more secure in expressing ideas and taking risks. Colombian companies should see emotional well-being as not just a factor in productivity but as a catalyst for creativity and innovation.

Actions:

- **Innovation Labs:** Set up dedicated innovation labs where employees can brainstorm and collaborate on new ideas without the pressure of formal evaluations. Foster a relaxed atmosphere that encourages creative thinking.
- **Failure as Learning:** Implement a policy that views failures as learning opportunities. Encourage teams to debrief after projects, discussing what went well and what could be improved, focusing on lessons learned rather than assigning blame.
- **Implement "Freedoms":** The proposal will allow employees to choose, month by month, different avenues for personal growth: freeing themselves from fears, finding order in uncertainty, expressing their authenticity, or embracing learning through mistakes. By engaging in activities that help them explore and understand their choice, a culture of innovation is fostered. As employees feel freer and more confident, they can generate more creative and disruptive ideas, driving growth and transformation within the organization.

Limitations

This study provides a solid foundation for understanding the impact of emotions and suffering on operational effectiveness; however, some limitations are acknowledged. For instance, the use of a convenience sample may restrict the generalization of the findings, suggesting the need to replicate the study with larger and more diverse samples to validate its conclusions. Additionally, it would be interesting to explore how other variables, such as organizational culture, leadership style, or even the work environment, interact with emotions and suffering, and how these interactions affect operational effectiveness. This approach would allow for a more comprehensive and applicable understanding of emotional dynamics in organizational contexts, contributing to the development of more effective interventions to improve employee well-being and performance.

For future research, it would be valuable to examine whether cultural factors within Colombia influence how emotional intelligence (EI) and suffering impact operational effectiveness. A cross-industry comparison could determine if these findings are unique to certain sectors, potentially uncovering whether empathy and EI play a more substantial role in specific environments, such as healthcare or education. This line of inquiry could provide valuable insights into the role of cultural and emotional management on organizational performance.

Furthermore, investigating how effective management of emotions within organizations can not only mitigate suffering but also enhance motivation and team commitment could lead to substantial improvements in productivity and job satisfaction. Identifying and analyzing the predominant emotions within specific work environments could further inform the design of more effective, context-specific emotional management strategies.

References

Abdullahi, A.Z., Anarfo, E.B. and Anyigba, H. (2020), "The impact of leadership style on organizational citizenship behavior: does leaders' emotional intelligence play a moderating role?", Journal of Management Development, Vol. 39 No. 9/10, pp. 963-987. https://doi.org/10.1108/JMD-01-2020-0012

Allard-Poesi, F., & Hollet-Haudebert, S. (2017). The sound of silence: Measuring suffering at work. Human Relations, 70, 1442 - 1463. https://doi.org/10.1177/0018726717703449.

Alon, I., & Higgins, J. M. (2005). Global leadership success through emotional and cultural intelligences. *Business horizons*, *48*(6), 501-512.

Amirrudin, M., Nasution, K., & Supahar, S. (2021). Effect of variability on Cronbach alpha reliability in research practice. Jurnal Matematika, Statistika dan Komputasi, 17(2), 223-230.

Belekoukias, I., Garza-Reyes, J. A., & Kumar, V. (2014). The impact of lean methods and tools on the operational performance of manufacturing organisations. *International Journal of Production Research*, *52*(18), 5346–5366. https://doi.org/10.1080/00207543.2014.903348

Carmona-Fuentes, P., Vargas-Hernández, J. G., & Rosas-Reyes, R. E. (2015). Influencia de la inteligencia emocional en el desempeño laboral. *Sapienza organizacional*, *2*(3), 53-68.

Casal, J., & Mateu, E. (2003). Tipos de muestreo. *Rev. Epidem. Med. Prev*, 1(1), 3-7.

Cimatti, B. (2016). Definition, development, assessment of soft skills and their role for the quality of organizations and enterprises. *International Journal for quality research*, *10*(1), 97.

Day, A. L., & Carroll, S. A. (2004). Using an ability-based measure of emotional intelligence to predict individual performance, group performance, and group citizenship behaviours. *Personality and Individual differences*, *36*(6), 1443-1458.

Driver, M. (2007). Meaning and suffering in organizations. *Journal of Organizational Change Management*, 20, 611-632. https://doi.org/10.1108/09534810710779063.

Fajardo, M., Cruz, M. Santa, R. Tegethoff, T., Quijano, Maicol. (2023). Knowledge transfer and superior performance in entrepreneurial SMEs in emerging countries: the mediating role of absorption and learning capabilities, *Small Enterprise Research* 30(2), DOI:10.1080/13215906.2023.2279040

Farh, C., Seo, M., & Tesluk, P. (2012). Emotional intelligence, teamwork effectiveness, and job performance: the moderating role of job context. *The Journal of applied psychology*, 97 4, 890-900. https://doi.org/10.1037/a0027377.

Gardner, H. (2012). The theory of multiple intelligences. In *Early professional development for teachers* (pp. 133-141). David Fulton Publishers.

Gismera, E., Fernández, J. L., Labrador, J., & Gismera, L. (2019). Suffering at work: a challenge for corporate sustainability in the spanish context. *Sustainability*, *11*(15), 4152.

Gu, J., Baer, R., Cavanagh, K., Kuyken, W., & Strauss, C. (2020). Development and psychometric properties of the Sussex-Oxford compassion scales (SOCS). *Assessment*, *27*(1), 3-20.

Herpertz, S. C. (2022). Interpersonal intelligence. In *Intelligence-Theories and Applications* (pp. 147-160). Cham: Springer International Publishing.

Heseltine, M. (1994). Competitiveness: what, why and how? *European Business Journal*, *6*(3), 8.

IMD. (2023). *World Competitiveness Center*. Obtenido de Business Eficency: https://www.imd.org/centers/wcc/world-competitiveness-center/rankings/world-competitiveness-ranking/

Kanov, J. (2020). Why Suffering Matters! *Journal of Management Inquiry*, 30, 85 - 90. https://doi.org/10.1177/1056492620929766.

Kautz, W. H. (2011). Understanding Human Suffering: An Intuitive Approach. *Citeseerx*. https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=e1291ea36c8e6118fa00c302009e109eee55ccb2

Khan, H. (2021). *Leadership, reinvented: How to foster empathy, servitude, diversity, and innovation in the workplace*. Sourcebooks, Inc.

Khraban, T. (2022). Emotional intelligence as a resource of efficiency of armed forces. *Psychological journal* 8(3). https://doi.org/10.31108/1.2022.8.3.5.

Lyons, J. B., & Schneider, T. R. (2005). The influence of emotional intelligence on performance. *Personality and individual differences*, *39*(4), 693-703.

Madaan, R., Bhatia, K. K., & Bhatia, S. (2020, January). Understanding the role of emotional intelligence in usage of social media. In *2020 10th International Conference on Cloud Computing, Data Science & Engineering (Confluence)* (pp. 586-591). IEEE.

Marsh, H. W., Hau, K. T., & Grayson, D. (2005). Goodness of Fit in Structural Equation. Contemporary psychometrics (pp. 275–340). Psychology Press.

Mehralian, G., & Shabaninejad, H. (2014). The importance of competitiveness in new internationalized and competitive environment of pharmaceutical industry. *Iranian journal of pharmaceutical research: IJPR*, *13*(2), 351.

Moss, S. (2016). Fit indices for structural equation modeling. Scientific Research An Academic Publisher. https://www.scirp.org/reference/referencespapers?referenceid=3167402

Nunnally, J.C. and Bernstein, I. (1994) Psychometric Theory, 3rd ed., Vol. 5, McGraw-Hill.

Nurdiani, I., Börstler, J., & Fricker, S. A. (2018). Literature review of flexibility attributes: A flexibility framework for software developing organization. *Journal of software: Evolution and Process*, *30*(9), e1937.

Porter, M. (1990). The Competitive Advantage of Nations. *Harvard Business Review*. https://hbr.org/1990/03/the-competitive-advantage-of-nations

Porter, M. (1996) What is strategy, *Harvard Business Review*, Vol. 74, No. 6, pp.61–78.

Ray, R., & Fellow, D. M. R. (2020). The importance of collecting demographic data. *The Brookings Institute*.

Russell, R.S. and Taylor, B.W. (2008) *Operations Management – Quality and Competitiveness in a Global Environment*, 5th ed., John Wiley and Sons, Inc., London.

Santa, R., Hyland, P., & Ferrer, M. (2014). Technological innovation and operational effectiveness: their role in achieving performance improvements. *Production Planning & Control*, *25*(12), 969-979.

Santa, R., Moros, A., Morante, D., Rodríguez, D., & Scavarda, A. (2023). The impact of emotional intelligence on operational effectiveness: The mediating role of organizational citizenship behavior and leadership. *PloS one*, *18*(8), e0284752.

Santa, R., Rodríguez Victoria, O.E. and Tegethoff, T. (2023), "The role of quality in the hotel sector: the interplay between strategy, innovation and outsourcing to achieve performance", *The TQM Journal*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/TQM-01-2023-0016

Santa, R., Sanz, C.M., Tegethoff, T. and Cayon, E. (2023), "The impact of emotional intelligence, cross-functional teams and interorganizational networks on operational effectiveness", *Journal of Organizational Effectiveness: People and Performance*, Vol. 10 No. 3, pp. 313-329. https://doi.org/10.1108/JOEPP-03-2022-0069

Santa, R.; Morante, D. y Tegethoff, T. (eds.) (2021). Regiones inteligentes: la tecnología, la innovación y la efectividad operativa. Cali: Escuela Militar de Aviación "Marco Fidel Suárez" (EMAVI) y Editorial Universidad Icesi. doi: https://doi.org/10.18046/EUI/ee.6.2021

Tegethoff, T. M., Santa, R., Granobles, D. F. M., & Hoyos, J. C. V. (2019). Does trust have an impact on system and operational effectiveness? The implementation of e-government in Colombia. *Electronic Government, an International Journal*, *15*(3), 241-260.

Tegethoff, T., Santa, R., Cayón, E., & Scavarda, A. (2023). Strategy and additive technologies as the catalyst for outsourcing, process innovation and operational effectiveness. *Plos one*, *18*(2), e0282366.

Tegethoff, T., Santa, R., Schluep, I., Fernando Morante, D., & Cruz, M. L. (2021). The challenges of strategic innovation: achieving operational effectiveness in developing countries. *International Journal of Innovation Management*, *25*(03), 2150031.

Yaşlıoğlu, M., & Yaşlıoğlu, D. T. (2020). How and when to use which fit indices? A practical and critical review of the methodology. *Istanbul Management Journal*, (88), 1-20.