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Evaluation of the concerns of Spanish university students in the face of current major challenges

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ABSTRACT

The concerns of students and young people have been on the rise in recent years. Recent events such as the Covid-19 pandemic or the invasion of Ukraine have contributed to this. Mental health, the high cost of living, the need to re-evaluate the way we work or the fight against climate change are among the main concerns of young people. The aim of this work is to find out the level of concern of university students about these problems that can condition their current life and to analyze whether these concerns can affect their academic performance, also distinguishing according to gender and age. To this end, a nationwide survey was carried out among this group in Spain. This work is the first of its kind to be carried out in Spain. The results obtained may be of great use to both educational institutions and government agents, with a view to offering policies that will improve the educational level and welfare of university students.

1. Introduction

The world situation is changing at an accelerated pace in terms of new forms of work organization, climate change, depletion of natural resources, loss of biodiversity or modification of ecosystems. Along with these problems, others have arisen due to Covid-19 and more recently to the invasion of Ukraine, such as the energy and economic crisis. All this generates a great uncertainty that can become a threat to be able to live a full life. Young people are no strangers to these concerns. Students' and young people's worries have actually increased recently, particularly in the wake of the Covid-19 pandemic (Ezpeleta et al., 2020; Muñoz-Fernández et al., 2021; Faura-Martínez et al., 2022; Fülöp et al., 2023).

Aspects such as mental health, the high cost of living, the need to reevaluate the way of working or the fight against climate change are among the main concerns of young people. All these issues are the major challenges facing a generation in constant transformation.

The survey conducted by Deloitte (Deloitte, 2022) across 46 countries, between November 2021 and January 2022 together with qualitative interviews in April 2022, shows these concerns among Gen Zs and millennials: the top concerns are Cost of living (29%), Climate change (24%), Unemployment (20%), Mental health (19%) and Sexual harassment (17%).

In Spain, the current crisis that is unfolding worldwide is intensely

affecting the economy and society (Funcas, 2022). Both the main economic indicators and those referring to inequality, the risk of poverty and social exclusion and the standard of living have been negatively influenced. There has been a loss of purchasing power of households, with a stagnation of private consumption in a context of energy crisis and inflation, decreasing the household savings rate, so that many families do not have adequate liquidity to compensate for the loss of purchasing power of their income. As for the real estate market, there is a growth in prices, which makes access to housing difficult, especially for young people.

All this is reflected in the concerns of Spaniards who, according to the October 2022 barometer of the Centro de Investigaciones Sociológicas, place the economic crisis as Spain's number one problem. Unemployment is consolidated as the country's second problem and healthcare as the fourth national problem (political problems are in third place). At this point, environmental problems fall to eighth place (in the previous month it was the fifth problem) as Spaniards prioritize economic policies over environmental ones. This barometer also reflects an increase in concern about the Ukrainian war. The list of personal concerns is also headed by the economic crisis, followed by healthcare, unemployment, problems related to the quality of employment, education and rising energy prices.

On the other hand, the health crisis caused by COVID-19 has put health at the top of the population's concerns. The percentage of the $\,$

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young population that declares having suffered from mental health problems very frequently in Spain has increased from 6.2% in 2017 to 15.9% in 2021 (Sanmartín et al., 2022), with women being the ones who suffer most from these disorders (their percentage is double that of men). Suicidal behavior in young people has also increased. In 2019, 5.8% of young people thought about suicidal behaviors with high frequency, compared to 8.9% in 2021 (Sanmartín et al., 2022).

Another problem that has been worsening in Spain is related to sexual harassment (that suffered by women by male partners or expartners). The number of victims of sexual harassment registered in the Central Registry of the Ministry of Justice is on the rise, with a growth of 3.2% in 2021 compared to 2020. And according to official data from the Macro-survey on Violence against Women conducted by the Spanish Government Delegation against sexual harassment in 2019, 26% of women between the ages of 16 and 24 have suffered repeated harassment.

All these concerns can generate anxiety, intense and continuous fears which could affect academic performance (National Institute of Mental Health, 2017; Martínez-Álvarez and Lajo, 2018; Colunga-Rodríguez et al., 2021).

In this context, a survey was conducted among Spanish university students in order to respond to the objectives of this work:

- To know the students' level of concern about these problems that may condition their current life.
- Analyze whether these concerns may affect their academic performance, distinguishing by gender and age.

Different studies have examined some of the issues brought up separately, but not in their entirety. In addition, little is known about the potential impact these issues may have on academic achievement. This is the first research of its kind conducted in Spain. In order to make judgments and implement policies targeted at enhancing the welfare and educational attainment of college students, the findings may prove to be extremely beneficial to both government officials and the academic community. Detecting and understanding student concerns, and providing solutions to them, should contribute to a more sustainable education system, where the Sustainable Development Goals (SDGs) set out as part of the United Nations 2030 Agenda are present. The 2030 Agenda is key to ensuring that all students acquire the knowledge and skills needed to promote sustainable development, eliminate gender disparities in education and significantly reduce the proportion of young people who are not employed. By formulating effective education policies based on the concerns identified, it will be possible to acquire quality education while promoting equality among people and the wellbeing of the planet.

2. Theoretical background

One of the main concerns of young people is the steadily rising high cost of living. Half of young people claim to live "day to day" and are worried that they will not be able to meet their expenses (Deloitte, 2022). Another problem and concern of young people is unemployment and the difficulty of finding a quality and stable job (Gebel & Giesecke, 2016; Arrazola et al., 2018).

Unemployment has a psychological and social impact among young people and can generate a decrease in self-esteem and cause physical and mental health problems (Strandh et al., 2014; Bolivar et al., 2019; Bartelink et al., 2020). Youth unemployment can generate feelings of loneliness and lack of social acceptance, which can cause them problems of social exclusion and depression (Weil et al., 2017). Low wages and the high cost of living also make it impossible for young people to emancipate (Moreno Mínguez, 2018; Cantó et al., 2022), with young women being more likely to have casual employment and worse working conditions (Omer et al., 2021).

Young people's perception of inequality has increased and, in

addition, a large proportion of them claim not to be confident of being able to retire. Many young people have also left jobs due to poor pay conditions, the search for work-life balance, and opportunities to grow professionally (Cabasés Piqué et al., 2016; Verschoor, 2018). Young women are more vulnerable than men in the labor market and are more likely to face precarious situations compared to men (Quintana-Murci et al., 2020; Solano-Lucas et al., 2021).

Mental health is another major concern for young people. Stress and anxiety are some of their main problems they suffer from. Mental health and well-being are increasingly relevant in the daily lives of young people, especially since the covid pandemic (Salimi et al., 2023; Abukhalaf et al., 2023). This is demonstrated by different studies reflecting the serious consequences that the pandemic has had on the well-being and mental health of young people (Esteves et al., 2021; Ford et al., 2021; O'Reilly et al., 2021; Sharpe et al., 2021). In addition, it has been documented in many papers that economic crises have a negative impact on mental health that is more intense in males, with employment status and educational level being particularly relevant (Cortès-Franch & López-Valcárcel, 2014). Women and younger age groups had the worst mental health during the coronavirus pandemic (Pieh et al., 2020; Jacques-Aviñó et al., 2020; Banks & Xu., 2020; Pieh et al., 2021).

Young people also tend to show great concern for the environment, highlighting actions against climate change as a priority in their model of understanding the future, although few are optimistic about current strategies to curb environmental degradation and protect the environment around us. The University and all its members can play a key role in environment and sustainability (Shiel et al., 2016, Fülöp et al., 2022). Corner et al. (2015) show that young people are more concerned about climate change as they will experience the personal and societal consequences of climate change. Bradley et al. (2020) show that awareness of climate change and sociodemographic variables such as gender, age and educational level influence the level of concern about climate change. Several studies affirm that women seem to be more concerned than men about the environment and more in favor of sustainability (McCright, 2010; Bush & Clayton, 2022, Cifuentes-Faura & Noguera-Méndez, 2023).

Sexual harassment is another issue of concern for young people (Crooks et al., 2019), especially due to the rise of new technologies (Henry et al., 2020), which are used as a tool for violence in the form of cyberbullying, with some young people normalizing abusive behaviors, such as control or insults (Oliver & Del Río, 2017). The prevalence of online bullying tends to be higher among younger women (O'Donnell & Sweetman, 2018; Cotter & Savage, 2019).

Also, the recent war conflict in Ukraine has led to a change of action in societal thinking and among young people, with all being more alert to possible repercussions in the rest of the world, but also engaging with greater frequency in cooperation and aid activities (Salas & Sobrevias, 2022). With respect to the Russia-Ukraine war, the results of the research by Barchielli et al. (2022) showed no significant differences, according to age, in fear of rising food prices; although they did detect differences by gender, with women having a greater concern among those aged 36 to 50 years and less than men among those over 61 years of age. Among young people between 18 and 31 years of age, no differences by gender were detected.

Added to all these concerns of young people are the consequences caused by the Covid-19 pandemic in the educational system. They have had to learn to manage their time differently, which may have led to greater confusion and overwhelm (Adnan & Anwar, 2020). Girls have generally been more anxious than boys and have suffered higher levels of worry and anxiety (Zhou et al., 2020). For students to successfully cope with these problems during the pandemic, factors such as well-being, engagement and belonging, motivation and self-efficacy have been key (Nurunnabi et al., 2020; Cifuentes-Faura et al., 2021; Defeyter et al., 2021).

Since learning outcomes and mental health are related to students' well-being, it is important to suggest preventive actions and offer advice

Table 1Sample distribution by age group.

Age Groups	Students	Percentage		
17-19	1796	38.2		
20-22	1951	41.4		
23-25	556	11.8		
> 25	404	8.6		
Total	4707	100		

to the student body to ensure that they are prepared to learn in higher education (Sood & Sharma, 2020; Kilani et al., 2020, Holzer et al., 2021).

3. Methodology

In order to respond to the objectives set out in this work, a survey was conducted at the beginning of the 2022–2023 academic year and disseminated among all Spanish universities. Students from universities in Spain were contacted via email, with a link to access the survey and fill it in. The survey covers the three dimensions of sustainable development: the environmental, economic and social situation and reflects the current concerns of young people. The following questions were asked:

O1: Level of concern about climate change.

O2: Level of concern about price escalation.

O3: Level of concern about the energy crisis.

Q4: Level of concern about the labor situation.

Q5: Level of concern about the war in Ukraine.

Q6: Level of concern about mental health.

Q7: Level of concern about sexual harassment.

The first of these questions is related to the environmental dimension, the next three to the economic dimension and the remaining three to the social dimension, although question Q4 on the invasion of Ukrainian territory by Russia may also be included in the economic dimension.

All these questions are formulated using a Likert scale with 5 values, being 1 = not at all worried, up to 5 = very worried.

An analysis of the degree of concern about each of the aspects raised is carried out. By means of different analyses of variance, we studied whether there are significant differences in the degree of concern according to the individual's sex and age, also taking into account the possible interaction between these factors.

An eighth question is posed in the survey:

Q8: Do you think the current situation may influence your academic performance?

Table 2
Descriptive of level of concern.

	Mean	Standard Deviation	Coefficient Variation
Q1. Climate change	3.93	1.06	0.2694
Q2. Prices	3.47	1.16	0.3356
Q3. Energy crisis	3.48	1.31	0.3755
Q4. Employment Status	4.13	1.12	0.2709
Q5. Ukraine war	4.08	1.14	0.2797
Q6. Mental health	4.06	1.09	0.2679
Q7. Sexual harassment	3.03	1.27	0.4197

This variable is measured through a Likert scale between $1=\mbox{does}$ not influence to $5=\mbox{influence}$ a lot. The correlation between Q8 and the rest of the questions posed in the survey is analyzed to determine which of them most affect the university student's performance.

4. Results

The sample consists of 4707 Spanish university students: 2128 men (45.2%) and 2579 women (54.8%). Of the total number of students enrolled in the university system in the 2020–2021 academic year, 55.6% were women (Ministry of Universities, 2022), so the sample maintains the structure of the Spanish university with respect to gender. The age grouped in intervals is shown in Table 1, with the largest group, with just over 41%, being students between 20 and 22 years of age. The 38.2% are students between 17 and 19 years of age, 11.8% between 23 and 25 years of age and the remaining 8.6% are those older than this age.

4.1. Concerns expressed by the students

Slightly more than 50% of students (Fig. 1) indicate being very concerned about the current employment situation (Q4) and the invasion of Ukraine (Q5). In a similar percentage are also those who are very concerned about mental health (Q6). About 40% of respondents express great concern about climate change (Q1). Sexual harassment (Q7) is the item about which they are most indifferent. In addition, more than 60% are very concerned about the price hikes that are taking place (Q2).

Spanish university students show greater concern for the labor situation, the war conflict in Ukraine and mental health, with means above 4 points out of 5 and a standard deviation of around 1.1 points (Table 2). The lowest concern of the topics analyzed, with a mean of 3 points, is for sexual harassment, but with a high standard deviation, close to 1.3, which makes the coefficient of variation of this variable the highest of all the items analyzed, indicating that this mean is the least representative

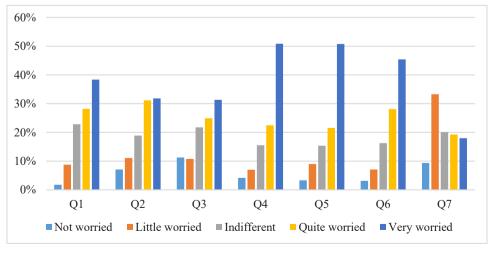


Fig. 1. Level of concern among university students.

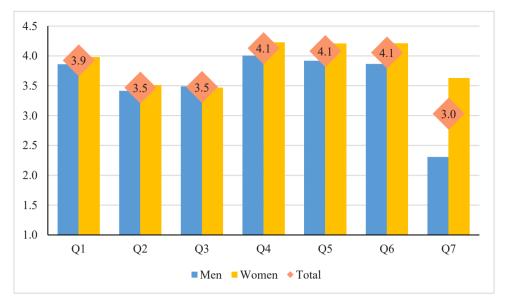


Fig. 2. Mean level of concern of university students by sex.

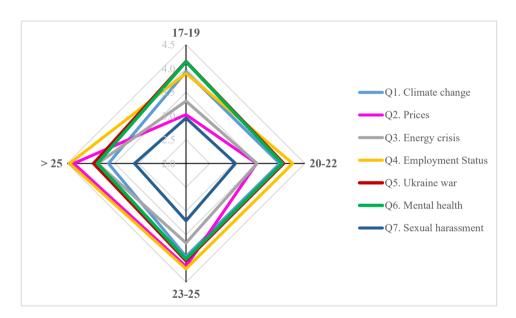


Fig. 3. Mean level of concern of university students by age group.

of the whole.

Taking into account the student's gender, women show a higher degree of concern than their male counterparts in all items except the one referring to the energy crisis (Fig. 2). The greatest difference is found in variable Q7, where women are more sensitive to sexual harassment (with an average of 3.63 points compared to 2.31 for men). Men are more concerned about the employment situation and the consequences of the war in Ukraine.

By age group (Fig. 3), students between 17 and 19 years of age are most concerned about the invasion of Ukraine (Q5) and mental health (Q6). For those aged between 20 and 22, they retain the same priorities, but the current employment situation stands out in them (Q4). In the group between 23 and 25 years of age, price increases (Q2) and the employment situation stand out. Those over 25 years of age coincide with the previous group, but with higher averages, close to 4.5 points. Regardless of age, the lowest concern is sexual harassment (Q7),

Table 3Analysis of variance (F-statistic value).

	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Age	12.926 (0.000)	270.74 (0.000)	23.783 (0.000)	50.09 (0.000)	5.421 (0.001)	10.389 (0.000)	10.758 (0.000)
Gender	17.936 (0.000)	4.246 (0.039)	0.019 (0.889)	22.769 (0.000)	63.605 (0.000)	109.323 (0.000)	1051.685 (0.000)
Age*Gender	2.295 (0.076)	0.716 (0.543)	5.016 (0.002)	6.747 (0.000)	2.951 (0.031)	6.325 (0.000)	1.787 (0.147)

Note: In parentheses the p-value.

Q1: Climate change; Q2: Prices; Q3: Energy crisis; Q4: Labor situation; Q5: Ukraine war; Q6: Mental health; Q7: Sexual harassment.

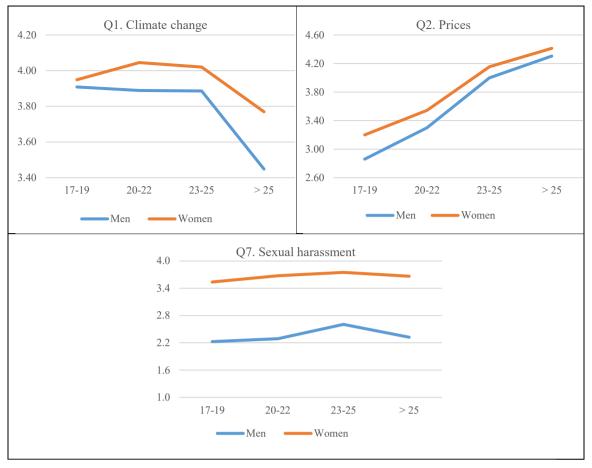


Fig. 4. Differences in means by age group and sex (without interactions between the factors).

especially in the younger age group, with an average score of 2.5 points out of 5.

To analyze whether the differences observed by sex and age groups are significant (Table 3), an analysis of variance is performed taking into account the possible interaction between the factors. There is no interaction (at 5%) between sex and age in questions Q1, Q2 and Q7 that refer to environmental problems, price situation and Sexual harassment, respectively. With respect to gender, except in question Q3 (energy situation) there are differences between men and women. In all the questions asked there are significant differences according to age groups.

Women are more concerned than men about environmental issues regardless of age (there is no interaction between the factors, p-value=0.076), and these differences are significant (p-value=0.000). By age group, there are also differences in this appreciation (p-value=0.000). The youngest students are the most worried and this decreases as age increases (Fig. 4). There are no differences between age groups younger than 25 years, however, those older than 25 years show significant differences with the other groups.

Regarding concern about the escalating prices that are occurring, women show greater concern than men regardless of age and this increases greatly with age, from an average of 3.05 for the youngest to 4.36 for those over 25 years of age. There is also no interaction between age and gender on the issue of mental health. Women are more concerned than men, concern increases slightly with age, and after the age of 25 it begins to decline.

For the rest of the issues (Fig. 5), there is interaction between gender and age. Regarding the energy crisis (Q3), in the younger age group, men are more concerned than women, but this situation is reversed in the other age groups, growing with age, with hardly any differences by

gender for those over 25 years of age. The employment situation (Q4) is an issue about which students are very concerned, especially older students. Up to the age of 22, concern is higher among women, but from the age of 23 onwards it is men who have a higher average.

Both the concern for the war in Ukraine and for mental health is quite high, with women having averages close to 4.2, while in men the tendency is decreasing.

If we evaluate the average concern in these topics, it is higher than 3 points, with women and young people over 22 years of age presenting a higher average concern (Table 4). In addition, there is less dispersion in the concern of women, which indicates that there is less variability in their level of concern.

An analysis of variance confirms that there is no interaction between the factors (p-value=0.1030), with significant differences by gender (p-value=0.0000) and age (p-value=0.0000). According to the age groups, there are no differences between the 23 to 25 age group and those older than 25 years, and there are differences among the others; the older the age, the greater the concern.

4.2. Academic performance and relationship to concerns

The last question of the questionnaire, Q8, is directed at the influence they think the current situation may have on their academic performance. In general, they think that this situation will not affect their performance much (mean 2.48 out of 5), although women consider that it will affect them more than men (mean 2.6 vs. 2.33). In addition, the older they get, the more it affects them (Table 5).

Analyzing the correlation between average concern and performance (Table 6), the correlation for women is 0.649 compared to 0.481 for men. By age, the older the age, the more the different concerns analyzed

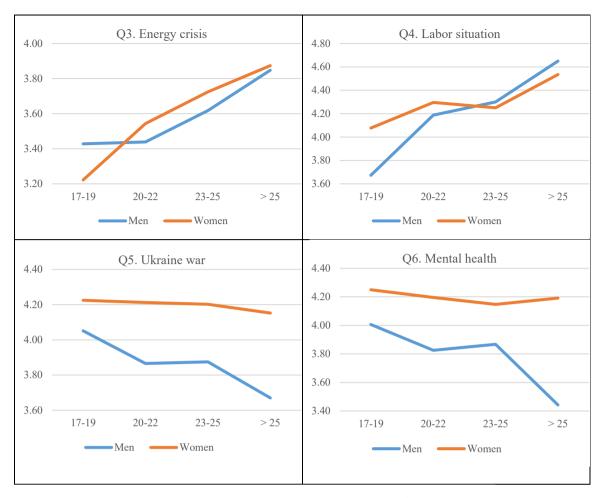


Fig. 5. Differences in means by age group and sex (interactions between factors).

Table 4Main descriptive measures of average concern.

		Mean	Std. Deviation	Coef. Variation
Gender	Man	3.55	0.760	0.2140
	Woman	3.89	0.640	0.1645
Age	17-19	3.63	0.668	0.1840
	20-22	3.76	0.733	0.1950
	23-25	3.90	0.712	0.1826
	> 25	3.89	0.778	0.2002
	Total	3.74	0.717	0.1918

Table 5Main descriptions of how concerns affect performance.

		Mean	Std. Deviation	Coef. Variation
Gender	Man	2.33	0.738	0.3167
	Woman	2.60	0.603	0.2324
Age	17-19	2.34	0.639	0.2731
	20-22	2.48	0.685	0.2766
	23-25	2.75	0.598	0.2173
	> 25	2.72	0.766	0.2818
	Total	2.48	0.681	0.2748

affect academic performance. If all of them are taken into account, price escalation is what affects performance the most, regardless of being male or female. The second most influential factor for women is the employment situation, while for men it is mental health. It should be noted that concern about sexual harassment is not significantly

correlated with performance in men, while for women it is a problem that influences their performance.

By age, those over 25 years of age are the most affected by concern about any of the issues raised, mainly the employment situation followed by escalating prices. The other age groups are most affected by concerns about prices. Climate change is considered to be the element that affects them the least except for the youngest group who recognize that it is sexual harassment.

5. Discussion and conclusions

The world situation is constantly changing and we are facing problems such as the depletion of natural resources or the loss of biodiversity. These problems are compounded by others such as the Covid-19 pandemic, the invasion of Ukraine or the energy and economic crisis. Young people's concerns have increased in recent years and they live with greater uncertainty on a daily basis.

In order to evaluate the degree of concern among university students and to be able to offer policies and solutions, a survey was conducted among Spanish university students. By examining students' concerns in various dimensions (economic, social and environmental), the study provides a holistic view of the challenges they face. This enables educational institutions to adapt support mechanisms more effectively.

More than 60% of the students are concerned about the high inflation and the escalation of prices that is taking place. More than 50% of students say they are very concerned about the current employment situation and the invasion of Ukraine, followed by mental health. Around 40% also express great concern about climate change. Among the issues analyzed, they are least concerned about sexual harassment.

Table 6Correlation of academic performance and different concerns.

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Mean
Gender	Man	.196 * *	.477 * *	.343 * *	.360 * *	.378 * *	.382 * *	.019 * *	.481 * *
	Woman	.219 * *	.558 * *	.417 * *	.472 * *	.331 * *	.345 * *	.300 * *	.649 * *
Age	17-19	.150 * *	.446 * *	.327 * *	.348 * *	.342 * *	.372 * *	.122 * *	.507 * *
-	20-22	.217 * *	.441 * *	.312 * *	.379 * *	.335 * *	.356 * *	.232 * *	.516 * *
	23-25	.373 * *	.595 * *	.450 * *	.564 * *	.521 * *	.497 * *	.403 * *	.753 * *
	más de 25	.402 * *	.620 * *	.602 * *	.636 * *	.567 * *	.562 * *	.444 * *	.824 * *
	Total	.212 * *	.517 * *	.375 * *	.425 * *	.363 * *	.375 * *	.239 * *	.585 * *

Note: * * Correlation significant at the 0.01 level.

Q1: Climate change; Q2: Prices; Q3: Energy crisis; Q4: Labor situation; Q5: Ukrainian war; Q6: Mental health; Q7: Sexual harassment

Women show greater concern than men in all the variables analyzed except for the energy crisis, demonstrating that they are more aware of the problems of society and the concerns that surround us. Men are mainly concerned about the employment situation and the consequences of the war in Ukraine.

The biggest difference by gender is in sexual harassment, men are much less concerned than women, showing the need for more sex education for men, and thus to eradicate gender violence. From educational and political institutions, we recommend carrying out frequent action campaigns and making available free telephone numbers and assistance in order to achieve zero violence by 2030, thus complying with SDG5.

Women are also more concerned than men about environmental issues, as shown by previous work (Xiao & McCright, 2015; Cifuentes-Faura et al., 2020). To encourage greater environmental concern in men, it would be advisable for the evaluation of students, to carry out mixed group work on sustainability, in which boys and girls can give each other feedback on their knowledge, while values such as respect, cooperation and teamwork are put into practice.

By age group, the youngest students are the most concerned about the invasion of Ukraine and mental health. As age increases, the biggest concerns are price escalation and the employment situation. This is because older students are approaching the working world and their responsibilities are increasing. Regardless of age, the least concern is sexual harassment, especially in men, reflecting the need to act with prevention policies.

On the other hand, students believe that the current situation affects their academic performance, with concerns about rising prices and the employment situation being the most important. This is aggravated for older students, mainly because of their proximity in the search for a job and the difficulty involved, for example, in being able to become independent in this situation.

Potential economic costs are linked to all the psychological and social costs associated with young people's concerns and issues (health care costs, social integration promotion, pension system sustainability, etc.). Furthermore, since many of them may leave the country in quest of better opportunities, the prevalence of youth unemployment suggests the potential loss of fresh talent as well as losses to the nation's human capital and talent pool. As a result, political organizations and academic institutions ought to be more cognizant of the issues facing the present generation and provide answers.

The pandemic-induced labor market crisis and the energy crisis and inflation resulting from the Ukraine conflict also call for urgent action, as the potential impacts are greatest among youth groups and women (Dinku & Yap, 2022). Collaborations between businesses and universities are essential in the modern day since universities serve as engines of growth and innovation (Marra et al., 2022). Governmental and academic institutions might collaborate to create a joint shock strategy that would enable youth to enter the workforce through agreements with companies that would allow them to finish paid internships in their senior year. After completing the internship, the student will be entitled to a job offer that will allow him or her to handle daily issues and challenges and will pay a remuneration appropriate for the work performed.

In addition, the university system should promote a more focused attention on the student body by offering counseling and mental health services to improve students' overall health and strengthen their social and emotional resilience. They will be able to enhance both their evaluation scores and academic achievement as a result of this. It might also offer classes that assist students in honing their workforce-ready skills and competencies, such as those related to modern technologies. It is important to assess whether students' performance has improved and whether their concerns and problems have diminished once these concerns have been identified and corrective measures have been implemented.

Implementing policies based on student concerns and periodically assessing their impact on academic performance will facilitate continuous improvement in the educational experience. Aligning educational content with real-world challenges will enable students to understand and address pressing global issues, preparing them for a socially responsible future.

All these policies are really necessary to contribute to the Sustainable Development Goals and improve the education system. These policies mainly contribute to achieve quality education (SDG4), achieve gender equality within the education system (SDG5), reduce inequalities (SDG10), and contribute to improve climate change through educational actions. In this way, sustainable communities can be created where ethical behavior and responsible consumption are promoted, thus also achieving SDGs 11, 12 and 13.

The topic covered in this research is quite broad and complex, and it could help to better understand the concerns if a qualitative analysis with personal interviews, a focus group, or other family variables were also taken into account. This work could be replicated in other countries in order to carry out a comparative study, taking into account the context of each country. Future research could analyze whether the socioeconomic status of the family, the employment status of the parents or the maximum level of education attained by them, or living in a rural or urban region, influence the concerns of university students.

CRediT authorship contribution statement

Cifuentes-Faura Javier: Conceptualization, Formal analysis, Investigation, Methodology, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. Faura-Martínez Ursula: Conceptualization, Formal analysis, Investigation, Methodology, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. Lafuente-Lechuga Matilde: Conceptualization, Formal analysis, Investigation, Methodology, Validation, Visualization, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

The authors declare that there exists no competing financial interest or personal relationships that could have appeared to influence the work reported in this paper.

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