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Artículos científicos

**La resiliencia y su relación con los rasgos favorables y
herramientas competitivas de los estudiantes universitarios en la
pandemia por covid-19**

***Resilience and its relationship with the favorable traits and competitive
tools of university students in the Covid-19 pandemic***

***Resiliência e sua relação com os traços favoráveis e ferramentas
competitivas de estudantes universitários na pandemia de covid-19***

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Resumen

La resiliencia es un tema significativo en la formación universitaria, el cual ha cobrado relevancia en los últimos años debido a la contingencia vivida durante y después del confinamiento por covid-19. Esto llevó a buscar dentro de las competencias adquiridas en este tiempo, aquellas que podrían ser movilizadas o actualizadas. Por tanto, esta investigación tuvo como objetivo determinar si la resiliencia está relacionada con el desarrollo de rasgos favorables y herramientas competitivas en los estudiantes universitarios. Para ello, el enfoque de investigación fue cuantitativo de tipo encuesta y correlacional. La información se obtuvo por medio de la Encuesta de Resiliencia, Rasgos Favorables y Herramientas Competitivas (E-RRHC). La muestra estuvo conformada por 6712 estudiantes de licenciatura de la Universidad Autónoma de Sinaloa. El análisis estadístico del instrumento se realizó con la correlación de Spearman. Entre los resultados podemos resaltar que los estudiantes universitarios tuvieron una mayor resiliencia a través del desarrollo de rasgos favorables y herramientas competitivas. Además, en la mayoría de los ítems, existió una correlación positiva moderada o positiva fuerte. En conclusión, se puede indicar que el proceso resiliente que sobrellevaron los estudiantes de la Universidad Autónoma de Sinaloa durante y después de la pandemia les dio la oportunidad de madurar. En síntesis, un estudiante con resiliencia académica se caracteriza por ser una persona responsable, meticulosa, constante, que trabaja los fracasos escolares y busca opciones de ser mejor cada día.

Palabras clave: competencias, educación superior, pandemia, resiliencia.

Abstract

Resilience is a significant topic in university education, it has gained relevance in recent years due to the contingency experienced during and after the confinement by Covid-19. The foregoing led to a search within the competencies acquired at this time, those that could be mobilized or updated. This research aimed to determine if resilience is related to the development of favorable traits and competitive tools in university students. The research approach was quantitative of the survey and correlational type. The information was obtained through the Survey of Resilience, Favorable Traits and Competitive Tools (E-RRHC). The sample was 6 712 undergraduate students from the Autonomous University of Sinaloa. The statistical analysis of the instrument was performed with Spearman's correlation. Among the most significant results we can point out that university students had greater resilience

through the development of favorable traits and competitive tools. In most of the items there is a moderate positive or strong positive correlation. It is reflected that the resilient process that the students of the Autonomous University of Sinaloa endured during and after the pandemic gave them the opportunity to mature and that is that the worst fall is when the human being learns to fly. A student with academic resilience is characterized by being a responsible, meticulous, constant person who works through school failures and looks for options to be better every day.

Keywords: skills, higher education, pandemic, resilience.

Resumo

A resiliência é um tema significativa no ensino universitário, que ganhou relevância nos últimos anos devido à contingência vivida durante e após o confinamento da covid-19. Isto levou a buscar, dentro das competências adquiridas naquele momento, aquelas que pudessem ser mobilizadas ou atualizadas. Portanto, esta pesquisa teve como objetivo determinar se a resiliência está relacionada ao desenvolvimento de características favoráveis e ferramentas competitivas em estudantes universitários. Para isso, a abordagem da pesquisa foi quantitativa do tipo survey e correlacional. As informações foram obtidas por meio da Pesquisa de Resiliência, Características Favoráveis e Ferramentas Competitivas (E-RRHC). A amostra foi composta por 6.712 estudantes de graduação da Universidade Autônoma de Sinaloa. A análise estatística do instrumento foi realizada por meio da correlação de Spearman. Dentre os resultados podemos destacar que os estudantes universitários apresentaram maior resiliência através do desenvolvimento de características favoráveis e ferramentas competitivas. Além disso, na maioria dos itens houve correlação positiva moderada ou positiva forte. Concluindo, pode-se indicar que o processo resiliente que os estudantes da Universidade Autônoma de Sinaloa enfrentaram durante e após a pandemia lhes deu a oportunidade de amadurecer. Em suma, um aluno com resiliência acadêmica se caracteriza por ser uma pessoa responsável, metódica, constante, que trabalha o fracasso escolar e busca opções para ser melhor a cada dia.

Palavras-chave: competências, ensino superior, pandemia, resiliência.

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Introduction

Resilience, favorable traits and competitive tools is a relevant topic in university education that has gained importance in recent years due to the contingency experienced during and after the covid-19 pandemic. In this regard, Casimiro et al. (2020) express that “resilient people use their neuropsychological capacities and resources in a positive way to face crises; they have high degrees of motivation to get ahead” (p. 456). For their part, Morán et al. (2019) point out that it is “the set of personal qualities that make us grow and develop more vigorously in adversity and have optimal functioning once the trauma has been overcome” (p. 2); for this, individuals must be able to identify their favorable traits and competitive tools to strengthen their personal and professional development processes.

For Barrero et al. (2018) resilience “is a capacity to rework life, including transforming adversity into an opportunity to act better in the face of various circumstances” (p. 125), while Caldera et al. (2016) explain that there are no statistically significant differences between the levels of resilience and the careers chosen by university students; in addition, they point out that it is most likely that they have acquired or developed certain minimum standards of resilience in their previous studies.

However, Casimiro et al. (2020) highlight that the level of emotional state and the reaction of university students to the covid-19 pandemic are negatively related to the emotional state, since it significantly increases the levels of stress, anxiety and anguish, to which can be added the fear of the personal, social and school environment.

For Gonçalves et al. (2021) “resilience plays an important role in maintaining people's mental health, especially during periods of crisis such as a pandemic” (p. 3). For this reason, it is affirmed that resilience can be a source of technological change, and can turn the teacher into a creative, innovative, self-motivated, self-taught being interested in expanding their digital skills (Rosales et al., 2021).

Along the same lines, Cervantes et al. (2022) found that “after the cancellation of face-to-face activities, the need to continue educational processes generated challenges that IFAD [Teacher Training and Refresher Institutions] have addressed through different adaptation, prioritization, and adjustment alternatives that imply changes in institutional dynamics” (p. 129). Therefore, they recommend recovering and systematizing the experiences lived during the pandemic and keeping them in mind in times of difficulty.

Authors such as Rizvi and Nabi (2021) showed in an investigation, carried out in India during the confinement by covid-19, the value of generating resilience in the face of

multiple challenges such as technological changes. This situation, therefore, became an opportunity for students to develop the problem-solving and adaptability skills they need in an uncertain environment that they will face when they enter the world of work; for this reason, the aforementioned authors conclude that resilience must be integrated into the educational process to guarantee said skills.

Now, Harvey et al. (2021) found in research carried out on Colombian students during the covid-19 pandemic that there is a weak direct correlation between stressful life events, aggressive reaction and resilience. Likewise, the correlation between resilience and coping strategies is direct and moderate on problem solving strategies and seeking social support. In addition, there is a moderate inverse correlation between resilience and emotional avoidance strategies and expression of coping difficulty. In the words of Harvey et al. (2021), "at higher levels of resilience [...] greater adaptability, which corroborates the catalytic role of resilience in times of pandemic" (p. 11).

For their part, Rosales et al. (2021), in an investigation carried out during the covid-19 contingency in Venezuela, found that the development of resilience and the utopia of virtual education have promoted the transformation of learning spaces through virtuality. In this sense, Cervantes et al. (2022) express that the pandemic is an opportunity for the generation of knowledge, for which it is necessary to recover and systematize the experience lived during confinement to face moments of difficulty.

On the other hand, Portillo (2022) explains that the exceptional situation we have experienced has forced us to use all the resources to face the difficulties, which would not have happened in normal face-to-face teaching conditions. Indeed, the confinement made it necessary to search within the acquired competences for those that could be mobilized and updated to put them into practice, which also revealed the existing deficiencies.

For this reason, Shahrill et al. (2021) investigated in times of confinement "how it was possible to change in a short period and continue the university academic semester, and look for alternatives to manage day to day in the midst of a pandemic crisis" (p. 700). From these questions, the authors found that blended learning opened up more opportunities to offer programs in a flexible, personalized, and student-centered way; likewise, it was possible to understand that physical and mental well-being are essential elements to overcome a situation like the one experienced.

Having explained the above, this article shows the results of a guided study with the objective of determining if resilience is related to the development of favorable traits and

competitive tools in university students. The results collected are relevant for the educational institution where the study was carried out, since they allow the identification of the situations that their students experience in order to establish support programs in the educational context and in the processes of social adaptation.

Method

The research approach was quantitative of the survey and correlational type. The information was obtained through the Survey of Resilience, Favorable Traits and Competitive Tools (E-RRHC), which was answered by undergraduate students from the four regional units that make up the Autonomous University of Sinaloa (UAS): (North 1216 , North Center 980, Center 2730 and South 1786). This instrument was sent in May 2022 in digital format through WhatsApp and had the support of the directors of the academic units, teachers, and group leaders. A voluntary response was obtained from 6712 students.

The E-RRHC (2022) was structured in three dimensions: resilience, favorable traits and competitive tools. It was validated by experts and with a Cronbach's alpha of 0.971. The dependent variable was built from the three dimensions and the independent variables concerned their development during and after the covid-19 confinement. For the investigation, the following working hypotheses were established:

H0. There is no relationship in the development of resilience, favorable traits and competitive tools with the experiences during and after the covid-19 confinement.

H1. There is a relationship between the development of resilience, favorable traits and competitive tools with experiences during and after confinement due to covid-19

The Spearman test statistic was performed for the survey questions that are related to during and after the experiences. A significance level (denoted as α or alpha) of 0.05 was taken into account.

Results

Students from 77 undergraduate degrees participated from a total of 189 programs offered, in 58 academic units and 17 higher-level extensions (Autonomous University of Sinaloa [UAS], 2022). Of the participants, 41.9% were women, 57.5% men, and 0.7% preferred not to respond.

The study was oriented to the analysis of the three categories (resilience, favorable traits and competitive tools) with the quantitative component: the relationship between resilience, favorable traits and competitive tools with the experiences during and after confinement by covid-19.

The results obtained from the Spearman correlation of the items during and after the confinement due to covid-19 and the percentage difference between them in the responses of "Agree" and "Strongly agree" are presented.

Table 1 shows the Resilience category in the Adaptation and Ambiguity subcategories. For the first subcategory, the item "Did you feel safe and confident in the face of the new challenges and continued your educational process" during and after the covid-19 confinement, there is a positive correlation of 0.537; however, there is a decrease of 13.1% in the responses of "Agree" and "Strongly agree". The item "It is important to continue with school activities" has a positive correlation of 0.581, with an increase of 6.3% of confidence to continue with the studies. The item "It is important to stay interested in school activities" has a correlation of 0.701, that is, it is positive and high, with a percentage increase of 8.2 in responses after confinement.

When asked about the affective relationship with oneself, during and after confinement due to covid-19, the correlation was high positive (0.798), and an increase of 4.3%. When questioning "You are a determined person", the result of the correlation was 0.728 (high positive) and the percentage increased by 7.8 points. In what corresponds to "You have the ability to overcome difficult times", the correlation was high positive (0.755) with an increase of 4.7%. The item "You have the ability to accept policies and rules that are established as part of the educational process" (0.797) the correlation was high positive and an increase between during and after of 2.5%.

In the "Ambiguity" subcategory, in the item "You analyze a situation from different points of view" (0.917), the correlation was very high positive with an increase of 3.7% between what the students experienced during and after confinement. The item "You carry out the activities of the educational process even without wanting to or understanding" (0.622) the correlation was moderately positive and an increase of 9.7% of students who carry out the activities without understanding. Regarding these results, the ambiguity of the educational process is made visible in a positive way.

Table 1. Resilience of the students of the Autonomous University of Sinaloa in the face of adaptation and ambiguity during and after confinement by covid-19

Subcategoríe	Item	p value	Difference
Adaptation	Did you feel safe and confident in the face of the new challenges and continued your educational process	0.537	13.1-
	It is important to continue with school activities	0.581	6.3+
	It is important to stay interested in school activities	0.701	8.2+
	There is an affective relationship with yourself between during and after confinement due to covid-19	0.798	4.3+
	You are a determined person	0.728	7.8+
	You have the ability to overcome difficult times	0.755	4.7+
	You have the ability to accept policies and rules that are established as part of the educational process	0.797	2.5+
Ambigüedad	You analyze a situation from different points of view	0.917	3.7+
	You carry out the activities of the educational process even without wanting to or understanding	0.622	9.7+

Source: Own elaboration

Table 2 presents the results obtained from the Spearman correlation of the items during and after the confinement by covid-19 in the category "Favorable traits" and the subcategories "Meticulous", "Curiosity", "Tolerance", "Competitiveness" and "Social Ties". The difference in percentage between during and after confinement in the responses of "Frequently" and "Always" is also detailed.

In the "Meticulous" subcategory, the item "You know what your duties and obligations are to successfully complete your school activities" shows a high positive correlation (0.768) and an increase of 8.4%. It is linked to "Do you consider yourself a person dedicated to your learning process" with the result of 0.737 (high positive) and with an increase of 10.1%. For the item "You comply with what you propose for your educational process" the correlation was 0.744 (high positive) and an increase of 7.5%. When asking if

"You are a careful and/or detailed person in your learning process", the correlation was high positive (0.839), and the difference decreased by 3.4%.

In the item "You remain interested in your educational process", the correlation was moderately positive (0.692) and an increase of 12.7% between during and after confinement. There is a direct relationship with the item "You dedicate enough time to successfully achieve your educational process", which has a high positive correlation (0.715) and an increase in the percentage of 8.5 points.

In the "Curiosity" subcategory, in the item "You are a creative person in your educational process", the correlation was 0.715 (high positive) and an increase of 7.5% in the responses of "Frequently" and "Always" between the during and after confinement by covid-19. This result is complemented by asking "Do you consider that after confinement due to covid-19, you are flexible in your educational process", since 68% of the students who participated consider it in the responses of "Frequently" and "Always".

Now, in the subcategory "Tolerance", the item "Are you tolerant of changes in your educational process" had a result of 0.716 (high positive correlation) and there is an increase of 7.2% of students who consider themselves to be more tolerant after confinement. However, the item "Do you enjoy your educational process" has a moderate positive correlation (0.464) and 19.9% estimate that they enjoy the educational process more after the confinement due to covid-19. This may be an indicator that students value their education more after lockdown.

In this same category, the item "Are you able to cope with bad weather or adversity in your educational process" has a high positive correlation and an increase of 9.4% of students consider themselves capable of coping with adversity during the educational process after covid -19. The item "You regret things that you cannot change and/or do something" had 0.739 as a result; Although it is a high positive correlation, there is a difference of 4.6% of students who during confinement regretted things that they cannot change and/or do.

In the item "You associate with people who don't like you" (0.739) there is a high positive correlation and there is no difference in the percentages between during and after confinement. And the item "You find it difficult to accept the suggestions of the people who are part of your educational process" also had a high positive correlation, and there is a decrease of 1% after confinement.

All items in the "Competitiveness" subcategory have a high positive correlation. The result of the item "Do you consider yourself a competitive person and you meet the goals of

your educational process" is 0.750 and has an increase of 7.1% of students who consider themselves more competitive. The item "In the face of an adverse situation you are able to do and continue school activities and meet the goals that they imply" the correlation is 0.739 with an increase of 7%.

In the item "Do you consider your academic training important" the correlation was 0.756 and there was an increase of 6.5% in the response after confinement. In the question "Are you proud of achieving what you propose regarding your educational process" the correlation is high positive (0.757), and 6.9% value the importance of their academic training after confinement. The item "You are a self-disciplined person" (0.763) is positive high, with an increase of 6.8 points after confinement.

In this same subcategory, the item "Do you think your life has meaning" has a high positive correlation (0.726) and the difference in responses during and after is 11 percentage points. And when asking if "You are a person who can emerge victorious from a difficult situation" the correlation was 0.794, with a percentage increase of 11 points in the responses of "Frequently" and "Always" between during and after confinement.

Regarding the category "Social ties", there are two similar items: in the first, students are asked if they interact (in person and/or online) with other people besides those who live at home and close relatives, and in the second, if they interact (in person and/or online) with other classmates and/or professors from their university, in addition to those from their school group and professors who teach them. Due to the essence of the items, the correlation was not obtained, but a percentage. The first had a result of 58.4% and the second of 53.3%.

However, the correlation of the item "Do you participate in activities organized by the university" during and after confinement was moderately positive (0.511) with a downward percentage of 8.9 points. And the willingness during and after the pandemic to help your peers in their learning process was 0.681, an increase of 9.4 percent.

Table 2. Resilience of the students of the Autonomous University of Sinaloa in the meticulous, curiosity, tolerance, competitiveness and social ties during and after the confinement by covid-19

Subcategoríe	Item	p value	Diferenc e
Meticulous	You know what your duties and obligations are to successfully complete your school activities	0.768	8.4+
	Do you consider yourself a person dedicated to your learning process	0.737	10.1+
	You comply with what you propose for your educational process	0.744	7.5+
	You are a careful and/or detailed person in your learning process	0.839	3.4-
	You remain interested in your educational process	0.692	12.7+
	You dedicate enough time to successfully achieve your educational process	0.715	8.5+
Curiosity	You are a creative person in your educational process	0.780	3.2-
Tolerance	Are you tolerant of changes in your educational process	0.716	7.2+
	Do you enjoy your educational process	0.464	19.9+
	Are you able to cope with bad weather or adversity in your educational process	0.707	9.4+
	You regret things that you cannot change and/or do something	0.739	4.6+
	You associate with people who don't like you	0.783	0
	You find it difficult to accept the suggestions of the people who are part of your educational process	0.841	1-
Competitiveness	Do you consider yourself a competitive person and you meet the goals of your educational process	0.750	7.1+
	In the face of an adverse situation you are able to do and continue school activities and meet the goals that they imply	0.739	7+

	Do you consider your academic training important	0.756	6.5+
	Are you proud of achieving what you propose regarding your educational process	0.757	6.9+
	You are a self-disciplined person	0.763	6.8+
	Do you think your life has meaning	0.726	11+
	You are a person who can emerge victorious from a difficult situation	0.794	11+
Social Ties	You look for opportunities to interact (face-to-face and/or online) with people other than those who live in your household and close family members.	N/A	
	You look for opportunities to interact (face-to-face and/or online) with other classmates and/or professors from your university, in addition to those of your school group and professors who teach you.	N/A	
	Do you participate in activities organized by the university	0.511	8.9-
	You are willing to help your classmates in their learning process.	0.681	9.4+

Source: Own elaboration

The last category of the instrument was "Competitive Tools", which covers "Organization", "Communication" and "Responsibility" (Table 3). In the first subcategory, all the items have a high positive correlation, with a difference in percentages. In "You are able to encourage the educational process" (0.771) there is an increase of 9.5 points in the after confinement. In the item "Are you able to organize and encourage your classmates to develop the educational process" (0.780) has an increase of 7.6%; when questioning "Are you able to manage the progression of your own learning process" (0.771) there is an increase of 6.3% after confinement and in "Are you able to work as a team to prepare school work" (0.752) the percentage increased by 7.2 points after confinement. The importance of being organized is rescued not only in the educational process, but also in daily life.

In the "Communication" subcategory, the item "You propose ideas to the management of your school to improve the educational process" (0.886) was positive high; however, the difference in percentage leans to during the pandemic with 9.8%. The question "Are you able to establish communication with your classmates and teachers to strengthen your educational process" (0.620) is moderately positive with a percentage difference of

13.3% after confinement. And "You consider yourself an enthusiastic person, you also like to speak and participate in classes, you present your ideas in such a way that you attract the attention of others" (0.738) is positive high, with an increase of 8.8% after the pandemic. Communication is an essential element to express ideas, feelings, emotions, etc., hence the importance of this category as an indispensable means for the educational process.

In the "Responsibility" subcategory, in the item "You are a person responsible for your own educational process" (0.766) the correlation was high positive and a difference of 8% after confinement. Finally, the item "You have the digital skills to develop your educational process" (0.684) was moderately positive and an increase of 11.8% after isolation. This means that the value of responsibility in the educational process increased after the confinement, that is, what the students experienced could have made them a little more aware of their learning process.

Table 3. Development of the resilience of the students of the Autonomous University of Sinaloa in the category Competitive Tools during and after the confinement by covid-19

Subcategoríe	Item	p value	Difference
Organization	You are able to encourage the educational process	0.771	9.5+
	Are you able to organize and encourage your classmates to develop the educational process	0.780	7.6+
	Are you able to manage the progression of your own learning process	0.771	6.3+
	Are you able to work as a team to prepare school work	0.752	7.2+
Communication	You propose ideas to the management of your school to improve the educational process	0.886	9.8+
	Are you able to establish communication with your classmates and teachers to strengthen your educational process	0.620	13.3+
	You consider yourself an enthusiastic person, you also like to speak and participate in classes, you present your ideas in such a way that you attract the attention of others	0.738	8.8+
Responsibility	You are a person responsible for your own educational process	0.766	8+
	You have the digital skills to develop your educational process	0.684	11.8+

Source: Own elaboration

When observing the correlations of each one of the items, it can be affirmed that there is a moderate positive or strong positive correlation in all of them, which indicates that resilience is positively related to favorable traits and competitive tools.

Discussion

Due to the nature of the instrument used, a discussion by categories is carried out. In the "Adaptation" subcategory of the "Resilience" category, although there is a decrease in the security and confidence that students felt during confinement, their interest in continuing their studies made them adapt to the changes and overcome the ambiguity that I lived in those moments. On this matter, Vinkers et al. (2020) mention that it is important to promote social connection, since loneliness and isolation make this crisis different compared to others. In fact, adaptation is a process that can be achieved through coexistence (although in confinement it was by digital means). In this case, support groups (in person or online) are an option.

In this same subcategory, a finding suggests that students adapt, although this factor alone does not influence how they get used to changes. It is necessary to realize that instead of focusing on the individual subject, there must be a meaningful justification for the student to carry out activities to overcome the resilience linked to the educational process. This is considered because there are studies that indicate that university students tend to be resilient in their academic process (Caldera et al., 2016; Harvey, 2021).

In the "Ambiguity" subcategory of the aforementioned category, the importance of university students having the ability to self-manage their learning as part of a training process is highlighted, since "a self-management process requires specific individual conditions, mentalities and skills that must be created or reinforced. There are two needs for the self-management of knowledge. On the one hand, the obligation and, on the other, sharing it, both explained by responsibility" (Rodríguez, 2022, p. 223).

In the "Meticulous" subcategory, a positive trend towards care in the educational process is reflected. Therefore, in the training of a university student, it is necessary that they have the teaching support to develop the necessary skills, according to the educational level studied and the school grade they are studying.

In relation to the subcategory "Curiosity", it is argued that, regarding the results, the literature provides the following evidence:

[If the teacher] takes care of the design of training content to activate the student's curiosity, retain their interest and seek the job applicability of what is going to be learned, the coherence in the learning content, it is likely that the student not only feels motivated to carry out their academic process at home, but the option of dropping out is reduced (Garcés and Mora, 2020, p. 54).

Thus, the strategies together with the adaptation of university students constitute an option to continue the educational process.

In this same category, the results of the "Tolerance" subcategory showed that students valued their education more after the covid-19 health emergency. Also, a minimum percentage (1%) of students decreased between during and after the confinement in terms of accepting the suggestions of other people who are part of the educational process. Contrary to the present investigation, another developed in the Mexican context by Gervacio and Castillo (2021) points out that young people during the covid-19 pandemic had developed feelings of anger, frustration, and little tolerance for the people around them.,

Regarding the subcategory "Competitiveness", Talavera et al. (2021) explain that in the transition from university life there is greater competitiveness, which is why students need to adapt to a new role, norms and academic responsibilities. In this sense, and contrary to the results of the present investigation, Estrada-Araoz et al. (2020) consider that students, despite knowing the benefits and advantages of the educational process, do not consider it important and do not feel comfortable in virtual environments.

About this same subcategory, and based on the positive and high correlation results when asked about how they overcome the difficulties of the educational process, some authors express that the accumulated values and experiences manage to "give meaning and even create new meanings to the events and avoid collapsing in the face of despair caused by the extreme situation" (Bautista et al., 2022, p. 11). This is one of the ways to find the meaning of life. In other words, these types of circumstances cannot be reduced to rules or concepts, but students must become aware and be attentive to events.

In relation to the "Social ties" established by the young people surveyed, Lozano et al. (2020) mention that the impact of confinement had repercussions on social capital (which for Bourdieu refers to social ties and networks). These authors highlight the strong impact of confinement on university students, especially in the psychological and academic field.

For the category of "Competitive tools" in the subcategory of "Organization", the importance of having an order in the educational process is made visible, as well as knowing how to identify, relate, compare and classify educational activities to achieve them successfully. In the words of Molina et al. (2021), "the role of the organization is essential, since it coordinates human efforts (functions, activities, responsibilities) and material resources (endowment, distribution, assignments)" (p. 290).

For the "Communication" subcategory, it is important to highlight that dialogue is necessary for any activity, be it educational, work, professional or personal. In this regard, as Freire mentions, the horizontal dialogue that must be established in the educational process is the basis for communication.

Lastly, the "Responsibility" subcategory had an increase after confinement. Therefore, other exploratory studies would have to be carried out to find out how they lived and experienced the educational process during the pandemic, and what opinion they have about responsibility.

Conclusion

The study showed that there is a significant relationship between favorable traits, competitive tools and the resilience experienced during and after the covid-19 pandemic. However, there are particularities in the interest, participation, activities to be developed in the educational process, as well as in the development of communication between classmates and the use of digital skills in the learning process. All this could be part of a new research study that asks the following question: is there a relationship between the responsibility of the educational process and academic resilience?

On the other hand, it can be seen that the resilient process that the students of the Autonomous University of Sinaloa endured during and after the covid-19 pandemic gave them the opportunity to mature. In other words, adaptation traits and socio-emotional skills are perceived that allowed favoring academic development, since all the effort dedicated to fulfilling school tasks inevitably generates a process of personal self-improvement.

Based on the previously mentioned results, it can be affirmed that university students made an effort to face the challenges of not losing academic rhythm and adapting to the conditions during and after confinement. A student with academic resilience is characterized by responsibility, meticulousness, and perseverance. She deals with school setbacks and looks for opportunities to constantly improve. He is the one who maintains his strength in the face of daily adversities, surpassing himself and forging his own destiny. This process of reconstruction, recreation and readaptation is reflected in the notable change observed upon returning to face-to-face classes.

However, it is evident that not everything is positive, and there are areas of opportunity for educational institutions with regard to implementing actions that reinforce

both resilience and the processes that contribute to the adaptability and academic progress of students. In this sense, the analysis of the phenomenon from the perspective of teachers remains pending.

Future lines of research

In future research on this topic, it is suggested to interview students from the Autonomous University of Sinaloa to determine their competencies and weaknesses, which would lead to action plans to strengthen educational quality. It is also proposed to carry out the study on teachers, since from their vision adequate training could be established to improve education and university training. Likewise, it would be interesting to study resilience by age ranges and by educational level, as well as delve into resilience models and methods to broaden the field of research on this topic.

References

- Barrero, Á., Riaño, K. y Rincón, P. (2018). Construyendo el concepto de la resiliencia: una revisión de la literatura. *Poiésis*, (35), 121–127. doi.org/10.21501/16920945.2966.
- Bautista, E., Quintana, N. y Sánchez, O. A. (2022). Educación a distancia con estudiantes del nivel superior en periodo de cuarentena por COVID-19. *Innoeduca. International Journal of Technology and Educational Innovation*, 8(2), 5-13. doi.org/10.24310/innoeduca.2022.v8i2.12257.
- Caldera, J., Aceves, B. y Reynoso, O. (2016). Resiliencia en estudiantes universitarios. Un estudio comparado entre carreras. *Psicogente*, 19(36), 227-239. doi.org/10.17081/psico.19.36.1294.
- Casimiro, W., Casimiro, N., Barbachán, E. and Casimiro, J. (2020). Stress, anguish, anxiety and resilience of university teachers in the face of Covid-19. *Utopía y Praxis Latinoamericana*, 25(7), 453-464.
- Cervantes, E., Gutiérrez, P. y Ronquillo, C. (2022). La formación docente en el estado de Chihuahua: entre el desafío sanitario y la resiliencia docente. *Nóesis. Revista de Ciencias Sociales*, 31(61), 89-113. doi.org/10.20983/noesis.2022.1.6.
- Estrada-Araoz, E., Gallegos-Ramos, N., Mamani-Uchasara, H. J. y Huaypar-Loayza, K. (2020). Actitud de los estudiantes universitarios frente a la educación virtual en tiempos de la pandemia de COVID-19. *Revista Brasileira de Educação do Campo*, 5. doi.org/10.20873/uft.rbec.e10237.

- Garcés, J. y Mora, C. (2020). Estrategias de aprendizaje para mitigar la deserción estudiantil en el marco de la COVID-19. *SUMMA. Revista Disciplinaria en Ciencias Económicas y Sociales*, 2(especial), 49-55. doi.org/10.47666/summa.2.esp.06.
- Gervacio, J. H. y Castillo, E. B. (2021). Impactos de la pandemia covid-19 en el rendimiento escolar durante la transición a la educación virtual. *Revista Pedagógica*, 23, 1-29. doi.org/10.22196/rp.v22i0.6153.
- Gonçalves, M., Freires, L., Tavares, J., Vilar, R. and Gouveia, V. (2021). Fear of COVID and trait anxiety: Mediation of resilience in university students. *Psicología: Teoría e Práctica*, 23(1), 1–16. doi:10.5935/1980-6906/ePTPC19139.
- Harvey, J., Arteaga, K., Córdoba, K. y Obando, L. (2021). Eventos vitales estresantes, estrategias de afrontamiento y resiliencia en adolescentes en contexto de pandemia. *Psicogente*, 24(46), 1-17. doi:10.17081/psico.24.46.4789.
- Lozano, A., Fernández-Prados, J., Figueredo, V. y Martínez, A. (2020). Impactos del confinamiento por el COVID-19 entre universitarios: satisfacción vital, resiliencia y capital social online. *International Journal of Sociology of Education*, 79-104. doi.org/10.17583/rise.2020.5925.
- Molina, T., Lizcano, J., Álvarez, S. R. y Camargo, T. T. (2021). Crisis estudiantil en pandemia. ¿Cómo valoran los estudiantes universitarios la educación virtual? *Revista Conrado*, 17(80), 283-294.
- Morán, M., Finez, M., Menezes, A., Pérez, M., Urchaga, J. y Vallejo, G. (2019). Estrategias de afrontamiento que predicen mayor resiliencia. *Revista INFAD de Psicología. International Journal of Developmental and Educational Psychology*, 4(1), 183–190. doi.org/10.17060/ijodaep.2019.n1.v4.1542.
- Portillo, J., Romero, A. y Tejada, E. (2022). Competencia Digital Docente en el País Vasco durante la pandemia del COVID-19. *Revista Latinoamericana de Tecnología Educativa*, 21(1). doi.org/10.17398/1695-288X.21.1.57.
- Rizvi, Y. and Nabi, A. (2021). Transformation of learning from real to virtual: an exploratory-descriptive analysis of issues and challenges. *Journal of Research in Innovative Teaching & Learning*, 14(1), pp. 5-17. doi.org/10.1108/JRIT-10-2020-0052.
- Rodríguez, E. (2022). La TIC y la autogestión del conocimiento en la Educación Superior. *Revista Universidad y Sociedad*, 14(6), 222-235.

- Rosales, J., Alvarado de Salas, A. y Linares, J. (2021). Educación virtual en tiempos de contingencia. Un acercamiento a la realidad del docente venezolano. *Revista Latinoamericana de Estudios Educativos*, 51(Esp-2021), 153-180. doi.org/10.48102/rlee.2021.51.ESPECIAL.453
- Shahrill, M., Petra, M. I., Naing, L., Yacob, J., Santos, J. H. and Aziz, A. B. A. (2021). New norms and opportunities from the COVID-19 pandemic crisis in a higher education setting: Perspectives from Universiti Brunei Darussalam. *International Journal of Educational Management*, 35(3), pp. 700-712. doi.org/10.1108/IJEM-07-2020-0347
- Talavera, I., Zela, C., Calcina, S. y Castillo, J. (2021). Impacto de la COVID-19 en el estrés académico en estudiantes universitarios. *Dominio de las Ciencias*, 7(4), 1673-1688. dx.doi.org/10.23857/dc.v7i3.2077.
- Universidad Autónoma de Sinaloa [UAS]. (2022). *Primer informe*. UAS 2021-2022. Dr. Jesús Madueña Molina. https://sau.uas.edu.mx/pdf/1er_Informe_UAS_2021-2022.pdf
- Vinkers, C. H., van Amelsvoort, T., Bisson, J. I., Branchi, I., Cryan, J. F., Domschke, K., Howes, O. D., Manchia, M., Pinto, L., de Quervain, D., Schmidt, M. V. and van der Wee, N. J. A. (2020). Stress Resilience during the Coronavirus Pandemic. *European Neuropsychopharmacology*, 35, 12–16. doi.org/10.1016/j.euroneuro.2020.05.003.

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