

Resilient coping and future expectations in university students in Peru during the pandemic

Afrontamiento resiliente y expectativas de futuro en estudiantes universitarios de Perú durante la pandemia

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ABSTRACT

Objective: To determine the relationship between resilient coping and future expectations.

Methods: The approach was exclusively quantitative, observational, prospective, cross-sectional, and correlational in design. The participants were 2202 students from the (UNHEVAL, Perú), and the instruments resilient coping scale and the future expectations scale were used, which were digitized to be applied. A correlation analysis was performed using Spearman's Rho non-parametric statistical test.

Results: The level of future expectations where the largest number of students is located was high, with 55.6%, and at the same time, 53.4% of the students manifested medium-level resilient coping. The main finding is that university students obtained a significant relationship between resilient coping and future expectations ($r_s=0.39$; $p=0.000$), as in future expectations with the three dimensions of resilient coping, personal resilient coping ($r_s=0.36$; $p=0.000$), social resilient coping ($r_s=0.38$; $p=0.000$) and spiritual resilient coping ($r_s=0.18$; $p=0.000$).

Conclusions: There is a statistically significant and positive relationship between resilient coping and future expectations in students (UNHEVAL, Perú).

Keywords: Psychological Resilience; Spiritual Coping; Subjective Well-being; Students; COVID-19.

RESUMEN

Objetivo: Determinar la relación entre el afrontamiento resiliente y las expectativas de futuro.

Métodos: El enfoque fue exclusivamente cuantitativo, observacional, prospectivo, transversal y de diseño correlacional. Participaron 2202 estudiantes de la (UNHEVAL, Perú), y se utilizaron los instrumentos Escala de Afrontamiento Resiliente y Escala de Expectativas de Futuro, los cuales fueron digitalizados para su aplicación. Se realizó un análisis de correlación mediante la prueba estadística no paramétrica Rho de Spearman.

Resultados: El nivel de expectativas de futuro donde se ubica la mayor cantidad de estudiantes fue alto con un 55,6 %, y a su vez el 53,4 % de los estudiantes manifestaron un afrontamiento resiliente de nivel medio. El principal hallazgo es que los estudiantes universitarios obtuvieron una relación significativa entre el afrontamiento resiliente y las expectativas de futuro ($r_s=0,39$; $p=0,000$), así como en las expectativas de futuro con las tres dimensiones del afrontamiento resiliente, afrontamiento resiliente personal ($r_s=0,36$; $p=0,000$), afrontamiento resiliente social ($r_s=0,38$; $p=0,000$) y afrontamiento resiliente espiritual ($r_s=0,18$; $p=0,000$).

Conclusiones: Existe una relación estadísticamente significativa y positiva entre el afrontamiento resiliente y las expectativas de futuro en los estudiantes (UNHEVAL, Perú).

Palabras clave: Resiliencia Psicológica; afrontamiento espiritual; Bienestar subjetivo; Estudiantes; COVID-19.

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Introduction

COVID-19 has been generating very extreme socio-cultural complexities due to its duration and direct impact on millions of individuals, impacting human relations, public health, socioeconomic indicators, and education. ⁽¹⁾ In this context, university students have been facing the complexities of moving from face-to-face to virtual classes, causing physical

isolation between teacher and student-student. ⁽²⁾ This scenario caused mental health problems in students, such as sleep problems, anxiety problems, depression, and hopelessness (Tamayo et al., 202), causing a radical change that included affectations on their health and emotional well-being. ⁽³⁾

The preceding reaffirms that the university, as the space where students build a large part of their identity, has the challenge of becoming an entity that, as part of the integral formation of the student, spreads enthusiasm, joy, and optimism. Of the same, educate the student, developing in them the ability to assume positive vital attitudes, in case their life horizon becomes uncertain, sad, or adverse, for example, when they are exposed to situations such as COVID-19; ⁽⁴⁾ especially when the population, especially young people, has seen their mental health compromised, giving rise to a variety of disorders, beyond the fact that resilient personal strengths have also appeared in the form of predictors of mental health. ⁽⁵⁾

Resilient coping in university students

Resilient student coping is the process that allows students to achieve successful results after facing adverse and unfavorable situations. ⁽⁶⁾ In this research, it is assumed that the process of facing adversities related to studies and achieving positive results despite stressful situations. ⁽⁷⁾ According to the research consulted, university students can face numerous challenges during their stay at the university, such as evaluations, academic tasks, and managing relational changes, ^(8,9) We can assess the above as micro stressors. However, they have implications for their health since, on occasion, they lead to negative psychological and behavioral consequences that affect their academic performance, ⁽¹⁰⁾ which is essential to achieving the educational objectives. ⁽⁷⁾

It has recently been proposed that resilience is associated with future expectations. ^(11,12) In this way, subjects with future expectations employ the necessary strategies to achieve their objectives since they hope to achieve them. In addition, students with high future expectations show higher levels of health and general well-being. ⁽¹³⁻¹⁵⁾ Resilient coping, in addition to being related to future expectations, is associated with life satisfaction and perceived well-being. ^(16,17) Thus, students with high levels of resilience also show high levels of self-regulation, academic efficacy, and commitment to studies, in addition to low levels of stress and exhaustion. ⁽¹⁸⁾

Resilience represents a fundamental element to achieving academic requirements, goals, and personal objectives (future expectations) because overcoming adversity, perseverance and tenacity are resources that facilitate coping with the irregularities that occur are exposed during the race, parallel to the events of their personal life. ⁽¹⁹⁾ Resilience is also a form of intelligence, which arises from the desires and expectations of the person to achieve the goals that constitute their life project; and it is evident in situations of suffering, stress, and

uncertainty, as well as in circumstances of desire and future projection (future expectations). There is a clear interrelation between resilience, well-being, and coping; highlighting that people who achieve resilience who experience high levels of psychological well-being; achieve this through the application of specific strategies for coping based on correct identification of problems, their evaluation, and the search for positive solution alternatives. ⁽²⁰⁾ An investigation whose objective was to investigate the mental and psychological impact of COVID-19 and associated factors in a sample of Portuguese higher education students found that hope and resistant coping contributed to reducing the probability of experiencing depression, anxiety, and stress. ⁽²¹⁾

Resilience, either directly or meditational, predicts the perception of the student's academic performance. Likewise, family functioning could be a significant predictor of academic performance, mainly when said family dynamics help the person acquire self-confidence, improve their social behavior based on an excellent axiological projection, and develop and practice personal skills and attitudes in a consistent manner. ⁽²²⁾ A study whose objective was to determine the level of mental health in university adolescents and the influence of resilient skills as possible predictors on it found that when protective mechanisms are found, people are better prepared to face complex situations such as COVID-19. ¹⁹ and other events of daily life, when the person develops a resilient profile, as a consequence, he enters into a wide range of healthy behaviors partially predicts mental health. ⁽⁵⁾ On the other hand, social support can influence the resilient behavior of students, given that there is a positive and direct correlation between perceived social support and level of resilience, as well as a significant prevalence of positive coping attitudes regarding negative situations experienced during the study COVID-19 isolation. ⁽²³⁾

An investigation in Germany in which the resilient functioning of students was explored for nine months before COVID-19 and once during the first lockdown in Germany shows relatively stable resistant functioning trajectories, associating self-care with a more extraordinary resilient functioning trajectory. In other words, self-care is highlighted to counteract stressors before and during the pandemic. ⁽²⁴⁾ While in Australia, other research found that during COVID-19, adolescents showed resilience and capacity for positive experiences and that most of these adolescents used active coping strategies during the unpredictable and rapidly evolving situations posed by COVID-19. ⁽²⁵⁾

Future expectations of university students

From the sociocognitive approach, positive academic expectations directly affect satisfaction and permanence in studies, which represents a brake on the dropout problem. ⁽²⁶⁾ This research assumes future expectations of the graduation projections of the students' training process, whether they are educational or labor. ⁽²⁷⁾ Regarding future expectations, for a student to complete a university career, they need to develop study habits aligned with

learning expectations and motivations; by increasing the achievement of their expectations, they will have greater motivation. ⁽²⁸⁾ The expectations correspond to the interaction between the student and the situation in which they develop in the university context, that is, when they interact with university services, which is an excellent predictor of goal achievement and educational results. ⁽²⁹⁾

The factors determining expectations are previous experiences of success and failure, feelings of frustration, individual effort, and will. However, these would not only depend on the person but are determined by social structures that could hinder or facilitate the trajectories of the students. It is of vital importance, then, to know the future expectations of university students, related to their academic, occupational, and well-being future, so that universities can implement training programs that cover these needs and that would later revert to an essential benefit in society. ⁽³⁰⁾

Some determining elements of future expectations in university students are the images of the future. An investigation carried out in Helsinki (Finland) specified that the images of the future offer a close and interactive relationship between future thinking and students; the researchers specified that "in order to build meaningful future ideas in students, it is necessary to be based on an effective pedagogy that prioritizes the necessary transversal learning. This pedagogy should prioritize students' curiosity about the future and their recurring thoughts. He also emphasized that students have hopes and fears related to technology and its uses in the professional field. Similarly, teachers should help and accompany students to discuss potential opportunities and future expectations. ⁽³¹⁾

In short, university students could have different future expectations about the type of resilient coping. Also, resilient coping and the future expectations that a student has are very important because it directly impacts their performance and will produce high expectations for the future in the academic and work fields that will ultimately affect their well-being.

This study aimed to determine the relationship between resilient coping and future expectations in students from the UNHEVAL, Peru, COVID-19 context.

Methodology

Type of study

The study is part of the area of social sciences and responds to a positivist paradigm of quantitative, non-experimental, cross-sectional, and correlational design.

Population and sample

The population consisted of 2,202 university students enrolled in the II Semester of the 2021 Academic Year, UNHEVAL, Peru. Due to the access facilities, 100% of the population was assumed as a sample. All the students belonged to the professional careers with the largest student population: Psychology (Health Sciences), Law and Political Sciences (Education Sciences, Social Sciences, and Humanities), Civil Engineering (Engineering), Accounting and Financial Sciences (Business Economics). And Agronomic Engineering (Science, Environment, and Productive Development).

Process

Two contextualized and validated instruments were applied.⁽³²⁾ One of them was the resilient coping scale made up of 34 items with five response options: 1 = I never do this, 2 = I sometimes do this, 3 = I usually do this, 4 = I do this many times, 5 = I always do this. This instrument evaluated the dimensions: Personal Resilient Coping, Social Resilient Coping, and Spiritual Resilient Coping. The other instrument was the scale of future expectations, in order to identify economic, academic, and personal well-being future expectations; the Likert-type scale was composed of 19 items with five response options where: 1 = I am sure it will not happen, 2 = unlikely to happen, 3 = maybe / maybe not, 4 = probably, 5 = sure it will. For the application of the instrument, a form distributed and applied online was designed using the Google Forms application.

Data analysis

The data was processed and analyzed by executing the statistical program SPSS, version 27. Descriptive analyzes of the information were carried out through absolute frequencies, percentages, and correlational analysis using Spearman's Rho correlation coefficient to establish the association between the variables studied. The reliability analysis results show a reliable instrument with a Cronbach's alpha index of 0.958.

Ethical considerations

We worked under the guidelines of the Declaration of Helsinki,⁽³³⁾ considering the principle of autonomy because the participating students had the freedom to be part of the study or not; justice, because this research considers that of the participants to be benefited with the results of the research; of beneficence and non-maleficence, principles referring to the kindness of researchers to maximize benefits and reduce possible harm.^(34,35)

Results

Regarding the general characteristics of the participants, 50.4% were women, and 49.6% were men; according to the study program, 39.2% corresponded to Accounting and Financial Sciences, 17.2% to Civil Engineering, 16.5% in Agronomic Engineering, 14.3% in Psychology and 12.8% of Law and Political Science.

Table 1 - Resilient coping levels of university students

Dimensions	Levels	Frequency	%
Resilient Coping Levels (general)	Low	316	14
	Middle	1560	71
	High	326	15
	Total	2202	100
Personal Resilient Coping	Low	167	8
	Middle	1584	72
	High	451	20
	Total	2202	100
Social Resilient Coping	Low	361	16
	Middle	1350	61
	High	491	22
	Total	2202	100
Spiritual Resilient Coping	Low	1243	56
	Middle	774	35
	High	185	8
	Total	2202	100

In general, 71% of the students manifested medium-level resilient coping, followed by a high level with 15% and 14% had a high level. Regarding the dimensions of Resilient Coping, in the dimensions of Personal Resilient Coping and Social Resilient Coping, the medium level stands out with 72% and 61%, respectively; however, the dimension of Spiritual Coping predominates the low level with 56%. Regarding the Future Expectations of the students, 82% are observed at the high level, 16% at the medium level, and 1% at the low level. The dimensions of student expectations reveal that the high level predominates in economic, academic, and personal well-being expectations with 75%, 69%, and 75%, respectively.

Table 2 - Levels of expectations of university students

Dimensions	Levels	Frequency	%
Levels Of Future Expectations (general)	Low	27	1
	Middle	359	16
	High	1816	82

	Total	2202	100
Economic expectations	Low	45	2
	Middle	516	23
	High	1641	75
	Total	2202	100
Academic Expectations	Low	45	2
	Middle	634	29
	High	1523	69
	Total	2202	100
Personal Wellness Expectations	Low	35	2
	Middle	526	24
	High	1641	75
	Total	2202	100

Table 3 - Correlation analysis between resilient coping and future expectations of university students

Dimensions	Future's expectations	
	Spearman's rho	Significance
Resilient Coping	0,39	0,000
Personal Resilient Coping	0,36	0,000
Social Resilient Coping	0,38	0,000
Spiritual Resilient Coping	0,18	0,000

Based on what is shown in Table 1, it is suggested that there is a statistically significant direct correlation between resilient coping and future expectations ($r_s=0.39$; $p=0.000$). Along with the above, the dimensions of resilient coping were correlated with the future expectations of university students in the context of the pandemic, where there was also a statistically significant direct correlation with the dimensions of personal resilient coping ($r_s=0.36$; $p=0.000$), social resilient coping ($r_s=0.38$; $p=0.000$) and resilient spiritual coping ($r_s=0.18$; $p=0.000$). Students with high levels of resilient coping also presented high levels of future expectations.

Table 4 - Kruskal-Wallis H test (Gender concerning Resilient Coping)

Total No.	2202
Test Statistic	9,075 ^{a,b}
Degree of Freedom	1
Asymptotic Sig. (bilateral test)	,003
a. Test stats are adjusted for ties.	
b. Multiple comparisons are not performed because there are fewer than three fields.	

To find out if gender and the careers that students study influence the level of resilient coping in pandemic contexts, the normality of the data resulting from the resilient coping variable was analyzed. The Kolmogórov-Smirnov test reports a value of sig. = 0.000, the same as being less than 0.05, shows that the data do not have a normal distribution.

In this context, the non-parametric Kruskal-Wallis test is chosen to analyze gender and study careers regarding resilient coping. Regarding gender, the test reports an asymptotic significance of 0.003, which, being less than 0.05, allows for determining the differences in resilient coping between men and women in contexts of the pandemic, rejecting the null hypothesis of the same level of Resilient coping in pandemic contexts.

Table 5 - Kruskal-Wallis H test (Professional careers regarding Resilient Coping)

Total No.	2202
Test statistic	44,291 ^a
Degree of freedom	4
Asymptotic sig. (bilateral test)	,000
a. Test stats are adjusted for ties.	

To study careers, the asymptotic significance of 0.00, which is less than 0.05, allows for determining the differences in resilient coping between different study careers in contexts of the pandemic, rejecting the null hypothesis of the same level of resilient coping in pandemic contexts in study careers. In this case, the Post Hoc test must be done to determine where these differences are.

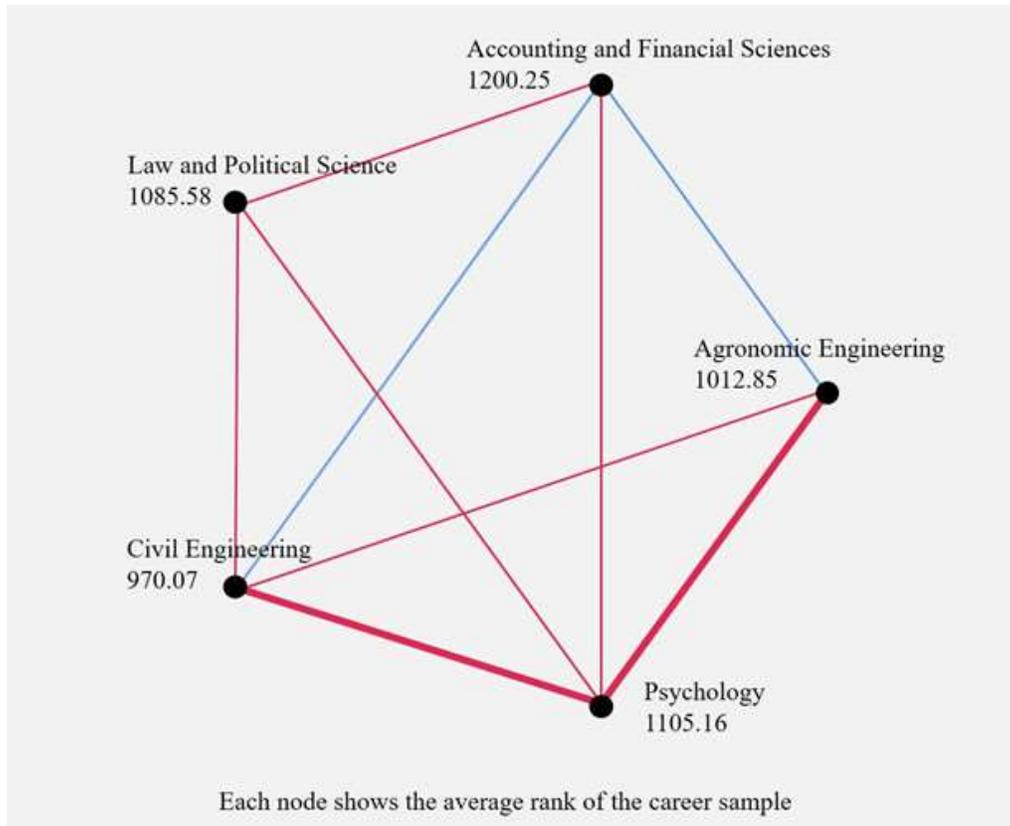


Fig. 1. Pairwise comparisons between student careers regarding Resilient Coping.

It is observed that significant differences are found in the students of the Agronomic Engineering and Accounting and Financial Sciences careers in favor of the latter. There are also significant differences between the careers of Civil Engineering and Accounting and Financial Sciences, in favor of the latter.

Table 6 - Kruskal-Wallis H Test (Gender vs. Future Expectations)

Total No.	2202
test statistic	,017 ^{a,b}
degree of freedom	1
Asymptotic sig. (bilateral test)	,897
a. Test stats are adjusted for ties.	
b. Multiple comparisons are not made because the global test does not show significant differences in the samples.	

To determine if gender and study careers influence the future expectations of students and considering that the data under analysis do not follow a normal distribution, the non-parametric Kruskal test is performed. Concerning gender, the test reports an asymptotic significance of 0.897, which, being more significant than 0.05, allows us to determine that there are no differences in prospects between men and women in contexts of the pandemic, not rejecting the null hypothesis of the same level of expectations.

Table 7 - Kruskal-Wallis H Test (Professional Careers Regarding Future Expectations)

Total no.	2202
Test statistic	31,017 ^a
Degree of freedom	4
Asymptotic sig. (bilateral test)	,000
a. Test stats are adjusted for ties.	

About study careers, the asymptotic significance of 0.00, which is less than 0.05, allows for determining the existence of differences in the future expectations of students from different study careers in contexts of the pandemic, rejecting the null hypothesis of the same level of expectations in pandemic contexts in study careers. In this case, the Post Hoc test must be done to determine where these differences are found.

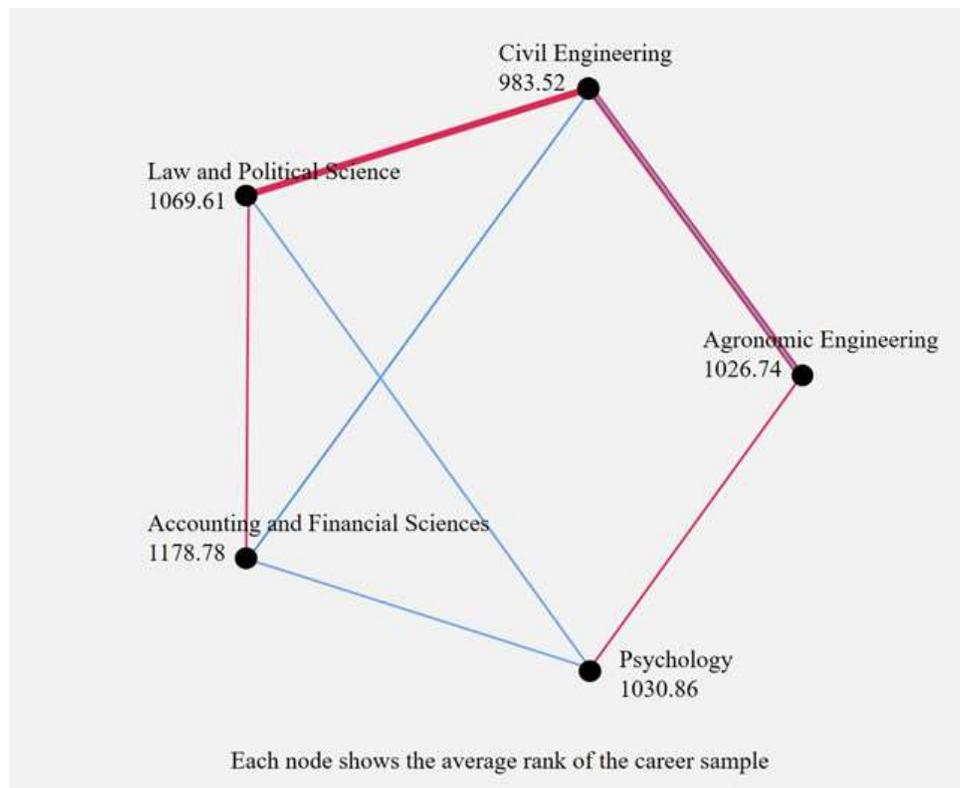


Fig. 2. Pairwise comparisons between student careers regarding future expectations.

It is observed that significant differences are found in the students of the careers of Civil Engineering and Accounting and Financial Sciences in favor of the latter. There are also significant differences between the careers of Law and Political Science and Psychology in favor of the former; Finally, there are significant differences between Accounting and Financial Sciences and Psychology, also in favor of the former.

Discussion

This research determined the relationship between resilient coping and future expectations in university students; through a positivist paradigm of quantitative, non-experimental, cross-sectional, and correlational design, whose participants were 2202 students from UNHEVAL, Peru.

The results highlight that the students from UNHEVAL, Peru, achieved high scores on the resilient coping scale and also showed high future expectation scores; a higher degree of resilient coping is strongly associated with future expectations. In addition, the students' Future Expectations are significantly related to the dimensions of Resilient Coping as personal, social, and spiritual, but also the Economic, Academic, and Personal Welfare Expectations of the students. These results are corroborated with the research of Meneghel I, Querenha, Altabás B, Salanova M⁽³⁶⁾ who found a significant relationship between resilience and future academic success; in the study, it was explained that to guarantee better academic success, it is crucial to influence the development of student resilience college students. Likewise, Urbano FA, Oiene SE, Cruz PD, Aragón DE, Guantay LF, Salom MG, et al⁽¹⁹⁾ found that resilience is linked to the life expectancies of university students from a university in Argentina and reported that students desire to achieve the degree to achieve their expectations. Similarly, Vizoso Gómez CM, Arias-Gundín O⁽³⁷⁾ in their study concluded a positive correlation between resilience and future expectations. For these authors, university students with high expectations about their future can handle stressful situations and put aside the implications. Another study by the author himself reports that future expectations correspond to a factor with more excellent projection for resilience in university students of educational sciences; that is, those students with positive expectations regarding their future will be able to overcome adversity.⁽³⁸⁾ In addition, Farfán Zurita JA⁽³⁹⁾ evaluated the association between resilience and academic commitment of Medicine students in a positive relationship between resilience and engagement in medicine interns at a university in Peru. Contrary to the results presented, the work of Asch JM⁽⁴⁰⁾ reports that there is no relationship between resilience and academic performance of university students of the professional career that made up their study.

The study also found that the participating university students have the necessary skills and abilities to face multiple challenges that may arise during their career development. One of them is COVID-19, a pandemic where they have had to adapt to a new way of learning and working for their future. Students need to be resilient and optimistically face the conjunctural changes they have to live through, as well as maintain their future expectations strengthened to complete their degree.⁽⁴¹⁾ In addition to confirming the above, studies carried out in the COVID-19 context show that resistant coping contributed to reducing the probability of experiencing depression, anxiety, and stress.^(21,42) Also, when protective mechanisms are found, people better cope with highly complex situations, and healthy behaviors that predict

mental health are deepened. ⁽⁵⁾ Family support is also vital to support. An investigation found a positive and direct correlation between perceived social support and the level of resilience in the pandemic context. ⁽²³⁾ Likewise, self-care is highlighted to counteract stressors before and during the pandemic. ⁽²⁴⁾ Finally, the study by Beames JR, Li SH, Newby JM, Maston K, Christensen H, Werner-Seidler A ⁽²⁵⁾ found that, in the COVID-19 context, the adolescents under study showed resilience and the ability to live positive experiences. Likewise, it was found that most of these adolescents used active coping strategies during the unpredictable and rapidly evolving situations posed by the pandemic. It should be noted that, due to COVID-19, much research has emerged on resilient copings, such as that carried out in the field of health, ⁽⁴³⁾ and the implications of mental and social health in daily life ⁽⁴⁴⁾ or how higher education students develop different strategies to adapt to the new demands of virtual education. ⁽⁴⁵⁾

Finally, Ordoñez (2020) shows a highly significant association between resilience and academic commitment in students at a university in Ecuador. ⁽⁴¹⁾ Although this finding is not firmly linked to future expectations of university students; it is necessary to problematize how the lack of academic commitment can affect the future expectations of university students and, from the pedagogical point of view, what educational strategies to use to correct this situation; maximum when it is known that in order to complete a university career, the student needs to develop study habits aligned with the learning expectations and the motivations that such academic commitment demands. It also needs teachers capable of accompanying them and helping them to problematize based on an effective pedagogy that prioritizes specific transversal learning, the student's curiosity about the future and their recurrent thoughts about it, as well as accompanying them to problematize about potential opportunities and expectations of future. ⁽⁴⁶⁾

There is a direct and positive relationship between resilient coping and future expectations in students of UNHEVAL, Peru, which is expressed through the Personal, Social and Spiritual dimensions (Levels of Resilient Coping); as well as Economic, Academic, and Personal Welfare Expectations of the students (Levels of expectations for the future).

Students with high expectations for the future demonstrate a high ability to handle stressful situations and correct the implications that these entails. They have the necessary skills and abilities to face multiple challenges that may arise during the development of their career; this has been evidenced in the COVID-19 context, where students have repeatedly demonstrated the ability to adapt to the new way of learning; using active coping strategies when unpredictable and rapidly evolving situations have arisen.

This direct and positive relationship between resilient coping and future expectations shows that students need to be resilient and optimistic to assimilate the conjunctural changes they have to live through. Assuming that resilience helps reduce depression, anxiety and stress, it can be conjectured that a person capable of coping effectively with their vicissitudes experiences healthy behaviors that positively transform their mental health. Also, family

support is fundamental support for people to face complex difficulties and keep their future expectations intact.

It is necessary to question the factors that threaten resilient coping and the future expectations of students. A crucial one is the lack of academic commitment; this fact invites new studies to elucidate what pedagogical strategies to apply to prevent situations like this; especially when, in order to complete a university career, the student needs to develop study habits aligned with future expectations and the motivations that make up said academic commitment. In addition, innovative teachers trained to question students about their expectations for the future and their recurring thoughts about it are also needed, as well as accompany them to question potential opportunities and expectations.

Limitations

It is emphasized that the data for the variables resilient coping and future expectations have been collected simultaneously, making it challenging to reach causal conclusions between the variables addressed.

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Conflict of interests

The authors declare that does not exist an interest conflic.

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