

Occupational safety policy and its influence on the prevention of occupational accidents in a construction company in Huaral, 2025

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Abstract— *The objective of this research was to determine the influence of the occupational safety policy (and its dimensions: identification of occupational risks, evaluation of occupational risks, implementation of measures for the prevention of occupational hazards, implementation of measures for the prevention of occupational hazards and assurance of the preventive system) in a construction company in Huaral, 2025. Research with quantitative approach, applied type, with explanatory and descriptive level, non-experimental design and cross-sectional. The population was finite, made up of 50 workers of the company studied. The sample was a census sample, which meant that 100% of them were included. The technique applied was the virtual survey. The instrument used to measure the first variable consisted of 12 items, and the one used to measure the second variable had 15 items, and demographic data were also collected. Validity was obtained through the judgment of 3 experts (Aiken's $V. = 1.00$). Reliability was high for both variables ($\alpha = 0.779$ and 0.906). Results such as demographic information, normality tests, measurement of the variables and hypothesis tests were obtained. It was concluded that to determine the influence of the work safety policy in a construction company in Huaral, 2025. (sig. = 0.000; $r^2 = 0.997$).*

Keywords—Occupational safety policy, prevention of occupational accidents, construction companies.

I. INTRODUCTION

As a problematic reality that gives rise to the present research, it is fundamental to emphasize that occupational safety policy is influenced by several key factors. Among them, the lack of a solid State institution stands out, which prevents an adequate supervision and management of the norms that are a fundamental part of occupational safety and health (OSH). Thus, the deficient management by many companies is in the implementation of efficient preventive systems, since unfavorable work environments increase the risk for workers; therefore, sectors such as mining, construction and manufacturing show an increase in occupational accidents, which shows the urgent need to improve the circumstances in which the labor environment is reinforcing the regulations in force [1].

Likewise, between the years 2020 the 4-day working day has gained relevance in Spain, especially after the success of cases of some companies such as Software Del Sol, Telefónica and Desigual that have implemented this working day with positive results. This is why the reduction of the work week has been more successful as it includes higher productivity, better family reconciliation and a reduction of stress [2]. On

the other hand, in Peru a digital solution was identified that facilitates the reporting of prevention that can be adapted against risks associated with occupational health and safety in the workplace; in the same way, Laus indicates that it has been a success, appearing on the Forbes list of the 100 most successful ventures in Peru, with important clients and expansion plans to Chile and Mexico for which it emphasizes the tool that digitizes, optimizes the reporting of incidents, saving time and improving traceability [3].

In the province of Huaral, a construction company presents some problems related to the commitment of the organization, due to which a possible alternative solution has been proposed would be the use of the occupational safety policy oriented to the prevention of accidents, especially aimed at workers who are working in this sector, which could influence the organizational commitment in the construction company in Huaral, in the year 2024.

These problems have been recurring in recent years, generating an unsafe work environment due to the constant lack of safety training, which is mostly the responsibility of the company itself. This situation is reflected in a tangible way in the increase in the percentage of accidents that tend to be reported by the company, but there is no strict follow-up or the corresponding EPPS. This increase is attributed to the lack of good advice, which affects the progress of the workers, although it is very helpful to follow the relevant protocols. This not only affects the workers, but also generates a direct and measurable impact on the operational and financial performance of the organization due to the lack of commitment to the prevention of occupational accidents through safety, which must be guaranteed on an ongoing basis.

The present study, entitled “Occupational safety policy and its influence on the prevention of occupational accidents in a construction company in Huaral, in the year 2025”, is articulated with the guidelines of Sustainable Development Goal number 8, aimed at ensuring fair working conditions. This goal promotes safe, sustainable and equitable working environments, with the purpose of ensuring decent conditions for workers to promote stable economic growth that is inclusive and sustainable over time.

For Coelho [4], the problem statement is a key section in a thesis or research project, where the main question to be investigated is exposed, where the starting point is in the methodological procedure, defining and structuring the problem that lacks an answer in existing scientific research.

To formulate it, a sequence is followed that includes: identifying the problem, contextualizing it with previous studies, delimiting its specific aspects, justifying its relevance, and finally, describing or formulating it in interrogative or declarative terms.

In this sense, the general problem of the research was: how does the occupational safety policy influence the prevention of occupational accidents in a construction company in Huaral, 2025?

And as for the specific problems were:

1. How does the occupational safety policy influence the identification of occupational hazards in a construction company in Huaral, 2025?
2. How does the occupational safety policy influence the evaluation of occupational hazards in a construction company in Huaral, 2025?
3. How does the occupational safety policy influence the implementation of measures for the prevention of occupational hazards in a construction company in Huaral, 2025?
4. How does the occupational safety policy influence the implementation of measures for the prevention of occupational hazards in a construction company in Huaral, 2025?
5. How does the occupational safety policy influence the assurance of the preventive system in a construction company in Huaral, 2025?

Additionally, the general objective of the research was: to determine the influence of the occupational safety policy on the prevention of occupational accidents in a construction company in Huaral, 2025.

And as for the specific objectives, these were:

1. Determine the influence of the occupational safety policy in the identification of occupational hazards in a construction company in Huaral, 2025.
2. Determine the influence of the occupational safety policy in the evaluation of occupational hazards in a construction company in Huaral, 2025.
3. Determine the influence of the occupational safety policy in the implementation of measures for the prevention of occupational antecedents in a construction company in Huaral, 2025.
4. Determine the influence of the occupational safety policy on the implementation of measures for the prevention of occupational hazards in a construction company in Huaral, 2025.
5. Determine the influence of the occupational safety policy on the assurance of the preventive system in a construction company in Huaral, 2025.

To support the approach of this research, relevant previous works that address the relationship between occupational safety policies and accident prevention were reviewed. These antecedents are detailed below:

In Mexico, Reyes and Salgado [5], stated that in the research work that was developed based on a quantitative, descriptive and cross-sectional approach. Among the 117 respondents, 6.8% experienced work-related accidents, while 93.2% did not. Thus, employees showed average satisfaction with regard to factors such as recognition and growth within the company. 80.3% reported a high level of job achievement and responsibility, although one third expressed dissatisfaction due to limited progress within the organization. Therefore, it is concluded that, despite the good levels of achievement and responsibility among employees, there is a notable dissatisfaction with the opportunities for growth that arise within the company, which could affect their motivation and commitment in the long term.

In Colombia, Bentacourt and Velasquez [6], presented quantitative research on the prevention of occupational accidents with measures for the implementation of safety policies in the San Marcos meat and sausages company, identifying hazards and risks through surveys applied to employees in the production area during working hours that are performed daily. A risk matrix was created, which revealed that the greatest risk is the biomechanical hazard, related to inadequate posture (34%), repetitive movements (33%) and handling loads (20%). Other relevant risks include noise (31%), extreme temperatures (19%) and chemical risks. Therefore, it was concluded that the organization should start with the realization of the safety management system that includes several processes for occupational health, which will improve work situations and reduce the risks that are presented and identified in the productive process.

In Peru, according to Ewes et al. [7], this article examines the position of OSH during the year 2022, focusing on the link with occupational risk prevention in the organization. Even so, it was conducted through a descriptive quantitative approach and an exhaustive bibliographic verification that gathers relevant information on the subject. In any case, the study supports the dissemination of laws and regulations on OSH; therefore, studies that evaluate occupational risks or accidents, emotional factors and culture that are present in the safety of various sectors such as industry, mining, construction and services that occupy each corresponding position are highlighted. In this way, it is concluded that it is fundamental to relate a determined alteration of these incidents and ailments, as well as to implement affective preventive measures. In addition, the magnitude of the relevance of linking OSH with the work environment is emphasized, since it is reflected in the quality of life of workers, who may be constantly exposed to risks due to the nature of their work.

In Junín (Peru), Llerena [8] research focused on the quantitative approach on how this system influences the

decrease of accidents that can be procreated in different areas, but specifically in maintenance, taking as reference the years 2019, 2020 and 2021; for which the hypothesis stated that the SGSST would have a positive impact on the prevention of accidents. Using the scientific method and a descriptive design, the area's collaborators were evaluated, and the results showed a decrease from 0.18 in 2019 to 0.00 in 2021, which indicates a 100% reduction. Likewise, it is concluded that Minera Chinalco has had a highly positive impact, managing to completely prevent occupational accidents, which reinforces the importance of these systems to support the safety of workers.

In Cajamarca (Peru), Salazar [9] research was not experimental, as no variables were manipulated, and focused on establishing the link between the critical risk management system and preventable risk prevention. On the one hand, the sample integrated 10 field supervisors, who provided key information and participated in technical visits. From the data obtained, 10 forms were developed with guidelines for use in preventing fatal accidents in mining projects. As a result, a proposal was presented for the critical risk management system that can be implemented, so it will reduce accidents in mining. Therefore, it is concluded that the project under implementation of a critical risk management system has a significant impact on the prevention of accidents with occupational safety policy measures in mining projects whereby the proposal presented in this study will contribute to reducing accidents, especially those of a fatal nature.

The proposed risk-based management model provides a comprehensive and organized approach to manage the safety to be perpetuated and the good occupational health condition to be discerned by focusing on planning, organizing, implementing and monitoring risks, companies not only ensure compliance with safety regulations, but also manage to create a safer working environment that are highly efficient for the health of employees, which in turn contributes to improve the productivity they constantly generate through the general welfare at work; the first figure is shown below:



Fig. 1 Risk-based management model

The process of occupational health and safety management comprises four fundamental stages of the risk-based management model, which are as follows:

Planning: the prevention objectives are defined in which those responsible for meeting them are assigned and the necessary resources that correspond to this model are determined.

Organization: it establishes the strategy that the company will follow implementing preventive measures that are achieved by distributing responsibilities equally among the different areas that are developing work procedures that consist of the risks and issues that may arise. That is why, in this same stage, a Prevention Manual is also designed and strategies are created to manage the corresponding documentation.

Control: the effectiveness of the system is verified through inspections, audits and continuous controls in the areas that concern the work centers, in order to guarantee the constant improvement of the work environment.

Execution: consists of implementing what has been planned and organized, ensuring that each measure is carried out as planned.

In relation to the second variable, Falagán et al [10], states that the prevention of accidents at work is established in how preventive actions should be planned in order to prevent in the company, based on a preliminary analysis of accidents, incidents or risks that could compromise safety in their workplaces in which they could risk the health of workers. From this assessment, risks become a key tool that allows employers to comply with the main objective of the law, which is to eliminate, reduce or manage the risks that could endanger their work environment. For this reason, it is essential to consider the essential components of any prevention system, which include the identification of the hazards inherent to each position, the corresponding evaluation, the implementation of corrective measures, their effective execution and continuous monitoring to ensure compliance with the system, as shown in Figure 2:



Fig. 2 Components of the preventive system

The components that make up an effective preventive system in occupational safety and health are made up of five important arguments such as:

Identification of occupational hazards: which involves detecting and recognizing the possible hazards existing in each function or area, in order to anticipate any factor that may compromise the safety and health of workers.

Evaluation of occupational hazards: which allows analyzing the severity as well as their probability of occurrence, by establishing priorities and determining which measures should be applied with greater urgency.

Implementation of measures: which consists of adopting concrete solutions aimed at eliminating, reducing or managing risks, with the purpose of preventing accidents and occupational illnesses.

Implementation of measures: that is, their effective execution through specific actions and changes within the work environment.

Assurance of the preventive system: which guarantees the efficiency that provides sustainability towards the measures adopted through inspections, audits and constant monitoring of the preventive system.

Finally, the general hypothesis was: there is a significant influence of the occupational safety policy in the prevention of occupational accidents in a construction company in Huaral, 2025.

In addition, the specific hypotheses were:

1. There is a significant influence of the occupational safety policy in the identification of occupational hazards in a construction company in Huaral, 2025.
2. There is a significant influence of the occupational safety policy in the evaluation of occupational hazards in a construction company in Huaral, 2025.
3. There is a significant influence of the occupational safety policy on the implementation of measures prevention measures in a construction company in Huaral, 2025.
4. There is a significant influence of the occupational safety policy on the implementation of measures for the prevention of labor background in a construction company in Huaral, 2025.
5. There is a significant influence of the labor safety policy in the assurance of the preventive system in a construction company in Huaral, 2025.

II. METHODOLOGY

The approach was quantitative. According to Arias et al. [11], this approach is based on the collection and analysis of numerical data using statistical techniques, allowing an objective and accurate interpretation of the results. In this research, the variables “occupational safety policy” and

“prevention of occupational accidents” were measured in order to analyze the relationship between the two using statistical tests.

The type was applied. From the point of view of Vizcaino et al. [12], this type of research is situated through a solution of practical problems, which are used for scientific knowledge as a fundamental tool; therefore, in this case, the problem was identified a high incidence of occupational accidents that conforms in this research in a construction company in Huaral, so the implementation was raised as a solution that shows an effective result on the occupational safety policy.

The level was explanatory. Using the words of Galarza et al. [13], this level seeks to understand the causes of the phenomena in how they are related to each other, establishing cause and effect links; therefore, in this research, we tried to determine how the occupational safety policy influences the prevention of occupational accidents, identifying the conditions that favor greater safety in the work environment.

The level was also descriptive. Taking into account the authors Hernandez and Mendoza [14], they express that they maintain a purpose of this level by describing the characteristics and properties of phenomena or social groups, in order to obtain accurate and measurable information on the variables studied, as a result, the safety policies in force and the levels of prevention of occupational accidents were described, classifying the results into low, medium and high levels.

The design was non-experimental. From the position of Arias et al. [11], it conforms this type of design that the variables are not deliberately manipulated, but observed in their natural context; also in this research, the variables “occupational safety policy” and “prevention of occupational accidents” were evaluated in the work environment of the construction company, in which there is no direct intervention in its implementation or modification of the study it conforms.

The cut was cross-sectional. As mentioned by Arias et al. [11], it is characterized by collecting data at a single moment in time, allowing descriptive analysis and establishing relationships between variables at that specific point; thus, in this study, the information was collected during the month of June 2025, applying in one opportunity the questionnaire related to the variables for workers in the construction company.

The method was hypothetico-deductive which involves developing assumptions based on previous observations or theories, and then conducting tests or experiments to verify these assumptions. This means Armijo et al. [15], emphasizes that it is a widely used scientific approach that involves developing assumptions based on observations, prior theories and then conducting tests or experiments to verify whether these assumptions are correct or incorrect.

According to the first variable which is occupational safety policy. From the perspective of Butron [16], the related topic acts as a reference that directs the management with the objective of safeguarding occupational safety and welfare of workers, contractors, visitors and people who may be

involved. Since, this policy sets out the organization's intentions, its commitment to these objectives and the conditions under which it will carry them out. Although it is drafted and approved by top management, its application extends to the entire organization, from employees, directors and managers to OSH professionals, contractors and other stakeholders, can find a manual to carry out procedures, organize activities, report problems or potential risks, among other tasks related to the management influenced by occupational safety and health.

It should be emphasized that the operational approach was carried out with the dimensions of occupational safety planning, organization of occupational safety, execution of occupational safety and control of occupational safety.

However, in the second variable of prevention of accidents and incidents at work, it is defined as a discipline dedicated to promoting employee safety and health of workers in their work environments, through the implementation of measures and activities that seek to prevent risks associated with working conditions. To achieve this, risk assessment is used as a key tool, which is carried out in each company by technicians specialized in the prevention of occupational hazards or accidents [17].

Likewise, it is essential to highlight that in the operational approach the following dimensions were carried out: identification of occupational risks, occupational risk assessment, implementation of occupational risk prevention measures, implementation of occupational risk prevention measures and assurance of the preventive system.

The population is defined as the complete group of elements referred to in the research being carried out. Also, it can be described as the total of all units that are observed, the totality of people or elements that possess common characteristics about which inferences are desired [18].

The population was classified as finite. As stated by Sarasola [19], it is considered a statistical set in which all its elements can be counted, thus obtaining a specific and limited total quantity; therefore, this characteristic implies that there is complete knowledge of the study, given that there is a record that allows its identification and delimitation.

The population is made up of 50 workers in the construction company located in Huaral, according to the boss in charge of construction.

According to Bernal [18], the sample is the group of people selected to collect the necessary data for the development of the research; from this group the measurements and observations of the variables being studied are obtained. Therefore, for this research, the sample amounted to 100% of the workers of the construction company in Huaral; therefore, there are 50 loyal workers in the construction company, thus applying a census sampling.

The technique used for data collection was the survey. According to Bernal [18], this survey is one of the most used methodologies to collect information, although its credibility has decreased over time due to a bias that can introduce the

responses of respondents; therefore, in this study the Google Forms platform was used which is applied as an online survey for construction workers,

The instrument was a structured questionnaire. As Bernal [18] points out, the questionnaire is a series of questions in different sections and spaces that are designed to obtain information directly from individuals. So, in this event, the questionnaire was comprised by the variables "occupational safety policy" and "prevention of occupational accidents", in which it was composed of 27 items. It is important to consider that the instrument was validated by 3 expert judges, and its reliability was 0.779 and 0.906 for each of its variables by means of Cronbach's Alpha.

The data collection procedure began with the coordination of a meeting with the owner of the construction company, in order to request the corresponding authorization to apply the questionnaire. Subsequently, the collection of information was carried out in March 2025, using a virtual survey distributed through the Google Forms platform, addressed to the 50 workers.

The method of data analysis includes through general descriptive statistical techniques, which included the measurement of variables and dimensions, the analysis of levels of variables and indicators, as well as the application of hypothesis and normality tests. Therefore, these techniques allowed processing the information obtained in a structured way, facilitating the characterization of the sample that allows understanding the data collected as well as the analysis of the relationships between the variables of the object of study.

Finally, the ethical aspects include:

- a) Academic honesty; which implies the commitment to present information with results in a truthful and accurate manner, avoiding any form of plagiarism, data manipulation or falsification of information. Therefore, it is based on the integrity of the researcher when reporting findings and correctly citing the sources used.
- b) Respect for confidentiality: in this thesis, it is complemented by protecting the identity and privacy of the surveyed participants, keeping in reserve any personal data or sensitive information provided during the research, as it includes the appropriate and safe use of the data, ensuring that only the information necessary for the purposes of the study is disclosed.
- c) Respected ethical principles; which is acquired through the fundamental values of research ethics, such as the principles that are manifested through the researcher's commitment to present data and results truthfully, in which it must be ensured that the study is conducted without causing harm, maintaining fair treatment and avoiding conflicts of interest, so as to safeguard the integrity of the research process on a specific topic.

III. RESULTS

Regarding the demographic characteristics of the sample, it was composed of 50 participants. Of the total, the most representative group corresponded to the 30 to 45 years age range with 36% (18 individuals), followed by 26% (13 people) between 18 and 29 years of age. Likewise, 24% (12 participants) corresponded to the 46 to 59 age group, while the remaining 14% (7 people) were 60 years of age or older. This age distribution made it possible to gather the perceptions of workers at different stages of their working lives, providing a broader view of the reality studied.

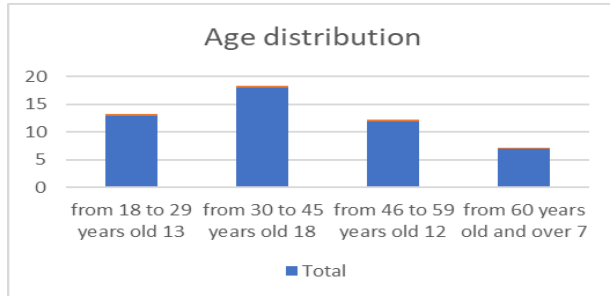


Fig. 3 Age distribution.

In relation to the sex of the respondents, it was identified that the totality of the participants (50 people) corresponded to the male gender, representing 100% of the sample, as shown in Figure 4.

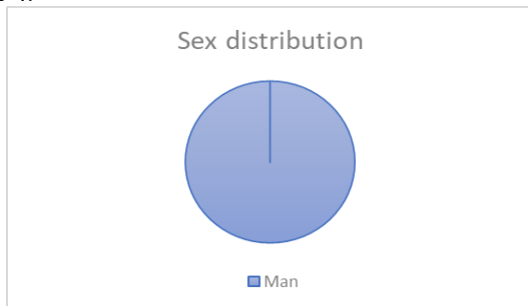


Fig. 4 Sex distribution.

Hypothesis Testing Results.

Regarding the results of the hypothesis analysis, given that this research is framed within an explanatory approach and considering that the normality test showed that the data do not follow a normal distribution, it was necessary to apply a non-parametric statistical test to evaluate the hypotheses. In this sense, it was considered pertinent to apply the Nagelkerke statistic, since it allows evaluating the explanatory capacity of a logistic regression model, especially in studies with categorical variables and non-normal distributions.

Under this methodology, the general hypothesis was analyzed: the occupational safety policy significantly

influences the prevention of occupational accidents in a construction company in Huaral, 2025.

TABLE I
GENERAL HYPOTHESIS TEST

-2 Log Likelihood (intercept only)	-2 Log Likelihood (final)	Chi-square	df	Sig.	Nagelkerke Pseudo r ²
249.716	0.000	249.716	23	0.000	0.997

In order to verify or refute the general hypothesis, an ordinal regression was applied. The results obtained are presented in Table 1. The -2 log likelihood value was 249.716, with a final significance of 0.000. This result suggests that the model with predictors represents a substantial improvement over a null model, indicating an adequate fit. In that sense, the chi-square statistic was also 249.716, with a bilateral significance level of 0.000.

Since the significance value is less than 0.05, the general hypothesis formulated is accepted. Consequently, it is concluded that the variable, occupational safety policy significantly influences the prevention of occupational accidents in a construction company in Huaral, 2025.

On the other hand, the value of the pseudo R² of Nagelkerke reached 0.997, which indicates that the independent variable explains 99.70% of the variability observed in the dependent variable, which evidences a high explanatory capacity of the proposed model. This result strongly supports the general hypothesis of the study, confirming a significant and direct influence between both variables.

In the analysis of specific hypothesis 1: the occupational safety policy significantly influences the identification

TABLE II
SPECIFIC HYPOTHESIS 1 TEST

-2 Log Likelihood (intercept only)	-2 Log Likelihood (final)	Chi-square	df	Sig.	Nagelkerke Pseudo r ²
204.064	0.000	204.064	23	0.000	0.993

In order to validate or reject specific hypothesis 1, an ordinal regression was performed, the results of which are presented in Table 2. The value of the -2 log likelihood was 204.064, with a final significance of 0.000. This indicates that the model with predictors improves substantially compared to the model without predictors, evidencing an optimal fit. The chi-square statistic, also 204.064, confirms this improvement, supporting the validity of the fitted model.

Since the bilateral asymptotic significance value is 0.000 lower than the significance level of 0.05, the specific hypothesis 1 is accepted. Therefore, it is concluded that the occupational safety policy significantly influences the

identification of occupational hazards in a construction company in Huaral, 2025.

Regarding the analysis of the first dimension of the dependent variable, a pseudo r^2 value of 0.993 was obtained, indicating that the occupational safety policy explains 99.30% of the variability in the identification of occupational hazards. This result reflects a strong influence of preventive management on the ability of workers and the organization to detect early the hazards present in the work environment.

Subsequently, specific hypothesis 2 was evaluated: the occupational safety policy significantly influences the evaluation of occupational hazards in a construction company in Huaral, 2025.

TABLE III
SPECIFIC HYPOTHESIS 2 TEST

-2 Log Likelihood (intercept only)	-2 Log Likelihood (final)	Chi-square	df	Sig.	Nagelkerke Pseudo r^2
193.764	0.000	193.764	23	0.000	0.992

To verify specific hypothesis 2, an ordinal regression was used, the results of which are detailed in Table 3. The value of the -2 log likelihood statistic decreased from 193.764 to 0.000, indicating a significant improvement of the model by incorporating the predictor variable "occupational safety policy". The chi-square statistic was 193.764 with 23 degrees of freedom and a bilateral significance of 0.000. Since this value is less than the conventional threshold of 0.05, we proceed to accept specific hypothesis 2.

Likewise, the pseudo r^2 of Nagelkerke was 0.992, which shows that 99.2% of the variation in the evaluation of occupational risks is explained by the occupational safety policy, revealing a highly significant relationship between the two variables.

Next, specific hypothesis 3 was analyzed: the occupational safety policy significantly influences the implementation of occupational risk prevention measures in a construction company in Huaral, 2025.

TABLE IV
SPECIFIC HYPOTHESIS 3 TEST

-2 Log Likelihood (intercept only)	-2 Log Likelihood (final)	Chi-square	df	Sig.	Nagelkerke Pseudo r^2
194.923	0.000	194.923	23	0.000	0.992

The ordinal regression used to verify specific hypothesis 3 showed that the -2 log likelihood value was reduced from 194.923 to 0.000 after including the independent variable, reflecting an excellent fit of the model. The chi-square statistic was 194.923 with 23 degrees of freedom and a significance of 0.000, allowing the hypothesis to be accepted.

Nagelkerke's pseudo r^2 reached a value of 0.992, indicating that 99.2% of the variation in the implementation of occupational health and safety measures is attributable to the occupational safety policy, thus confirming a significant influence between both variables.

Based on this, we proceeded to the analysis of specific hypothesis 4: the occupational safety policy significantly influences the implementation of occupational background prevention measures in a construction company in Huaral, 2025.

TABLE V
SPECIFIC HYPOTHESIS 4 TEST

-2 Log Likelihood (intercept only)	-2 Log Likelihood (final)	Chi-square	df	Sig.	Nagelkerke Pseudo r^2
177.792	0.000	177.792	23	0.000	0.988

To evaluate specific hypothesis 4, ordinal regression was used. The reduction of the -2 log likelihood value from 177.792 to 0.000 is evidence that the inclusion of the independent variable substantially improves the model. The chi-square value was 177.792 with a significance of 0.000, validating the hypothesis.

Nagelkerke's pseudo r^2 was 0.988, showing that 98.8% of the variation in the implementation of prevention measures is explained by the occupational safety policy. This high percentage confirms a statistically significant and positive relationship.

Along these lines, we proceeded to evaluate specific hypothesis 5: the occupational safety policy significantly influences the assurance of the preventive system in a construction company in Huaral, 2025.

TABLE V
SPECIFIC HYPOTHESIS 5 TEST

-2 Log Likelihood (intercept only)	-2 Log Likelihood (final)	Chi-square	df	Sig.	Nagelkerke Pseudo r^2
191.878	17.435	174.443	23	0.000	0.981

The results of the ordinal regression, detailed in Table 5, show that, by incorporating the job security policy variable, the value of the -2 log likelihood decreases from 191.878 to 17.435. Although the model does not reach a total reduction to zero as in the previous cases, the improvement is highly significant. The analysis yielded a value of the chi-square statistic of 174.443 with 23 degrees and a significance of 0.000. This result allows us to accept specific hypothesis 5, as it shows a statistically significant relationship between the variables analyzed.

Likewise, the value of Nagelkerke's pseudo R^2 was 0.981, which indicates that the independent variable "occupational safety policy" explains 98.1% of the variability in the

dimension “assurance of the preventive system”. This finding confirms a strong relationship between both variables, reflecting the substantial impact that an adequate safety policy has on the strengthening of preventive mechanisms within the work environment.

IV. DISCUSSION

The discussion with the background; regarding the work developed by Reyes and Salgado [5] in Mexico, it is evident that the objective raised by the authors is somewhat related to that of the present research, especially with regard to the analysis of the work environment and the factors that affect the safety and well-being of workers. However, Reyes and Salgado focused on measuring job satisfaction and achievements, so the present research focused on analyzing the influence of the implementation of an Occupational Safety and Health Management System (OSHMS) on the prevention of occupational accidents. In their study, 117 workers were surveyed, while in this research they worked with a different sample, composed of workers from a specific company according to its payroll. As for the results, Reyes and Salgado used descriptive statistics without resorting to hypothesis testing, while in this thesis the Pearson Chi-square test was applied, reaching a significance level of 0.000; therefore, this result provides greater statistical robustness to the analysis, which demonstrates greater precision and support regarding the link between the implementation of OSHMS and the reduction of accidents.

In relation to the study by Bentacourt and Velásquez [6] in Colombia, the objective of the authors was to identify occupational risks in a food processing plant through the application of surveys and the elaboration of a risk matrix. They state that this purpose is similar to this research, since both studies sought to prevent accidents through the management and control of occupational risks. However, the Colombian research focused on the situational diagnosis of hazards, while this research evaluated the real and measured impact of an implemented management system. That is why its sample was evaluated to workers in the production area, while this research worked with a more diverse sample; in other words, they did not apply statistical tests to validate the relationship between the identified risks and the accidents occurred, but this research used the Chi-square test, obtaining significant results. Therefore, it can be considered that the findings presented here are more determinant and applicable to environments that already have a structured safety system so that they can identify the risks that may occur.

Based on Ewes et al. [7] in Peru, their objective was to analyze OSH based on a normative and bibliographic review; therefore, this approach differs from the present research, since they did not apply instruments to workers or use statistical tests. Instead, this research directly evaluated the impact of an OSHMS by applying surveys and analyzing the results with the Chi-square statistic. It is also concluded that the findings presented here can be considered more definitive

with respect to the actual effectiveness of the system implemented.

As indicated by Llerena [8] in Junín, Peru, he states that he has a very similar objective to that of this research, which is to determine the influence of the SGSST in the reduction of accidents in the maintenance area, in which he took a quantitative approach and recorded a decrease of accidents of 100% in the period evaluated, therefore, it coincides with the results of this research, which also obtained significant statistical evidence. However, the present research strengthens these results by using the Chi-square test, while this study was limited to descriptive analysis. Therefore, in summary, it can be stated that this research complements and validates with greater precision the benefits of OSHMS in the labor context.

Considering Salazar [9] in Cajamarca, his objective was to establish the link between a critical risk management system and the prevention of accidents in mining projects; although his study was qualitative and did not manipulate variables, he also proposed an intervention guide based on the collection of technical data. Unlike Salazar, this research quantitatively measured the effects of OSHMS and demonstrated its effectiveness through statistical evidence. Therefore, it is concluded that the findings obtained here are more convincing, since they not only propose measures, but also validate their impact on the work studied.

V. CONCLUSIONS

1. The occupational safety policy significantly influences the prevention of occupational accidents in a construction company in Huaral, 2025; validated by the ordinal regression statistical test and Nagelkerke's pseudo R^2 (0.997), which indicates that 99.70% of the variability in accident prevention is explained by the occupational safety policy variable. These results reflect a high level of model fit and a determinant influence.
2. The occupational safety policy significantly influences the identification of occupational hazards in a construction company in Huaral, 2025; demonstrated by the ordinal regression and a pseudo R^2 of 0.993, which shows that 99.30% of the variation in the identification of occupational hazards is attributable to the occupational safety policy. This reveals a strong and direct relationship between the two variables.
3. The occupational safety policy significantly influences the evaluation of occupational risks in a construction company in Huaral, 2025; with a statistical significance of 0.000 and a pseudo R^2 of 0.992. This result shows that 99.20% of the variation in risk assessment is explained by the occupational safety policy variable, consolidating a highly significant influence.

4. The occupational safety policy significantly influences the implementation of occupational health and safety measures in a construction company in Huaral, 2025; validated with a pseudo R^2 of 0.992. This high fit value reflects that 99.20% of the variability in the implementation of measures is due to the occupational safety policy.
5. The occupational safety policy significantly influences the implementation of measures for the prevention of occupational antecedents in a construction company in Huaral, 2025; demonstrated by a pseudo R^2 of 0.988, which represents that 98.80% of the variability of this dimension is explained by the independent variable.
6. The labor safety policy significantly influences the assurance of the preventive system in a construction company in Huaral, 2025; where the model presented a pseudo R^2 of 0.981. Although the value of the -2 logarithm was not completely reduced to zero, the statistical significance confirms a strong relationship between the variables.

VI. RECOMMENDATIONS

First: It is recommended that the head of the construction plan strengthen the work safety policy in a comprehensive manner, since it has been statistically proven to have a direct and significant influence on the prevention of occupational accidents. For this reason, it is considered essential that the policy be kept up to date so that it can be effectively communicated to all personnel and supervised for each stage of the project.

Second: At the same time, it is suggested that the person in charge of the construction plan implement more rigorous and systematic strategies to identify occupational risks, such as regular inspections, risk detection forms, and training for operating personnel to achieve lower risk statistics on the hazards associated with their work.

Third: On the other hand, the person responsible for the construction plan must establish a technical system for evaluating occupational risks, ensuring that each identified risk is classified according to its level in order to perform a criticality analysis; it is also important that this evaluation is continuous and adapted to the type of work, machinery used and environmental conditions to be evaluated.

Fourth: However, it is recommended that the construction manager focus on the construction plan to design and implement clear protocols for the implementation of preventive measures, prioritizing those with the greatest impact and ensuring that personnel have the necessary resources and knowledge to apply them correctly in the field as required.

Fifth: The person in charge of the construction plan must also ensure that the preventive measures are not only implemented, but also executed in an operational and sustained manner throughout the different phases of the project; this can be achieved by means of execution schedules, assignment of responsible parties and on-site follow-up from the beginning to the end of the construction project.

Sixth: Finally, it is suggested to the person responsible for the preventive system that it is relevant to be within the construction plan to establish a continuous verification and assurance process, using safety performance indicators, internal audits and personnel feedback to confirm the effectiveness of the preventive system implemented through the guidelines or standards presented in the occupational safety policy.

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