



ORGANIZATIONAL CLIMATE AND LEADERSHIP STYLES OF THE MANAGEMENT STAFF OF THE FACULTY OF CHEMISTRY AND CHEMICAL ENGINEERING, UNIVERSIDAD NACIONAL MAYOR DE SAN MARCOS DURING THE COVID-19 PANDEMIC

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ABSTRACT.

The organizational climate is the result of mutual understanding among its members; therefore, it is necessary to strengthen all its aspects. Due to the pandemic, there is a universal crisis in all fields and the educational system is no exception. From the perspective of the organizational climate, the university is a multilevel and complex phenomenon. Due to the above, the objective of the research was: to determine the relationship of the Organizational Climate with the Leadership Styles of the management personnel of the Faculty of Chemistry and Chemical Engineering, Universidad Nacional Mayor de San Marcos during the Covid -19 pandemic. To meet the objective, a descriptive-correlational investigation was developed with a quantitative approach. It was obtained as a result that the relationship between organizational climate and visionary leadership style is very strong positive. With the affiliative leadership style it is considerable positive. With autocratic leadership style it is medium positive. And with the dominant autocratic leadership style it is negative medium. It is concluded that students during the Covid-19 pandemic managed to perceive visionary and affiliative leadership styles in managers as favorable attitudes that generated greater confidence and openness in difficult times of confinement and virtuality.

Keywords: organizational climate, leadership, university teaching, COVID-19

INTRODUCTION.

The organizational climate is the result of mutual understanding among its members, therefore, today it is necessary to strengthen all its aspects to strengthen areas such as leadership, decision making, communication, interpersonal relationships and motivation, since not everything can be achieved. According to (Angulo Sainz, 2014) The spirit of

your workplace is good, for different reasons, if the activities are not aimed at the same end, the results will not be encouraging, harming students, because their teachers are not motivated to learn most of the time and do not show themselves in their action. This attitude hinders leadership development because there is no guaranteed path to institutional change without a manager with leadership skills.

Researchers such as (Hermosilla et al., 2016) They report that the leaders of organizations that act from a change-oriented perspective have a good adherence to their recommendations, making people identify with them and trust them guiding them in situations of change. Perceptions of an unsatisfactory organizational climate lead to dissatisfaction of all staff of the institution. (Godoy & Bresó, 2013)They recognize that motivation in the organizational field is a complex, multifactorial structure and dependent on multiple factors, but above all there must be a positive correlation between the organizational climate and managerial leadership so that the administrative procedure in the institution promotes development and guides all members.

The so-called new normality during the health emergency is a testimony to the various failures of the educational system, one of the most affected, to the point that university authorities have implemented new strategies based on technological and digital resources; In this regard, (Barbosa et al., 2021), describes a dichotomy, how to reach the majority of the student population, and how to reduce distancing barriers by creating spaces that can be effective for the development of teaching and learning processes.

According to (Blanco-López et al., 2021), the organizational climate is affected directly or indirectly, so it is imperative to develop managerial leadership to fundamentally guide and manage the deployment of government standards in a pandemic to enhance or generate an organizational climate that allows teamwork, develop each of its elements. Likewise, (De la Cruz-Urrutia, 2022) affirms that managerial leadership is the main axis of the activities of the various organizations, allows interaction between members (teachers, workers, students) and therefore contributes to promote an adequate organizational climate, it is very important to take into account the role played by management leaders within universities, taking into account communication and decision making, It plays a very important role in the well-being and improvement of the educational community.

Therefore, the variables investigated in the study are closely related to decision-making to improve the dynamics of the university during the covid-19 pandemic, expressed in organizational climate and managerial leadership. This leads certain managers who have been forced to implement all their leadership strategies to update the institutional dynamics of the Faculty of Chemistry and Chemical Engineering of the Universidad Nacional Mayor de San Marcos in the context of the new regulations and the use of digital tools. This situation demonstrates the importance of directors' leadership as a condition for the delivery of resources and for their institutions not to be left behind in the implementation of the new regulations.

A good dynamic between the organizational climate and the managerial leadership of the Faculty of Chemistry and Chemical Engineering of the National University of San Marcos will help to promote and benefit the interests of the educational community (teachers, students, administrators) the relevance of this study, will allow to pose the challenge of promoting quality education, in which educational agents, Therefore, according to (Macancela & Paredes, 2021)Educational media and educational environments require an intensive process based on a good organizational climate and managerial leadership for the achievement of educational quality.

Due to the pandemic, there is a universal crisis in all fields and the education system is no exception. This reality proposes a radical change, technology has completely changed the way of life of all people. Under these conditions the entire educational community must be ready for major changes. Among them, faculty leaders should also promote faculty exchange and leadership, and develop these skills for initial practice and professional development. (Elmore, 2008), states that leadership is essentially about creating, cultivating and developing the capacity of managers, teachers and students to learn well.

In all the universities of the country, particularly the Universidad Nacional Mayor de San Marcos, it has been confirmed that interpersonal relationships are incompatible with the goals and objectives of vocational training. With

the authorities or administrators who have not really developed a leading role in the management of educational organizations, the result is that there is no organizational climate conducive to the leap in the quality of training in the country, which has a lot to do with the established structure of the educational system.

All these problems are related to the organizational climate, which is an internal part of the organization and the leadership styles of the directors of the schools or faculties of the university. In this sense, any factor of the work environment will change the direct changes in the organizational climate. According to (Gonçalves, 2021), organizational climate factors are based on motivational tendencies that are transformed into behaviors that affect the organization.

In universities, human potential is the most competitive and important weapon; In this era, attention must be paid. The discipline is too strict, the staff pressure is too great, only short-term results will be achieved, but in the long run, it will conflict with employees. A good organizational climate has an important positive and negative impact on the university. There are many factors that affect the quality of training, therefore, if they are incompatible with the principles of maintaining education, their attitude or behaviour may be negative or problematic; If they conform to these principles, there is no problem, then it is positive. However, these positions can be affected internally by the environment in which they are located.

Therefore, the particularity of the study is that these variables applied to reality do not seem to exist, however, an unfavorable confrontational and long-term organizational climate generated by the different leadership styles of the management positions of the different faculties and / or professional schools of the Universidad Nacional Mayor de San Marcos (UNMSM) is visualized. and that these leaderships have not seen positive results, on the contrary an inefficient level of management is visualized, the lowest level of achievement corresponds to leadership, which are weaknesses of the management team. The study will determine the relationship between the organizational climate and the leadership styles of the directors of the professional schools of the UNMSM in times of pandemic by covid-19. It is proposed as a research objective: to determine the relationship of the Organizational Climate with the Leadership Styles of the management staff of the Faculty of Chemistry and Chemical Engineering, Universidad Nacional Mayor de San Marcos during the Covid -19 pandemic.

MATERIALS AND METHODS.

The type of study is descriptive-correlational because theoretically studies are described by locating populations, based on variables and dimensions, to identify relationships between them and generate attributes based on in results. For (Flores et al., 2013) These designs describe the relationship between two or more variables at a given time. This type of design establishes a relationship between variables without specifying a causal relationship, looks for associations between statistical results based on in the variables "Organizational climate" and "Leadership styles", also their dimensions.

The research design is non-experimental, cross-sectional: according to the authors (Flores et al., 2013) It is a non-experimental design because the variable is never manipulated, the phenomenon is observed, how it occurred in its natural environment at a certain time to evaluate it later and establish a basic consistency in the understanding of the relationship between the variables studied. It is transversal, because through research the incidence and values in which the variables that are investigated at a given moment of time are manifested are investigated.

The research approach is quantitative in the sense that it uses data collection to test hypotheses, based on numerical measurements and statistical analysis to establish patterns of behavior and test theories. In this sense, a quantitative approach is used because it starts from variables and breaks down into dimensions and indicators, each dimension. These elements are responsible for generating measurements during the research, looking for relationships, respectively, using strategies, techniques and tools for the subsequent testing of hypotheses. (Flores et al., 2013).

Population and research sample.

The population or universe of study is made up of undergraduate students of the Faculty of Chemistry and Chemical Engineering, Universidad Nacional Mayor de San Marcos during the Covid -19 pandemic. The virtual surveys were

applied with the voluntary participation of 120 students from different cycles, to which we extend your enormous gratitude for their opinion and contribution to the research.

To determine the sample size, the following formula was applied:

$$n = \frac{N\sigma^2Z^2}{(N-1)e^2 + \sigma^2Z^2} \quad (1)$$

Where:

N: population size (Universe) = 120 undergraduate students of the Faculty of Chemistry and Chemical Engineering, Universidad Nacional Mayor de San Marcos during the Covid-19 pandemic

Z: constant according to confidence level (For 95% confidence level, Z=1.96)

p: proportion of individuals in the population who have the study characteristic (positive variability) = 0.5

q: proportion of individuals in the population who do not have the study characteristic (negative variability) = 0.5

e: maximum permissible error (precision) = 5% = 0.05

n: sample size = 92 undergraduate students of the Faculty of Chemistry and Chemical Engineering, Universidad Nacional Mayor de San Marcos during the Covid-19 pandemic.

Data collection techniques and instruments.

Data collection tools are the means researchers use to measure the behavior or properties of variables. These include: questionnaires, interviews and rating scales (Chavez, 2007). On the other hand (Tamayo Tamayo, 1995) They affirm about the techniques and instruments of data collection that "they are operational expressions of the design of the study, concrete specifications of how the study should be conducted".

Table 1. Operationalization of variables.

VARIABLES	CONCEPTUAL DEFINITION	OPERATIONAL DEFINITION	DIMENSIONS	INDICATORS	ITEMS	MEASUREMENT SCALE
<i>Organizational climate</i>	It is a fundamental factor within organizations, it depends on the perception that staff has about the environment that surrounds it, which can be negative or positive. (Chiavenato, 2011). It allows to achieve goals and objectives outlined in the "quality of working life".	Perception that people have about the organization to which they are linked and about different realities of work". For the present study it is considered: motivation, cooperation, interpersonal relationships and decision making.	Level of motivation	Intrinsic	1, 2	Ordinal: strongly disagree disagree neither agree nor disagree I agree Totally agree
			Cooperation	Extrinsic	3, 4, 5	
				A common goal	6	
				Shared responsibility	7	
			Relations Interpersonal	Team capacity	8, 9, 10	
				Ability to communicate	11, 12	
				Capacity for empathy	13, 14	
			Decision making	Respect for others	15	
				Directive decisions	16, 17	
				Individual decisions	18, 19	
				Strategic decisions	20	
	One of the central aspects that ensure the	Leadership styles are not mutually exclusive, in fact,	Visionary Leadership Style	Long-term vision	1, 2	Ordinal:
				It must be	3, 4	

Director's Leadership Styles	success of the process of change and innovation involves the actors who execute the actions. (Robbins, 2013). Executive leaders must be good managers who promote the favorable conditions of the organizational climate to achieve quality assurance.	there is no pure style leader, but one of them dominates. For the present study, the following styles are considered: visionary, affiliative, autocratic and dominant.		credible		strongly disagree disagree neither agree nor disagree I agree Totally agree
				Not content with what's there	5	
			Affiliative Leadership Style	Encourage listening	6, 7	
				Close and friendly treatment	8, 9	
				Every person is important	10	
			Autocratic Leadership Style	Little or no contribution to the group	11, 12	
				Rarely entrusts important tasks	13, 14	
				Make most decisions	15	
			Dominant Leadership Style	Levels of superiority	16, 17	
				Shows arrogance	18, 19	
				Dichotomous thinking	20	

RESULTS

Table 2. Normality tests for all variables.

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistical	G1	Gis.	Statistical	G1	Gis.
Organizational climate	,061	293	0,010	,989	293	,026
Leadership styles	,151	293	0,000	,914	293	,000
Affiliative leadership style	,138	293	0,000	,921	293	,000
Dominant leadership style	,237	293	0,000	,913	293	,000
Autocratic leadership style	,198	293	0,000	,898	293	,000
Visionary leadership style	,177	293	0,000	,912	293	,000

Source: research paper database

Since the sample size is greater than 50 elements, the Kolmogorov-Smirnov normality test is chosen, whose interpretation is based on the following working hypotheses:

H0: Data distribution is normal

H1: Data distribution is not normal

For this, a confidence level of 95% and a significance level of $\alpha = 5\% = 0.05$ are used. Then, H0 is accepted if: p value (Sig.) $\geq \alpha$, and reject H0 if: p value (Sig.) $< \alpha$.

Then it is appreciated that the sig. values are less than 0.05 in all cases, therefore it is concluded that the distribution of the data is not normal.

Conclusion: since the data of the variables are not normally distributed, then the best statistic for hypothesis testing is the correlation test for ordered Spearman ranges.

Table 3. Correlations.

		Organizational climate	Leadership styles
Spearman's Rho	Organizational climate	Correlation coefficient	1,000
		Sig. (bilateral)	.
		N	293
	Leadership styles	Correlation coefficient	0.723**
		Sig. (bilateral)	0,000
		N	293

** The correlation is significant at the 0.01 (bilateral) level.

Source: research paper database

Then the nonparametric type test was performed: correlation for ordered Spearman ranges since the variables to be compared are qualitative ordinal type. Then he asks if: Is there a correlation between the variables "Organizational Climate" and "Leadership Styles"?

To verify this, the following statistical hypotheses are proposed:

H0: there is no correlation between the variables analyzed: $\rho = 0$.

H1: there is a correlation between the variables analyzed: $\rho \neq 0$.

For this, a confidence level of 95% and a significance level of $\alpha = 5\% = 0.05$ are used. Then, accept H0 if: Sig. $\geq \alpha$, and reject H0 if: Sig. $< \alpha$. Later:

a. The value obtained Sig. = 0.000 shown in the table, allows us to affirm with a confidence level of 95% that: if there is a correlation between the variables "Organizational climate" and "Leadership styles".

b. The value 0.723 indicates a considerable positive correlation according to the following values:

Table 4. Ranges for each type of correlation.

RANK	RELATION
-0.91 to -1.00	Perfect negative correlation
-0.76 to -0.90	Very strong negative correlation
-0.31 to -0.75	Considerable negative correlation
-0.11 to -0.50	Average negative correlation
-0.01 to -0.10	Weak negative correlation
0.00	No correlation
+0.01 to +0.10	Weak positive correlation
+0.11 to +0.50	Mean positive correlation
+0.51 to +0.75	Considerable positive correlation
+0.76 to +0.90	Very strong positive correlation
+0.91 to +1.00	Perfect positive correlation

Conclusion: the better the leadership style, the better the organizational climate. This is a considerable positive correlation (Spearman's Rho correlation coefficient (ρ) = 0.723).

Table 5. Organizational climate

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	Disagree	9	3,1	3,1	3,1
	Neither agree nor disagree	133	45,4	45,4	48,5
	I agree	145	49,5	49,5	98,0
	Totally agree	6	2,0	2,0	100,0
	Total	293	100,0	100,0	

Source: research paper database

This table shows the results of the responses to the items of the organizational climate questionnaire, where the 145 people said they agreed with the questions asked, 133 said they neither agreed nor disagreed; These are the highest values, while, the lowest value corresponds to those who indicated to fully agree with only 6 counts.

Table 6. Leadership styles

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	Strongly disagree	3	1,0	1,0	1,0
	Disagree	9	3,1	3,1	4,1
	Neither agree nor disagree	209	71,3	71,3	75,4
	I agree	68	23,2	23,2	98,6
	Totally agree	4	1,4	1,4	100,0
	Total	293	100,0	100,0	

Source: research paper database

This table shows the results of the responses to the items of the leadership styles questionnaire, where 209 people said they neither agreed nor disagreed with the questions asked, this was the highest value. The lowest value corresponds to those who indicated to strongly disagree with only 3 counts.

Table 7. Correlations.

		Organizational climate	Visionary Leadership Styles	
Spearman's Rho	Organizational climate	Correlation coefficient	1,000	0.762b
		Sig. (bilateral)	.	0.000a
		N	293	293
	Visionary Leadership Styles	Correlation coefficient	0.762**	1,000
		Sig. (bilateral)	0,000	.
		N	293	293

** . The correlation is significant at the 0.01 (bilateral) level.

Source: research paper database

The nonparametric type: correlation test for ordered Spearman ranges was performed since the variables to be compared are qualitative ordinal type. Then you ask yourself if: Is there a correlation between the variables "Organizational Climate" and "Visionary Leadership Styles"?

To verify this, the following statistical hypotheses are proposed:

H0: there is no correlation between the variables analyzed: $\rho = 0$.

H1: there is a correlation between the variables analyzed: $\rho \neq 0$.

For this, a confidence level of 95% and a significance level of $\alpha = 5\% = 0.05$ are used. Then, accept H_0 if: $\text{Sig.} \geq \alpha$, and reject H_0 if: $\text{Sig.} < \alpha$. Later:

to. The value obtained $\text{Sig.} = 0.000$ shown in the table, allows us to affirm with a confidence level of 95% that: if there is a correlation between the variables "Organizational climate" and "Visionary leadership styles".

b. The value 0.762 indicates a very strong positive correlation according to the values shown above.

Conclusion: the better the visionary leadership style, the better the organizational climate. This is a very strong positive correlation (Spearman's Rho correlation coefficient (ρ) = 0.723).

Table 8. Visionary leadership style.

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	Strongly disagree	7	2,4	2,4	2,4
	Disagree	18	6,1	6,1	8,5
	Neither agree nor disagree	148	50,5	50,5	59,0
	I agree	113	38,6	38,6	97,6
	Totally agree	7	2,4	2,4	100,0
	Total	293	100,0	100,0	

Source: research paper database.

This table shows the results of the answers to the items for the dimension visionary leadership styles, where 148 people said they neither agreed nor disagreed with the questions asked, 113 said they agreed, these are the highest values. The lowest values correspond to those who indicated strongly disagree and strongly agree with 7 counts for both cases.

Table 9. Correlations

			Organizational climate	Affiliative leadership style
Spearman's Rho	Organizational climate	Correlation coefficient	1,000	0.750b
		Sig. (bilateral)	.	0.000a
		N	293	293
	Affiliative leadership style	Correlation coefficient	0.750**	1,000
		Sig. (bilateral)	0,000	.
		N	293	293

** . The correlation is significant at the 0.01 (bilateral) level.

Source: research paper database.

The nonparametric type: correlation test for ordered Spearman ranges was performed since the variables to be compared are qualitative ordinal type. Then he asks if: Is there a correlation between the variables "Organizational climate" and "Affiliative leadership styles"?

To verify this, the following statistical hypotheses are proposed:

H_0 : there is no correlation between the variables analyzed: $\rho = 0$.

H_1 : there is a correlation between the variables analyzed: $\rho \neq 0$.

For this, a confidence level of 95% and a significance level of $\alpha = 5\% = 0.05$ are used. Then, accept H_0 if: $\text{Sig.} \geq \alpha$, and reject H_0 if: $\text{Sig.} < \alpha$. Later:

to. The value obtained $\text{Sig.} = 0.000$ shown in the table, allows us to affirm with a confidence level of 95% that: if there is a correlation between the variables "Organizational climate" and "Affiliative leadership styles".

b. The value 0.750 indicates a considerable positive correlation according to the values shown above.

Conclusion: the greater the affiliative leadership style, the better the organizational climate. This is a considerable positive correlation (Spearman's Rho correlation coefficient (ρ) = 0.750).

Table 10. Affiliative leadership style.

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	Strongly disagree	7	2,4	2,4	2,4
	Disagree	11	3,8	3,8	6,1
	Neither agree nor disagree	156	53,2	53,2	59,4
	I agree	111	37,9	37,9	97,3
	Totally agree	8	2,7	2,7	100,0
	Total	293	100,0	100,0	

Source: research paper database

This table shows the results of the answers to the items for the dimension affiliative leadership styles, where 156 people said they neither agreed nor disagreed with the questions asked, 111 said they agreed, these are the highest values. The lowest values correspond to those who indicated strongly disagree and strongly agree with 7 and 8 counts respectively.

Table 11. Correlations

			Organizational climate	Autocratic leadership style
Spearman's Rho	Organizational climate	Correlation coefficient	1,000	0.521b
		Sig. (bilateral)	.	0.000a
		N	293	293
	Autocratic leadership style	Correlation coefficient	0.521**	1,000
		Sig. (bilateral)	0,000	.
		N	293	293

** . The correlation is significant at the 0.01 (bilateral) level.

Source: research paper database

The nonparametric type: correlation test for ordered Spearman ranges was performed since the variables to be compared are qualitative ordinal type. So he asks if: Is there a correlation between the variables "Organizational Climate" and "Autocratic Leadership Style"?

To verify this, the following statistical hypotheses are proposed:

H0: there is no correlation between the variables analyzed: $\rho = 0$.

H1: there is a correlation between the variables analyzed: $\rho \neq 0$.

For this, a confidence level of 95% and a significance level of $\alpha = 5\% = 0.05$ are used. Then, accept H0 if: Sig. $\geq \alpha$, and reject H0 if: Sig. $< \alpha$. Later:

to. The value obtained Sig. = 0.000 shown in the table, allows us to affirm with a confidence level of 95% that: if there is a correlation between the variables "Organizational climate" and "Autocratic leadership style".

b. The value 0.521 indicates a considerable positive correlation according to the values shown above.

Conclusion: the greater the style of autocratic leadership, the greater the organizational climate. This is a considerable positive correlation (Spearman's Rho correlation coefficient (ρ) = 0.521).

Table 12. Autocratic leadership style.

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	Strongly disagree	3	1,0	1,0	1,0
	Disagree	12	4,1	4,1	5,1
	Neither agree nor disagree	205	70,0	70,0	75,1
	I agree	69	23,5	23,5	98,6
	Totally agree	4	1,4	1,4	100,0
	Total	293	100,0	100,0	

Source: research paper database

This table shows the results of the answers to the items for the dimension autocratic leadership styles, where 205 people said they neither agreed nor disagreed with the questions asked, this was the highest value. The lowest values correspond to those who indicated strongly disagree and strongly agree with 3 and 4 counts respectively.

Table 13. Correlations.

			Organizational climate	Dominant leadership style
Spearman's Rho	Organizational climate	Correlation coefficient	1,000	-0.149b
		Sig. (bilateral)	.	0.011a
		N	293	293
	Dominant leadership style	Correlation coefficient	-0.149*	1,000
		Sig. (bilateral)	0,011	.
		N	293	293

*. The correlation is significant at the level 0.05 (bilateral).

Source: research paper database

The nonparametric type: correlation test for ordered Spearman ranges was performed since the variables to be compared are qualitative ordinal type. Then he asks if: Is there a correlation between the variables "Organizational Climate" and "Dominant Leadership Style"?

To verify this, the following statistical hypotheses are proposed:

H0: there is no correlation between the variables analyzed: $\rho = 0$.

H1: there is a correlation between the variables analyzed: $\rho \neq 0$.

For this, a confidence level of 95% and a significance level of $\alpha = 5\% = 0.05$ are used. Then, accept H0 if: Sig. $\geq \alpha$, and reject H0 if: Sig. $< \alpha$. Later:

a. The value obtained Sig. = 0.011 shown in the table, allows us to affirm with a confidence level of 95% that: if there is a correlation between the variables "Organizational climate" and "Dominant leadership style".

b. The value -0.149 indicates an average negative correlation according to the values shown above.

In the dot scattering plot, shown below, used to analyze the relationship between the analyzed variables, a high point dispersion is observed, which is in accordance with the low value of $\rho = -0.149$. In addition, the negative slope of the line is displayed, which indicates an inversely proportional relationship between the variables.

Conclusion: the greater the dominant leadership style, the lower the organizational climate. This is an average negative correlation (Spearman's Rho correlation coefficient (ρ) = -0.149).

Table 14. Dominant leadership style.

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	Strongly disagree	2	,7	,7	,7
	Disagree	47	16,0	16,0	16,7
	Neither agree nor disagree	208	71,0	71,0	87,7
	I agree	34	11,6	11,6	99,3
	Totally agree	2	,7	,7	100,0
	Total	293	100,0	100,0	

Source: research paper database

This table shows the results of the responses to the items for the dominant leadership styles dimension, where 208 people said they neither agreed nor disagreed with the questions asked, this was the highest value. The lowest values correspond to those who indicated strongly disagree and strongly agree with 2 counts in both cases.

DISCUSSION.

The organizational climate, a subject of study, considers the relationship with the leadership styles of the management staff of the Faculty of Chemistry and Chemical Engineering at the Universidad Nacional Mayor de San Marcos. The research was based on the analysis of the existing problems during the covid-19 pandemic, with the aim of corroborating or contrasting possible internal conflicts between students, teachers, directors, administrators, a fact that highlights certain problems in the organizational climate expressed in an inadequate management of the leadership style that generates distortion in communications. On the other hand, there is some disorganization due to the issue of virtuality due to covid-19 and what is intended is to locate the problem to propose the solution of institutional problems, turning all these aspects into negative factors that do not favor the optimization of educational quality levels.

Considering the above, the findings allowed to determine that both students, teachers and administrators recognize with a higher percentage the visionary style of the directors of the Faculty of Chemistry and Chemical Engineering at the Universidad Nacional Mayor de San Marcos, which implies that the management staff inspires empathy, charismatic since it improves the organizational climate and even the institutional image. The managers have collaborated to face the problems of social isolation due to the pandemic generating opportunities that inspire confidence in others, which means that they are leadership styles of integral people with values.

The groups of students, teachers and administrators perceive a very good organizational climate despite the great limitations generated by the pandemic in all areas, which implies a stable virtual training environment for the Sanmarquina community orderly, integrated, identified and with a lot of motivation to promote a good organizational climate. It is evident that the Sanmarquina community from a critical point of view establishes a high organizational climate, with a tendency of very good managerial leadership. Expressed by the students, they indicate experiencing a good interpersonal coexistence.

To detail the above, the statistical results more accurately characterize the findings. Thus, in the first instance they show the existence of significant, considerable positive correlation between the organizational climate and managerial leadership from the perception of the students, with a value obtained 0.723, allows to affirm with a confidence level of 95% that: if there is a correlation between the variables "Organizational climate" and "Leadership styles", these results argue, That the director as a good leader manages to persuade and convince the members of the Sanmarquina community that the institutional plans are carried out in the best way, always trying to overcome

difficulties and risks that have to be faced during the pandemic. This agrees with Fretes (2020), who affirms that leaders are people with characteristics that distinguish them from others, from execution, creativity, with a vision of the future, communicating policies and formulating strategies, being democratic, participatory, collaborative or transformative, promoting innovation.

Analyzing the dimensions of the leadership style of the management staff of the Faculty of Chemistry and Chemical Engineering at the Universidad Nacional Mayor de San Marcos, it is possible to establish in the following cases:

Regarding the organizational climate and visionary leadership style of the management staff of the Faculty of Chemistry and Chemical Engineering at the Universidad Nacional Mayor de San Marcos, a result = 0.762 is appreciated, which according to (Hernández-Sampieri et al., 2017) It is shown that there is a very strong positive significant correlation, this value comparable with (Barrios et al., 2020), claim that the visionary style promotes an educational institution's community involvement. This is understood to promote a broader perspective by connecting the organizational environment with leadership with other people, whether in teaching, academic or administrative management.

Regarding organizational climate and affiliative leadership style of the management staff of the Faculty of Chemistry and Chemical Engineering at the Universidad Nacional Mayor de San Marcos, a result = 0.750 is appreciated, which according to (Hernández-Sampieri et al., 2017) It is shown that there is considerable positive significant correlation, this value comparable with (Sanchez, 2019) when he affirms that there is an important and direct relationship between affiliative leadership and organizational climate.

Regarding the organizational climate and autocratic leadership style of the management staff of the Faculty of Chemistry and Chemical Engineering at the Universidad Nacional Mayor de San Marcos, a result = 0.521 is appreciated, which according to (Hernández-Sampieri et al., 2017) It is shown that there is a significant positive correlation mean, this comparable value affirms that autocratic leadership is associated with less popular dictatorship with levels of desertion and wear of human resources.

Regarding the organizational climate and the dominant leadership style of the management staff of the Faculty of Chemistry and Chemical Engineering at the Universidad Nacional Mayor de San Marcos, a result = -0,149, which according to (Hernández-Sampieri et al., 2017) It is shown that there is an average negative correlation, this value comparable with (by Miguel, 2020), who claims that autocratic dominant leadership is associated with command and submission, tends to be stubborn and inclined to control.

CONCLUSIONS.

After interpreting the graphs, analyzing and discussing the results, it is concluded that:

There is a relationship between the organizational climate and leadership styles of the management staff of the Faculty of Chemistry and Chemical Engineering, Universidad Nacional Mayor de San Marcos during the covid-19 pandemic, this is reflected in the results obtained from an adequate organizational culture perceived by students, while the management leadership style adopts the visionary and affiliative models, While autocratic styles even the dominant one is not perceived, situation in the course of their managerial development:

The relationship between organizational climate and visionary leadership style is very strong positive, because it is evident that the management staff knows how to develop their talents, always with enthusiasm, creativity and good organization to achieve goals.

The relationship between organizational climate and affiliative leadership style is considerable positive, since it is evident that the managerial staff encourages listening, is sensitive to the needs of others and cultivates the care of others and everything that may happen to them.

The relationship between organizational climate and autocratic leadership style is medium positive, because due to the characteristics of this type of leadership, it is evident that of all the students surveyed practically no specific case could be identified.

The relationship between organizational climate and autocratic dominant leadership style is negative average, therefore, students do not visualize this type of leadership since they consider it as a negative model for the management staff of the Faculty of Chemistry and Chemical Engineering, Universidad Nacional Mayor de San Marcos.

Finally, it is concluded that students during the Covid-19 pandemic, managed to perceive in managers visionary and affiliative leadership styles as favorable attitudes that generated greater confidence and openness in such difficult times of confinement and virtuality.

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