



# Mindfulness and dispositional optimism, using factor analysis, inferential statistics and information technologies

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**Abstract**– The research analyzes the relationship between psychosocial risks and dispositional optimism in workers of a call center in Lima. The chi-square results indicated that a high workload and low remuneration negatively affect optimism, while positive social interaction and good organizational management improve it. The exploratory factor analysis (KMO 0.805) allowed the survey items to be reduced based on the strongest items, to improve decision making to improve optimism. The Mindfulness technique was applied, showing that more sessions increase optimism, with a positive correlation and predictive regression. Sentiment analysis was used with the Python language, applied to qualitative questions, identifying the causes that influence optimism, integrating all the information into a business intelligence platform which favors decision making.

**Keywords:** Psychosocial risks, dispositional optimism, exploratory factor analysis, Sentiment analysis, Mindfulness.

## I. INTRODUCTION

Currently, the demand for personnel in the customer service sector has increased significantly, especially in call centers, as a result of the health, political and economic crisis caused by the pandemic. This situation has led many people to opt for these jobs due to the possibility of working remotely, attractive salaries and other benefits. However, teleoperators face high work pressure, as they are constantly monitored by their supervisors and in continuous communication with clients who transmit a variety of information, both positive and negative.

Work stress, caused by psychosocial risks in the workplace. This can lead to high levels of stress, job dissatisfaction and high staff turnover [1],[2]. According to WHO, psychosocial risks at work, such as excessive workload, limited support from colleagues and inadequate remuneration, pose a risk to workers' mental health and well-being. [3]. Perceived stress is the result of how a person evaluates a stressor, determining whether they consider it threatening or not, and their own coping skills. Optimistic people tend to experience beneficial effects on their life and mental health [4].

## II. REVIEW OF CURRENT LITERATURE

For this study, it was decided to conduct a systematic literature review using the PRISMA approach to ensure objectivity and quality. Prisma facilitates the exhaustive exploration of databases and the systematic organization of relevant literature, following clear inclusion and exclusion criteria [5] [6].

The selection process is divided into four phases [6].

1. Identification: In this phase, all the studies found both in the databases and in other external sources are counted.
2. Screening: At this stage an initial review is carried out, discarding studies that do not seem relevant to the research objectives.
3. Eligibility: Here the studies that meet the established requirements are evaluated in more detail, determining which ones can be included.
4. Inclusion: It is the final stage where the approved studies are selected to be part of the synthesis of results, whether qualitative or quantitative.

## Research Questions

As part of the process of this systematic literature review, research questions were formulated to address existing gaps in knowledge. These questions are detailed in Table 1.

TABLE 1  
RESEARCH QUESTIONS

| Codes | Descriptions   |
|-------|--|
| PI 1  | What are the main psychosocial risks identified in the work environment?   |
| PI 2  | How does dispositional optimism influence employees' quality of work life?   |
| PI 3  | What interventions have been shown to be effective in reducing psychosocial risks and how are these interventions related to dispositional optimism? |

## Eligibility criteria

To carry out this study, the eligibility criteria, both inclusion and exclusion, have been considered. These eligibility requirements criteria can be seen in Table 2.

TABLE 2  
INCLUSION AND EXCLUSION

| Criteria  | Codes | Descriptions   |
|-----------|-------|--|
| Inclusion | CI 1  | Articles related to the topic.                                     |
|           | CI 2  | Articles published between 2018 and 2024.                          |
|           | CI 3  | Articles published in English and Spanish.                         |
|           | CI 4  | Articles related to the area of Social Sciences and Psychology     |
| Exclusion | CE 1  | Articles not related to the topic.                                 |
|           | CE 2  | Unpublished works between 2019 and 2024.                           |
|           | CE 3  | Articles not published in English and Spanish.                     |
|           | CI 4  | Articles not related to the area of Social Sciences and Psychology |

## Information sources

For the collection of articles in this Systematic Literature Review (SLR), it was decided to use electronic databases that are widely recognized and reliable in the academic community.

## Search strategy

- For the search in this systematic review of the literature, it was decided to use a formula that includes the most relevant terms for research on psychosocial risks and dispositional optimism in a call center.

("psychosocial risks" OR "psychosocial hazards" OR "psychosocial stressors" OR "risk factors" OR "workplace stress" OR "occupational stress") AND ("dispositional optimism" OR "trait optimism" OR "positive thinking" OR "optimism disposition" OR "optimistic trait"). Figure 1 is presented below, which is the study selection process according to the 4 phases of the prism method.

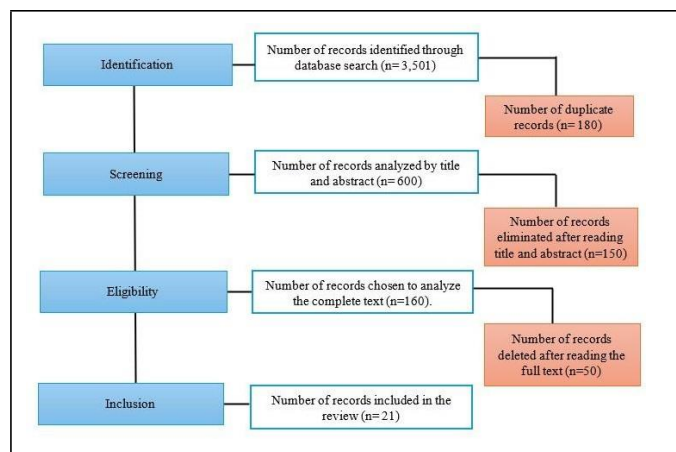


Fig. 1. Selection of articles based on Prisma

## Literature Review Discussions

In this section, the research questions posed will be answered.

### What are the main psychosocial risks identified in the work environment?

In call centers, psychosocial risks such as low control over tasks, high demands, and role conflicts generate stress and exhaustion [7]. Lack of leadership support and an inadequate physical environment affect job satisfaction and mental health [8]. Furthermore, high job tension, imbalance between effort and reward, and job insecurity aggravate these problems, underscoring the need to improve working conditions [9].

How does dispositional optimism influence employee's quality of work life?

Although a high mental load can reduce satisfaction, optimism helps mitigate these effects [10]. Furthermore, optimism helps manage emotions and problems related to injustice, reducing negative emotions and sleep problems [11]. Highlight that several investigations have shown that dispositional optimism can moderate the impact of psychological stress, depression, and general well-being, even in the work environment [12]. Higher levels of optimism and lower levels of pessimism have been shown to contribute to improved mental health and psychological well-being, while a lack of optimism can increase depressive symptoms. A lack or low level of optimism can impact the way people view life, which could result in a decreased meaning in life and increased symptoms of depression. In this sense, optimism could play a moderating role in the relationship between meaning in life and stress caused by the coronavirus, affecting depressive symptoms in young adults [12].

A five-year longitudinal study revealed that people with low levels of optimism (i.e., greater pessimism) were more likely to experience anxiety and depression, as seen in breast cancer survivors. [13].

What interventions have been shown to be effective in reducing psychosocial risks and how are these interventions related to dispositional optimism?

According to other authors [14], mindfulness is considered a crucial factor in improving health and well-being in the workplace, addressing it from three perspectives. First, as a personality trait, mindfulness can be valuable in personnel selection processes, especially for positions that involve high levels of stress. The studies reviewed highlight the effectiveness of mindfulness-based interventions in various work and academic contexts. Research by other authors show that Mindfulness-Based Cognitive Therapy for Life (MBCT-L) reduces stress and improves well-being in healthcare workers, being applicable to other work environments by teaching skills such as mindfulness and self-compassion [15]. Complementarily, other authors [16], show that optimism, although present among health workers during the COVID-19 pandemic, helps moderate stress and emotional exhaustion. They also [17], demonstrate that mindfulness reduces depression and anxiety in university students by facilitating the observation and description of internal experiences. Other authors point out [18], that levels of work-related stress have increased alarmingly due to the demands, demands and pressures of the work environment.

Research by other authors [19], reveals that women tend to solve problems directly, while men tend to express emotions. Understanding these differences can help design personalized interventions to improve optimism. Because of this, other research [20], highlight that assertive communication is key to teamwork and a less stressful environment, reinforcing dispositional optimism. In addition, demonstrate [21] that optimism reduces the psychological impact of the pandemic, relieving stress and future worry. Authors add [22], that optimism acts as a buffer against daily hassles, with the perception of control influencing optimism

during global emergencies. Together, these studies highlight that mindfulness and optimism are crucial to improving mental health and well-being in different work and educational environments.

In a study [23] describes the most common techniques used to practice mindfulness. One of the most notable is the Mindfulness-Based Stress Reduction (MBSR) Program, designed by Jon Kabat-Zinn at the Mindfulness Center at the University of Massachusetts. This program, a pioneer in the treatment of stress and chronic pain through mindfulness, lasts 8 weeks, where participants receive intensive training in meditation and yoga. Additionally, they are provided with information about stress and taught practical skills to deal with it effectively.

They also conducted a study [24] to evaluate a mindfulness program based on integrated brief practices (M-PBI) in order to reduce work stress. Employees with high levels of stress ( $PSS-14 > 22$ ) participated, who were evaluated before and after an 8-week program, as well as at a 20-week follow-up. Participants completed several questionnaires, including the Five Facet Mindfulness Scale (FFMQ) and the Self-Compassion Scale (SCS). A total of 40 employees participated, distributed into intervention (21) and control (19) groups, with no initial differences. Results showed that the intervention group experienced a significant reduction in stress and an increase in mindfulness, as well as improvements in decentering, self-compassion, and burnout (MBI-GS) compared to the control group. Concluding that, the 8-week M-PBI program proved to be effective in reducing stress and improving well-being in the work environment.

## Method

**Design:** The design will be experimental, with a quantitative approach of correlational scope [25], since the aim is to analyze the relationship between psychosocial risks and dispositional optimism in the workers of a call center in Metropolitan Lima.

## Participants:

The sample consists of 80 teleoperators from a call center in Metropolitan Lima, selected through non-probabilistic convenience sampling. The inclusion criteria are being between 18 and 45 years old, working in person and being in the company for more than 3 months. Those who are on vacation, on medical leave, absent for prolonged periods or with less than 3 months in the company are excluded.

## Instruments

Psychosocial Factors Questionnaire at Work (2004). It evaluates occupational risks with 50 items on a four-option Likert scale (0 = never, 4 = always). The version adapted in Peru by Pando, Varillas, Aranda y Elizalde [26], which showed concurrent validity and reliability ( $\alpha = 0.9$ ), with a factorial structure of 7 factors that explains 58.9% of the variance. Revised Life Orientation Scale (LOT – R) (1994). It

measures optimism and pessimism with 10 items on a Likert scale (1 = agree, 5 = disagree). Includes positive, negative and distracting items.

The Spanish version of Morón and Quispe [27], was used, with a confirmatory factor analysis that showed good validity and fit ( $\chi^2/df=1.29$ ; CFI=1.000; TLI=1.000; RMSEA=.024; SRMR=.013), and omega coefficients between .70 and .90.

## Procedure:

First, we will request permission from the head of the area to carry out the investigation. We will then contact administrative staff with a cover letter to obtain their acceptance and distribute the form to workers. Finally, we will analyze the data with SPSS software to obtain accurate and meaningful results.

For quantitative purposes, the variables measured on a Likert scale from 0 to 4 were renamed as follows: in the "Working Conditions" dimension they were labeled as noise1, noise2, up to noise9; in the "Workload" dimension as load1, load2, up to load5; In the "Job Requirements" dimension, the labels exig1 to exig10 were used; in the dimension "Job role and career development" they were called pap1d1 to pap1d6; in the dimension "Work and social interaction" as intl1, intl2, up to intl9; in the "Remuneration" dimension they were identified as rem1, rem2 and rem3. Finally, in the "Optimism" variable, they were labeled opt1 through opt10.

## III. RESULTS

The following table 3 Shows the reliability analysis of the psychosocial risks instrument.

TABLE 3  
RELIABILITY ANALYSIS OF PSYCHOSOCIAL RISKS

| Cronbach's Alpha | Elements Number |
|------------------|-----------------|
| .962             | 46              |

The reliability analysis shows a Cronbach's Alpha of .962, indicating excellent internal consistency of the instrument. This value reflects a high correlation between the items, confirming that they coherently measure the same construct.

The results of the reliability analysis of the instrument used to measure the dispositional optimism variable are presented below.

TABLE 4  
RELIABILITY ANALYSIS OF PSYCHOSOCIAL RISKS TO MEASURE THE DISPOSITIONAL OPTIMISM

| Reliability statistics |                    |
|------------------------|--------------------|
| Cronbach's alpha       | Number of Elements |
| .903                   | 10                 |

Table 4 shows a Cronbach's Alpha of .903, indicating excellent reliability and high internal consistency between the items, which coherently measure the construct of dispositional optimism.

Table 5 is shown below, where the calculation of the normality test is presented.

TABLE 5  
OPTIMISM VS PSYCHOSOCIAL RISKS NORMALITY TEST

| Kolmogórov-Smirnov normality test |             |    |      |
|-----------------------------------|-------------|----|------|
|                                   | Estadístico | gl | p    |
| Optimism                          | .141        | 80 | .000 |
| Psychosocial Risks                | .153        | 80 | .000 |

Table 5 shows a value of  $p = 0.00$  in the normality test, indicating that the data do not follow a normal distribution ( $p < 0.05$ ). Therefore, non-parametric statistical methods will be used. Below is the result of the chi square analysis between psychosocial risks and dispositional optimism.

Table 6 shows that the chi-square test reveals a highly significant association between the categorical variables Psychosocial Risks and Optimism.

TABLE 6  
CHI SQUARE TEST PSYCHOSOCIAL RISKS AND OPTIMISM

|   | Value               | gl | Asymptotic significance |
|---|---------------------|----|-------------------------|
| Pearson chi-square  | 62,351 <sup>a</sup> | 8  | .000                    |
| Likelihood ratio  | 50,898              | 8  | .000                    |
| Linear-by-linear association  | 5,747               | 1  | .017                    |
| N of valid cases  | 80                  |    |                         |
| a. 12 boxes (80,0%)<br>b. have expected a count of less than 5. The minimum expected count is,10. |                     |    |                         |

Which has an asymptotic significance of 0.000. This indicates an important relationship between the variables in the context of the study.

The following table 7 shows the results of the chi-square test between workload and dispositional optimism.

TABLE 7  
CHI-SQUARE BETWEEN WORKLOAD AND DISPOSITIONAL OPTIMISM

| Chi-square tests             |                     |    |                         |
|------------------------------|---------------------|----|-------------------------|
|                              | Valor               | gl | Asymptotic significance |
| Pearson's Chi-square         | 35,352 <sup>a</sup> | 12 | .000                    |
| Likelihood ratio             | 30,233              | 12 | .003                    |
| Linear by linear association | .842                | 1  | .359                    |
| N of valid cases             | 80                  |    |                         |

Table 7 shows a chi-square value of 35.352 with an asymptotic significance of 0.000, indicating a significant association between perceived workload and dispositional optimism. This suggests that a higher workload tends to reduce overall optimism.

Next, Table 8 presents the results of the chi-square test between performance pay and dispositional optimism.

TABLE 8  
CHI-SQUARE BETWEEN PERFORMANCE COMPENSATION AND DISPOSITIONAL OPTIMISM

| Chi-square tests             |                     |    |                         |
|------------------------------|---------------------|----|-------------------------|
|                              | Value               | gl | Asymptotic significance |
| Pearson chi-square           | 54,180 <sup>a</sup> | 12 | .000                    |
| Likelihood ratio             | 34,129              | 12 | .001                    |
| Linear-by-linear association | 2,934               | 1  | .087                    |
| N of valid cases             | 80                  |    |                         |

Table 8 shows a Pearson chi-square value of 0.000, indicating a significant association between 'Performance Reward' and 'Dispositional Optimism'. This suggests that employees' perceptions of their compensation are related to their level of optimism; Financial dissatisfaction can lead to less optimism about work.

Table 9 is presented below, showing the results of the chi-square test between social interaction and organizational aspects and dispositional optimism.

TABLE 9  
CHI-SQUARE BETWEEN SOCIAL INTERACTION AND ORGANIZATIONAL ASPECTS AND DISPOSITIONAL OPTIMISM

|                              | Value               | gl | Asymptotic significance |
|------------------------------|---------------------|----|-------------------------|
| Pearson chi-square           | 78,980 <sup>a</sup> | 16 | .000                    |
| Likelihood ratio             | 61,879              | 16 | .000                    |
| Linear-by-linear association | 2,374               | 1  | .123                    |
| N of valid cases             | 80                  |    |                         |

The chi-square value of 78.980 with a significance of 0.000 indicates a significant relationship between the perception of social interaction and organizational aspects at work with dispositional optimism, suggesting that problems in these areas affect employees' optimism regarding his work.

Although all the items of the instrument are important, for decision making the most relevant ones are mainly being considered according to the factor analysis, as seen in Table 10.

TABLA 10  
APPLYING FACTOR ANALYSIS TO THE INSTRUMENT

| KMO and Bartlett's test                         |                    |          |
|---|--------------------|----------|
| Kaiser-Meyer-Olkin measure of sampling adequacy |                    | .805     |
| Bartlett's test of sphericity                   | Approx. Chi-square | 2248,860 |
|   | gl                 | 666      |
|   | Sig.               | .000     |

The KMO value of 0.805 suggests that it is possible to reduce the survey by using a value of 0.6 to select the highest coefficients, which will allow management to make decisions to improve optimism in staff. The resulting table is shown below.

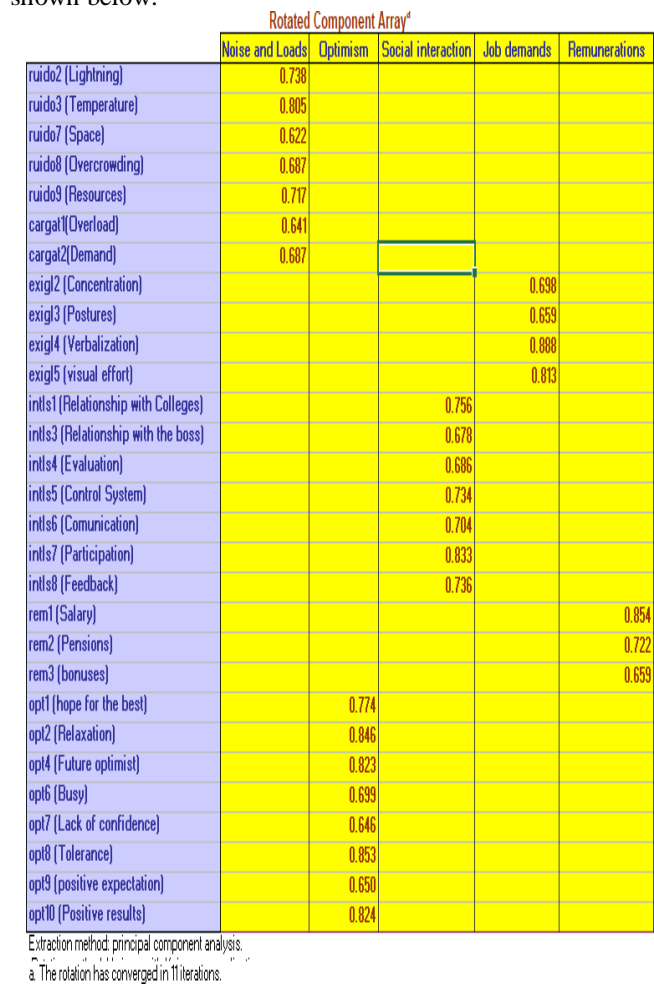


Fig. 2, Rotated Component Array

According to the items that presented the highest coefficients, they have been integrated into a BI platform, these variables would be the most important to take into account in decision making, as shown in Figure 3.

Decision-making effectiveness has been closely linked to how well managers adapt their cognitive style to task requirements [28]. That is why, in order to have the indicators for decision making, a BI platform has been developed, with the strongest indicators after applying factor analysis and sentiment analysis. The following shows the dashboard, with the most representative dimensions, after applying exploratory factor analysis.

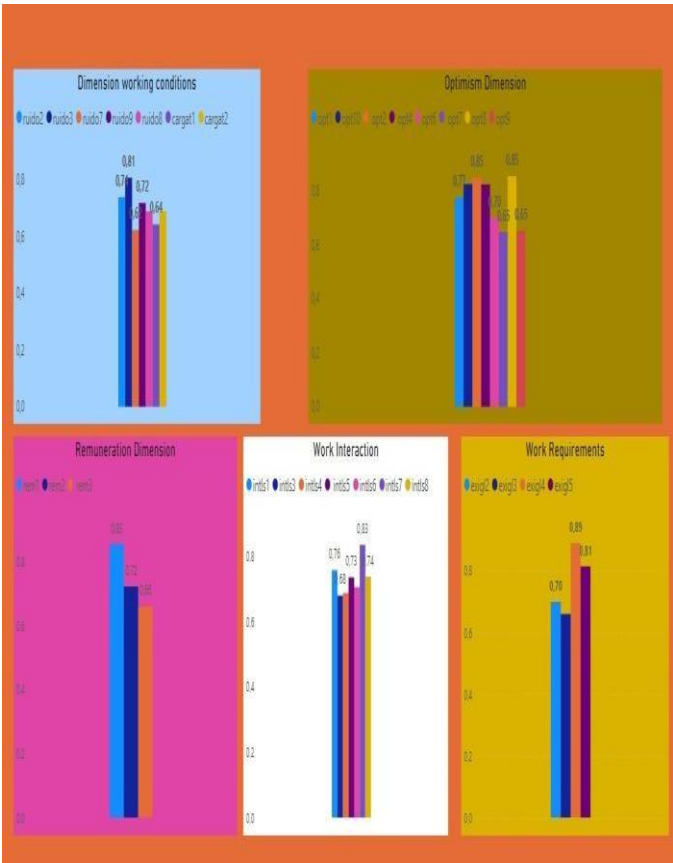


Fig. 3, Dimension of psychosocial risks and optimism in Dashboard Power BI

The following figure 4, shows optimism post and pre after to apply mindfulness.

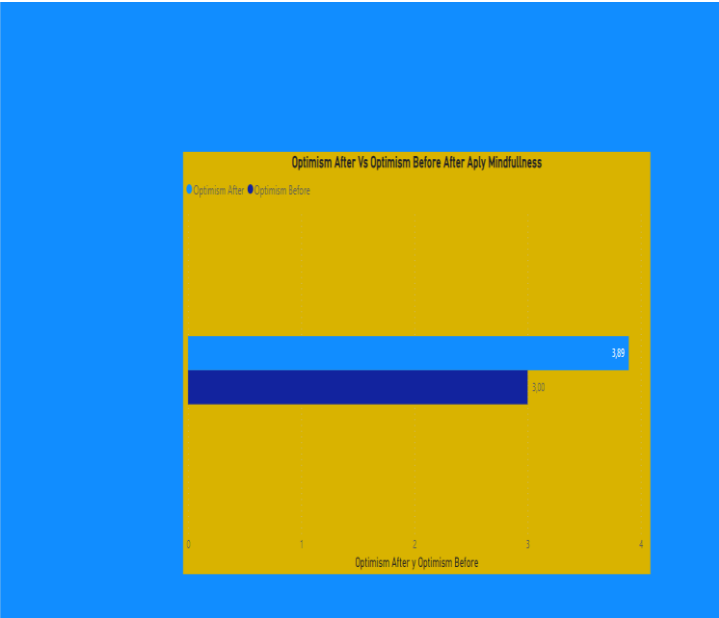


Fig. 4, Optimism -Post and Optimism -pre after Mindfulness



The following figure 5, shows the dataset with 32 persons with which the mindfulness technique was experimented.

| Optim_Pre | Mindfulness | Optim_post |
|-----------|-------------|------------|
| 3         | 4           | 5          |
| 3         | 3           | 4          |
| 2         | 5           | 5          |
| 2         | 2           | 3          |
| 2         | 4           | 4          |
| 2         | 3           | 3          |
| 3         | 5           | 5          |
| 2         | 2           | 2          |
| 3         | 4           | 4          |
| 2         | 3           | 3          |
| 2         | 5           | 5          |
| 2         | 2           | 3          |
| 2         | 4           | 4          |
| 2         | 3           | 4          |
| 3         | 5           | 5          |
| 2         | 2           | 2          |
| 2         | 4           | 4          |
| 3         | 3           | 4          |
| 4         | 5           | 5          |
| 2         | 2           | 2          |
| 3         | 4           | 4          |
| 3         | 3           | 3          |
| 4         | 5           | 5          |
| 2         | 2           | 3          |
| 2         | 4           | 4          |
| 3         | 3           | 4          |
| 3         | 5           | 5          |
| 2         | 2           | 2          |

Fig. 5, Mindfulness sessions and their relationship with Optimism

To improve optimism, 32 workers from the call center under study were used, using a control group and mindfulness techniques adapted to the work environment. Table 11 shows the normality test of the Dataset used.

In the study, five mindfulness sessions were implemented to improve optimism and reduce psychosocial risks in a call center. Techniques included conscious breathing, performed in two sessions, which helped participants focus on the present and reduce stress, promoting a more positive mindset. Body scanning, performed in one session, aims to enable participants to release accumulated physical tensions and strengthen the mind-body connection, contributing to an overall sense of well-being and optimism. Through this practice, participants were able to reduce the emotional burden associated with stress which facilitated a shift to a more positive outlook. Guided meditation, in another session, trained workers to observe their thoughts and emotions without judgment, improving their self-control and mental clarity, which increased their optimism. Finally, sensory scanning, performed in one session, allows workers to focus on their senses (sight, hearing, smell, taste, and touch), cultivating full awareness of the environment and fostering a sense of gratitude and well-being. By engaging the senses, participants were able to reconnect with the present and observe positive aspects of their surroundings.

The results showed that those who participated in all five sessions experienced a significant improvement in their optimism, suggesting that the continued practice of mindfulness contributes to emotional well-being and a more positive view of the work environment.

TABLE 11  
SHAPIRO-WILK NORMALITY TEST

| Shapiro-Wilk normality test |           |    |      |
|-----------------------------|-----------|----|------|
|                             | Statistic | df | Sig. |
| Optimism pre                | .352      | 32 | .000 |
| Optimism post               | .211      | 32 | .001 |

Since the data do not follow a normal distribution, the Wilcoxon test for related samples is used, as detailed in table 12.

Below are the results of the Wilcoxon test on optimism in workers.

TABLE 12  
WILCOXON TEST PRE AND POST TEST

| Test statistics                   |                     |
|-----------------------------------|---------------------|
|                                   | Optimism pre - post |
| Z                                 | -.4566 <sup>b</sup> |
| Asymptotic sign. (bilateral)      | .000                |
| a. Wilcoxon signed-rank test      |                     |
| b. It is based on negative ranks. |                     |

Given that the asymptotic significance is 0.000, which is less than 0.05, it is confirmed that the mindfulness technique applied effectively contributes to increasing optimism.

Also in Figure 5, the dataset of the 32 workers is presented, which shows the relationship between the practice of mindfulness and the level of optimism.

In the study, they completed the five sessions of mindfulness practice showing a notable increase in their level of optimism. This positive effect was significantly greater compared to participants who only completed two sessions.

Mindfulness strategies, including breathing and mindfulness techniques, were provided in a call center with the aim of reducing stress and promoting optimism among workers. The assessment showed a significant improvement in the level of optimism and a reduction in stress, as illustrated in Figure 7.

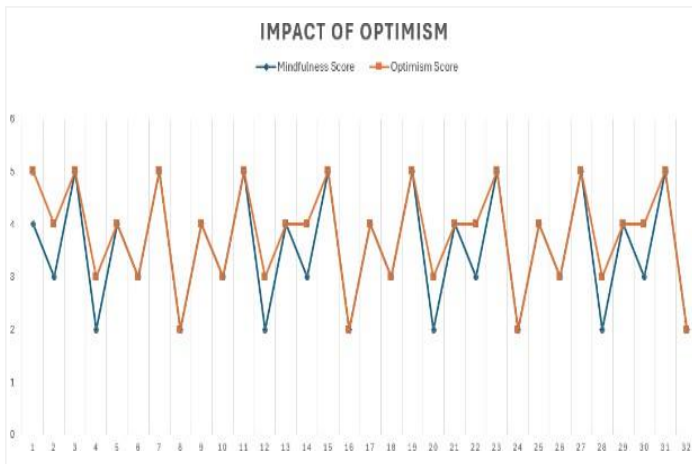


Fig. 6. Impact of mindfulness

Observing a strong positive correlation Figure 6 based on the Mindfulness sessions with optimism being 0.6 (Spearman), for which a linear regression of optimism-post was also carried out based on the Mindfulness sessions which we see in Figure 8.

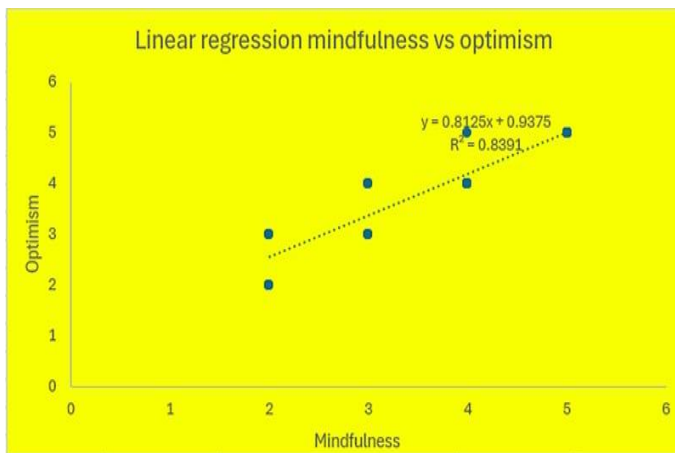


Fig. 7. Linear trend

For this investigation, by observing the resulting graph, it can be concluded that the mindfulness sessions allow us to predict the level of optimism as the coefficient of determination ( $R^2$ ) is 0.8391.

Below is the code made with the Python Programming Language to carry out the sentiment analysis on the opinions of workers in the call center sector. This study evaluated the underlying emotions in the comments collected, thus allowing the identification of patterns of satisfaction and discontent. By classifying each text as positive, negative or neutral, we seek to understand the impact of working conditions on the emotional well-being of employees. Determining the sentiment of a user, expressed in a textual

message, can be understood as classifying or categorising the message according to the characteristics of the message [29].

### Analysis of Feelings in the Context of Psychosocial Risks in Call Centers (Python Program)

```
import nltk
from nltk.sentiment import SentimentIntensityAnalyzer
from docx import Document
```

```
# Download the lexicon of feelings VADER en NLTK.
nltk.download('vader_lexicon')
```

```
# Initialize the sentiment analyzer
sia = SentimentIntensityAnalyzer()
```

```
# List of texts to analyze (Workers' perceptions)
```

```
texts = [
    "Working conditions Sometimes there is noise that
    disturbs my work activities.",
    "The workload is excessive.",
    "The assigned tasks are routine and boring.",
    "I have somewhat complex activities.",
    "There are activities that I do that I am not happy with.",
    "I don't have a good relationship with my coworkers",
    "I am dissatisfied with the remuneration I receive for my
    work.",
    "In difficult times I usually expect the best"
]
```

```
# Create a Word document for the results
```

```
doc = Document()
doc.add_heading('Sentiment Analysis', 0)
```

```
# Feature to rank sentiment and add scores
```

```
def classify_sentiments(text):
    score = sia.polarity_scores(text)
    if score['compound'] >= 0.05:
        sentiment = 'Positive'
    elif score['compound'] <= -0.05:
        sentiment = 'Negative'
    else:
        sentiment = 'Neutral'
    #Return both the feeling and the full score return
    sentiment, score
```

```
# Add results to the Word document
```

```
for text in texts:
    sentiment, score = classify_sentiments(text)
    doc.add_paragraph(f"Text: {text}")
    doc.add_paragraph(f"Sentiment: {sentiment}")
    doc.add_paragraph(f"Scores:
    Compound={score['compound']}")
    doc.add_paragraph('-' * 40)
```

```
# Save Word file
doc.save("D:/Python ultimo/anasentra2.docx")
print("Sentiment analysis with scores has been saved to a
Word file.")
```

**When opening the file, is shown:**

### Sentiment Analysis

Text: Working conditions Sometimes there is noise that disturbs my work activities.

Sentiment: Negative

Scores: Compound=-0.4404

Text: The workload is excessive.

Sentiment: Neutral

Scores: Compound=0.0

Text: The assigned tasks are routine and boring.

Sentiment: Negative

Scores: Compound=-0.3182

Text: I have somewhat complex activities.

Sentiment: Neutral

Scores: Compound=0.0

Text: There are activities that I do that I am not happy with.

Sentiment: Negative

Scores: Compound=-0.4585

Text: I do not have a good relationship with my coworkers.

Sentiment: Negative

Scores: Compound=-0.3412

Text: I am dissatisfied with the remuneration I receive for my work.

Sentiment: Negative

Scores: Compound=-0.3818

Text: In difficult times I usually expect the best

Sentiment: Positive

Scores: Compound=0.4019

This sentiment analysis through natural language processing techniques in Python, has been carried out with the purpose of understanding the perceptions of the respondents about their work environment in the call center sector.

Research [30] points out that both work motivation and workload significantly affect job satisfaction. However, it is crucial to understand that although job satisfaction does not act as a mediator in the relationship between motivation and performance, this suggests that other factors may be at play. In this context, a lack of motivation could lead to a negative

perception of workload, contributing to a cycle of dissatisfaction that affects mental health and productivity. From a psychological perspective, this highlights the need for interventions that foster intrinsic employee motivation, such as setting clear goals and recognizing individual effort.

On the other hand, another research [31] highlights the negative correlation between social support and mental load. 57.6% of workers report low social support, which can increase stress and feelings of isolation. This is especially relevant in the context of call centers, where the pressure and demands can be intense. The perception of low social support not only impacts job satisfaction, but can also affect employees' physical and mental health. Interpersonal relationships, therefore, are essential to mitigate emotional exhaustion and promote a healthier work environment.

It is encouraging to note that, despite the predominance of negative feelings, a positive comment has also been identified: "In difficult times, I usually hope for the best." This indication of resilience underlines the importance of cultivating an optimistic mindset among workers, even in adverse situations.

Therefore, the implementation of Mindfulness techniques is presented as a valuable intervention. These practices can equip workers with effective tools to manage stress and foster a more positive and collaborative work environment. By prioritizing the emotional and psychological well-being of employees, organizations not only improve the quality of life at work, but also promote a healthier and more sustainable organizational culture.

In conclusion, sentiment analysis offers a clear view of a landscape that requires urgent attention. It is essential to implement strategies that address psychosocial risks, optimize working conditions and strengthen emotional well-being. The integration of Mindfulness practices and other interventions will be crucial to cultivating a healthier and more resilient work environment, thus contributing to reducing staff turnover and improving the quality of life at work.

## IV. DISCUSSION

This study confirmed that a high workload and inadequate remuneration negatively impact the dispositional optimism of call center workers in Metropolitan Lima. These results coincide with another author [32], who points out that the stress associated with overwork can erode the mental health and well-being of employees. Furthermore, dissatisfaction related to insufficient remuneration, as evidence in another study [33], reinforces the idea that fair compensation is essential for workplace well-being.

On the other hand, social interaction and organizational aspects also emerged as significant factors that influence dispositional optimism. This finding is supported by another author, [34] where they argue that, lack of



participation in decision-making and excessive supervision creates a toxic work environment, which, in turn, reduces employee well-being. These studies highlight the need to manage not only workload, but also to cultivate an organizational environment that promotes the active participation of employees in decision-making processes.

In the context of mindfulness intervention, one study [35] provided a practical framework for addressing stress in the workplace. By recruiting 89 participants and assigning them to an online mindfulness intervention group or a control group, it is shown that mindfulness can be effective in reducing perceived stress and increasing resilience and vigor. These results are consistent with the approach taken in our study, which suggests that the implementation of mindfulness programs could serve as a valuable tool to improve the well-being of call center employees.

Furthermore, the findings of other authors [36], reinforce this perspective, as they show significant improvements in mindfulness and self-compassion among teachers who participate in a mindfulness-based stress reduction program. In the long term, advances in these areas suggest that mindfulness practice not only has immediate benefits, but can also contribute to sustainable personal and professional growth. These findings highlight the importance of appropriately managing workload and remuneration, as well as considering the implementation of mindfulness programs as effective strategies to improve dispositional optimism and general well-being in the work environment. Future research could explore the feasibility of integrating these practices across different sectors, thereby expanding our understanding of the impact of well-being on productivity and job satisfaction.

This research highlights the importance of promoting social interaction in the work environment as a key factor in maintaining optimism among employees. Positive social interaction and good organizational support improve emotional well-being and job satisfaction in the call center, as demonstrated by the strong association found between these variables. Workload also influences optimism; those with a higher burden tend to have a less positive view. Furthermore, the perception of compensation is linked to optimism, making it crucial for organizations to ensure fair compensation systems to maintain a positive attitude among workers.

The present research not only makes a study of psychosocial risks and the influence on optimism as well as the experience of applying Mindfulness to increase the degree of optimism, validated with statistical inferential tests, but also contributes to implementing the strongest indicators of the dimensions of optimism and psychosocial risks based on exploratory factor analysis in a business intelligence solution developed in Power BI for decision making, as well as integrating sentiment analysis into this platform using python from the survey (workers' comments), therefore, a gap is covered in the literature review, given that this multidisciplinary research integrates psychology and information technologies, to solve

the problem of optimism in the study company; It should be noted that the way this research is implemented is portable for any type of company.

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