STUDY OF CORRELATIONS OF ORGANIZATIONAL BEHAVIOR AND PERFORMANCE

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SUMMARY

The present work seeks to demonstrate the multiple relationships that can generate various reactions between behavioral variables and the variable of work performance in Ecuadorian organizations. It is possible to understand how variables linked to individual and group behavior can generate changes in the performance of employees.

INTRODUCTION

There is a wide variety of tools that measure the performance of human talent that in several cases end up being very subjective when determining the results. Organizations invest great efforts to determine the methodology that allows them to develop more accurate measurements.

Behavioral factors have a great influence on performance, it is considered to evaluate the behavior of these factors to determine if a relationship between behavioral factors. By comparing the relationships of these behavioral variables, it could be determined whether their evaluation is possible through statistical analysis.

It is proposed to develop a statistical analysis to evaluate the relationship between behavioral factors and their impact on performance. With this purpose of analyzing how they can be correlated in the behavior of the human being.

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METHODOLOGICAL FRAMEWORK

In this research we evaluate the relationship between the factors that relate to performance by taking a representative sample of 407 companies operating in Ecuador. (Echeverría et al., 2021, p. 367), and the reliability of the information collection instrument with 0.904 points of consistency in Cronbach's evaluation.

It is necessary to determine the relationship between the performance and behavioral factors of the collaborators in the organizations (Shragay & Tziner, 2011). From a qualitative data perspective, I made a quantitative analysis, weighing the results and determining the existence of a model.

We consider Performance one of the most relevant constructs for the management of human talent (Johari et al., 2018), as a variable dependent on motivation as a driver of behavior, communication as a means of transfer, and stress as a variable of the work environment within the institution. In order to determine its relationship with performance, and others such as employee monitoring, finally as external factors we relate family problems (Echeverría et al., 2020).

LITERARY REVIEW
Performance Factors

Organizations are constantly managing the surveillance and control of employees, this constant observation influences their behavior and conduct. In this situation they invest in the use of tools to monitor human activities. According to (Echeverria et al., 2020, p. 125) generating a society of control under the systemic approach. This approach does not change the orientation of human surveillance under the trust variable. However, it increases surveillance objects whose metrics involve human performance as a system resource to achieve the objective. (Echeverría et al., 2019, 222). Focused on improving their results through performance management. According to (Dessler, 2009; Mondy, 2010) Performance is the process that focuses on goals, securing organizational systems aimed at maximizing strategic business results.

We must consider what factors affect staff performance and how they interact. It is important to identify what these variables are. One of these

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factors is stress that directly affects our ability to react and perform. According to (Rivera Moya, Yendi Sarahi; Briseño Escobedo, 2017, p. 16) "It is the result of the adaptation of our body and our spirit to the change that requires a physical, psychological and emotional effort."

Another factor we must consider is motivation which is considered a predictor of performance. (Klehe & Anderson, 2007). Based on (Velasco Lince et al., 2012) "those factors capable of provoking, maintaining and directing the conduct towards an objective and that give rise to conduct; considering those of biological, psychological, social and cultural types". Taking into account how the cycle of motivation is carried out that "begins with a need, which breaks the balance of the organism, producing tension, dissatisfaction, discomfort and imbalance, which leads the individual to perform a behavior or act capable of releasing tension, satisfaction or imbalance " (Sum Mazariegos, 2015, p. 11).}

Performance research
The study of performance derives in the analysis based on different factors according to (Echeverría et al., 2021) There are different factors that improve this process. From this point of view, it is expected to obtain feedback on the fulfillment of the activities of the collaborators. Other studies (Gaspar-Castro, 2021) They demonstrate that to manage the capabilities of the human talent of an organization lies in the importance of performance, job satisfaction and the commitment of employees to achieve success for the organization (Davidescu et al., 2020, 45). This is how (Echeverría et al., 2019) It relates the monitoring and fulfillment of the goals which are based on the relationship of punishment and reward through the application of control to activities the economic development of organizations is encouraged.

This is how the measurement of performance can give us significant improvements in the performance of organizations, the happiness of the employee is also an influence on their results. (Salgado et al., 2019, 100), so we must identify their potential and weaknesses, but primarily the situations that may represent an advantage within competitive environments (Segura Dominguez & Alonso Suárez, 2021).

There are many changes at the level of performance management from traditional models (Chiavenato, 2011) including competency-based

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performance evaluation on which many evaluation models are based (Alles, 2015).

However, these models have failed to eliminate the main element that generates deficiencies in the results of the evaluation generating drawbacks. According to (Camejo, 2008): little impact on employee behavior, conflicts between principals and dependents, dissatisfaction due to bias in evaluation due to subjectivity and others (Alshaabani et al., 2022, 17), for this reason it is important to establish an effective method of evaluation.

In Ecuador, studies such as (Chasillacta et al., 2020) They perform an analysis of the relationships between various factors focused on the results of quality and performance, they do not focus on the definition of the performance evaluation model. In the case of (Echeverría et al., 2021) It focuses on the study of employee monitoring and control relationships without determining the causes of behavioral models that may lead to better employee performance.

At work (Cuesta Santos et al., 2018) defines organizational performance as the potential of the organization to consolidate individual, group and own results. It allows to identify competencies of the workers and the most relevant characteristics that impact the organization (Alveiro Montoya, 2009).

According to (Ayón et al., 2021) Performance and motivation are closely related, the latter being the drive to achieve goals. Following (Velasco Lince et al., 2012) It indicates that when analyzing motivation we will obtain significant information about the improvement of performance, that is its main importance. This is how it coincides (Sum Mazariegos, 2015) which defines it as a fundamental tool for performance, encouraging activities to be carried out satisfactorily,

Another important element in performance outcomes is communication that in the words of (Velasco Lince et al., 2012) It keeps the motivation by transmitting to the collaborators the objectives, and also transmits what can be done to improve the performance. Communication allows to influence the behavior of individuals in the organization to achieve their strategic objectives (Quezada-Rodríguez et al., 2020).

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It is known that performance must be evaluated from time to time to know the effort that officials put their skills and abilities (Quezada-Rodríguez et al., 2020). Agrees with what it says (Sum Mazariegos, 2015) That performance evaluation allows identifying the talents and skills of employees as the basis for achieving results, that is, performance.

Every organization must improve the productivity and effectiveness of its processes (Romero Chico, 2015). The main objective of the evaluation of results obtained is the decision making to correct the deficiencies (Alveiro Montoya, 2009). In the words of (Ayón et al., 2021) We must understand the performance of an organization as a manageable process that integrates a number of components.

For this main reason and in the absence of a mathematical analysis on performance management has prompted us to carry out the study of the factors that are related in the process. Find a mechanism to define a function model that allows an evaluation based on numerical conditions.

ANALYSIS AND DISCUSSION.
Evaluation of correlations
Performance covariance

In Table 1 we can take as a reference the results of the first column, which are the covariances between the performance variable as dependent on the variables surveillance, family problems, communication, motivation and stress as independent variables.

Table 1
Covariance matrix

	Performance	Vigilance	Prob. Famil.	Communication	Motivation	Stress
Performance	17.4566	7.5401	-1.4938	10.5048	11.2669	-0.7710
Vigilance	7.5401	20.4958	-0.0116	4.7858	4.8969	2.1791
Prob. Famil.	-1.4938	-0.0116	22.0776	-2.3081	-4.0387	8.8264
Communic	10.5048	4.7858	-2.3081	19.4707	13.8031	-

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ation						0.8917
Motivation	11.2669	4.8969	-4.0387	13.8031	17.8034	-2.6009
Stress	-0.7710	2.1791	8.8264	-0.8917	-2.6009	16.1498

Note: Table prepared by the authors based on the information captured from the results of the analysis in Matlab.

If we look at the first column Table 1 we can determine that there are high positive relationships with performance between the variables surveillance, motivation and communication. An inverse relationship between the variables family problems and stress is presented. This represents that while they increase the performance decreases and on the contrary if their value is lower the performance increases.

Similar results were presented by (Sum Mazariegos, 2015) who indicated that motivation has a primary impact on the fulfillment of activities and their performance. We can see in the results this impact is verified by being the highest value.

The data of (Echeverría et al., 2021) indicated that there is a considerable relationship between these factors and that organizations base their control and monitoring strategies on them. Additionally, it was evidenced that there is a strong relationship between the positive variables and the inverse relationship is medium and low between these variables.

Relationship between variables

In the statistical analysis performed, it was possible to compare the results obtained in Matlab (Table 2) with the results obtained in SPSS (Table 1) applying a linear regression methodology.

Tables 1 and 2 presented values of zero or negative value correlation coefficients which are indicated as improper resolutions. Similar results have been presented by (Sharma et al., 2005) who reported that most incorrect solutions are for samples less than n = 800.

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Table 2
Matlab correlation coefficient matrix

	Perform ance	Vigila nce	Prob. Famil.	Communic ation	Motiva tion	Stre ss
Performan ce	1.000	0.399	-0.076	0.570	0.639	-0.04 6
Vigilance	0.399	1.000	-0.001	0.240	0.256	0.12 0
Prob. Famil.	-0.076	-0.001	1.000	-0.111	-0.204	0.46 7
Communic ation	0.570	0.240	-0.111	1.000	0.741	-0.05 0
Motivation	0.639	0.256	-0.204	0.741	1.000	-0.15 3
Stress	-0.046	0.120	0.467	-0.050	-0.153	1.00 0

Note: Table prepared by the authors based on the information captured from the results of the analysis in Matlab.

Pearson's correlation coefficients (Ramos-Villagrasa et al., 2019, 199) obtained with the regression analysis of the model (Tables 1 and 2) positive relationships can be observed first column. We can determine that there are strong relationships between the variables human vigilance, communication and motivation that positively impact performance. Among these variables we can observe that motivation is the most participatory variable 0.639 in the relationship with performance followed by communication 0.57. In addition, negative relationships are visualized between the variables of family problems and stress whose influence on performance has a lower proportion between -0.076 and -0.046 respectively compared to the variables of positive impact.

The matrix of correlation coefficients according to (Díaz Monroy & Morales Rivera, 2012) looks for an association between the variables and each element (i, j) of the resulting matrix satisfies the relationship based on the Pearson coefficient which tells us that the correlation

between the variables can be positive or negative depending on the results of the coefficient. $-1 \leq \rho ij|p1 + 1,\ldots,p \leq 1$

Multiple Linear Regression Analysis

In the multiple linear regression analysis we must consider the coefficient of determination or which helps to determine the fit of the regression model or percentage of variation of the model based on R^2(Walpole et al., 2012). it can be interpreted as the proportion of the variance of one variable that is explained by the other (Rodgers & Nicewander, 1988). R^2

$$R^2 = \frac{SCR}{STCC} = \frac{\sum_{i=1}^{n}(\hat{y}_i - \bar{y})^2}{\sum_{i=1}^{n}(y_i - \bar{y})^2} = 1 - \frac{SCE}{STCC}$$

and

$$R^2_{ajus} = 1 - \frac{\dfrac{SCE}{n - k - 1}}{\dfrac{STCC}{n - 1}}$$

Table 3
Model summaryb

Model	R	R square	Adjusted R-squared	Standard error of estimation	Change statistics		
					Change in R-squared	Change in F	Sig. Change in F
1	.696a	.485	.478	3.01845	.485	75.378	.000

Note: Table prepared by the authors based on the information captured from the results of the analysis in SPSS.

The value of 48.5% obtained allows us an acceptable prediction of the results of the proposed model. R^2(Walpole et al., 2012) indicated that with this coefficient value the analyzed model can be understood.

The squared correlation coefficient is used when the interpretation of the data is not obvious (Rodgers & Nicewander, 1988). On the other hand, the values in F indicated that there is a relationship between the

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variables studied and that the coefficients of the multiple linear regression model can be applied in a performance study.

Figure 1

Relationship between standardized predicted values and standardized residue regression values.
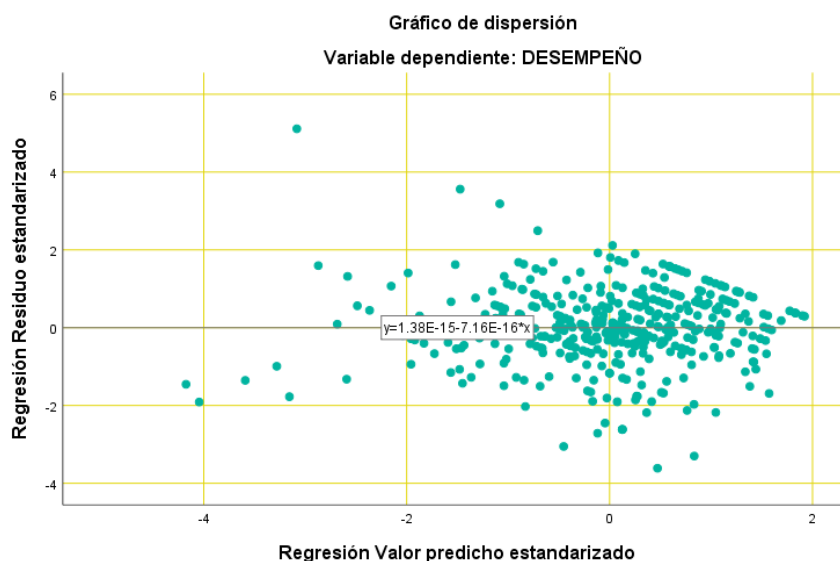
Note: graph generated by the authors based on information captured from the analysis results in SPSS.

Figure 1 indicates that the multiple regression model takes into account multiple predictor variables simultaneously, with the result that the variables have a high correlation between them. Multiple linear regression is a generalization of simple linear regression in which there is more than one predictor variable.

CONCLUSION

In the present research work it was considered to carry out a statistical study to determine the relationships that exist between behavioral factors such as human vigilance, family problems, communication, motivation and stress on the impact they can have on the performance factor in organizations to perform this analysis we took as a population the participants of a survey conducted by (Echeverría et al., 2021) consolidated in a sample of 407 results on the study variables with a highly demonstrated level of reliability with the coefficient of 0.904 points of consistency over Cronbach's alpha.

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We came to determine its main objective of the study, analyzing through covariances we identified the linear dependence that may exist between the variables (Londoño, 2013) on the performance of this form to demonstrate the strength of their interaction between them.

The estimated relationships between the factors were confirmed by comparing the correlation of variables resulting from a multiple linear regression analysis. The results gave us a value for what gives us the acceptance of the projected coefficients of the regression model, which corroborate the results of high correlation between the $R^2 = 48.5\%$ variables studied and ensuring the homoscedasticity of the model.

The models evaluated allowed to detect the incidence of two essential variables in the results of the performance: communication and motivation that represent a better development

As future lines of research, the linear regression model can be developed and the averages obtained in a quantitative way can be evaluated on the performance results in several periods. The data collected was carried out in Ecuador in 2020 prior to the scourge of the global pandemic, an update of the results could be developed with a new survey analyzing the same factors, or even more variables could be added, to allow us to observe the consequences of the global crisis and impact on the performance and behavior of the workers of the organizations.

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