

# Differences in the Transition to Adulthood of University Students before and after the Pandemic

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## Abstract

**Introduction.** The difference in the opinions of two groups of university students on the transition to adulthood and on certain educational aspects over a period of 8 years was analysed, one before and the other after the Sars-Cov 2 pandemic.

**Method.** The questionnaire was applied based on the perception that university students have on the transition to adulthood (Guerra Santana, 2022), adapted from Arnett's Transition to Adulthood Scale (2001). It was answered by 780 students from a Spanish university, 453 of whom were educated before the pandemic and 327 of whom are currently studying. A quantitative methodology with a descriptive and comparative design was used.

**Results.** The results indicate that, of the three factors that make up the empirical structure of the questionnaire, there are significant differences (99.95% CI) in the ability to create a family and attend to its needs, and in personal responsibility and maturity according to the student's group of belonging (pre-pandemic/post-pandemic) and age. On the other hand, no differences were found in the variables gender and field of knowledge.

**Discussion and Conclusion.** In conclusion, the post-pandemic group of students have a more favourable perception of the transition to adulthood than those who studied before the pandemic.

**Keywords:** transition to adulthood; perceptions of emerging adulthood; higher education; COVID, pandemic.

## Resumen

**Introducción.** Analizamos las diferencias entre dos grupos de estudiantes universitarios sobre la transición a la edad adulta y sobre determinados aspectos educativos a lo largo de un periodo de 8 años, uno anterior y otro posterior a la pandemia por Sars-Cov 2.

**Método.** Aplicamos el cuestionario sobre percepción del alumnado universitario ante el tránsito a la vida adulta (Guerra, 2022), adaptado de la Escala de transición a la edad adulta de Arnett (2001), a 780 alumnos de una Universidad española, 453 formados antes de la pandemia y 327 cursan estudios en la actualidad. Se emplea una metodología de tipo cuantitativa con un diseño descriptivo y comparativo.

**Resultados.** Los resultados indican que, de los tres factores que conforman la estructura empírica del cuestionario aplicado, existen diferencias significativas (IC 99,95%) en la capacidad de crear una familia y atender sus necesidades y en la responsabilidad y madurez personal por razón al grupo de pertenencia del estudiante (pre-pandemia/ postpandemia) y de la edad. Por su parte, hay ausencia de diferencias en las variables género y ramas de conocimiento.

**Discusión y Conclusión.** En conclusión, el grupo de estudiantes postpandemia tienen una percepción más favorable ante el tránsito a la vida adulta de aquellos otros estudiantes que cursaron estudios antes de la pandemia.

**Palabras clave:** Tránsito a la vida adulta; percepción de la adultez emergente; educación superior; COVID; pandemia.

## Introduction

The conceptualisation of the term *Emerging Adulthood*, coined by Arnett (2000, 2015), has focused research on people between 18 to 29 years of age. It is a life stage characterised by identity enquiry and world exploration by people who have passed childhood and adolescence yet have not acquired the regulatory responsibilities of adulthood (Arnett, 2014). Theory recognises that different cultures have different ways of coming to terms with this period, and that it has been changing over recent years, characterised by an increase in people pursuing higher education and postponing the creation of their own family (Arnett & Mitra 2020). The onset of the Sars-Cov 2 pandemic in late 2019 and early 2020 has triggered a series of educational, social, economic, and cultural changes that make it necessary to reconsider what adulthood is and how it is assumed by young people.

When focusing on *academic aspects*, the university stage is perceived positively and is related to a period in which emerging adults have greater decision-making capacity in terms of friendship or personal interests. It is also a phase in which a person's labour and personal identity is shaped in terms of relationships (Cupit et al., 2021). The Covid pandemic that hit in 2020 brought important changes. Academically, it forced a large number of university students to return home to their parents, break off new friendships and begin studying remotely (Broner et al., 2022; Van den Berg et al., 2021). Quarantine severely restricted shared leisure time and limited the way students expressed their identity. In addition, many students returned to problematic family situations that were coupled with home confinement (Hall & Zygmunt, 2021; Halliburton et al., 2021).

This resulted in emotional maladjustment that was exacerbated by fear of becoming infected or seeing family and friends get sick, or an increase in atypical behaviours such as excessive handwashing that led to socio-emotional disorders (Farris et al., 2021; Hall & Zygmunt, 2021; Halliburton et al., 2021). This is especially important considering that emerging adults are prone to higher rates of emotional disorders, anxiety, and stress than the rest of society (Beiter et al., 2015). Thus, academically, students experienced problems with the change from face-to-face to online classes, with a negative impact related to academic obligations (Halliburton et al., 2021). Students were overly concerned about the difficulty in completing and submitting assignments and the uncertainty of their educational future (Weaver et al., 2022).

Another essential factor in the perception of adulthood is the *ability to create a family*. Adulthood brings with it a series of responsibilities and goals in all cultures and societies in which marriage, or any kind of legal partnership, creating a family with children, and having labour and economic stability, are present. These aspects were the focus of adulthood in the past, although today's emerging adulthood and longer adulthood means that childbearing is postponed until closer to age 40 (Mehta et al., 2020).

Financial independence is a key factor in this regard, but there may be a certain financial dependence on parents that frustrates the idea of starting a family. One of the conflicting aspects between the emerging adult and their family refers to financial issues, and some parents feel that their children will not become full adults for this reason (Lowe & Arnett, 2020).

During the pandemic, many university students were laid off or could not find job opportunities (Aucejo et al., 2020). This made it challenging to pay bills, pay for their studies, or pay for accommodation, leading to frustration among students (Broner et al., 2022). In many cases, students were forced to return to the family home, which was detrimental in their transition to adulthood (Pretz et al., 2021). In addition, the delay in those traditional goals of marriage or childbearing have given way to the pursuit of new experiences before acquiring the responsibilities of adulthood (Lowe & Arnett, 2020).

On the other hand, there is the factor related to *personal responsibility and maturity*. Students who started university at the beginning of the pandemic had less time to consolidate their identity and experience life without parental guidance. It is likely that these students felt less adult, less independent, and more limited in their ability to function (Hall & Zygmunt, 2021; Halliburton et al., 2021). Independence is a fundamental and characteristic aspect of going to university (Arnett, 2016) and senior university students had experienced their emerging adulthood with a higher level of independence, but were forced to return to their families, which was considered a setback (Dotson et al., 2022; Vehkalahti et al., 2021). Emerging adults turn to their parents for opinions or advice on important aspects of their lives such as relationships or friendships (Van den Berg et al., 2021). Even so, the developmental loss in this stage of their lives no doubt interrupted their development as adults (Broner et al., 2022). Young people have myriad opportunities for an array of social interactions, but these were suddenly limited when the pandemic restrictions struck. In many cases, interaction with

family and friends shifted to the realm of social networks and technology (Weaver et al., 2022).

Some emerging adults report that they are in a phase of transition to adulthood that has come to a standstill, perceiving that they are not independent, and have thus set their own personal development as a goal. The type of studies, and the academic demands involved in order to graduate from their degree, could determine students' perception of adult characteristics (Kapogiannis, et al., 2021). These aspects have neglected the concept of mature social behaviour and the establishment of milestones such as starting a family (Raikou & Konstantopoulou, 2021).

The pandemic has generated contradictions in the desires of emerging adults who yearn for an independent life but cannot emancipate themselves, as there is an interaction between the material aspects and the mental world of these people (Vehkalahti et al., 2021). The strategy for dealing with the difficulties and restrictions of lockdown has focused on trivialising the problem and generalising the disadvantages as something that happens to society as a whole (Migliorini et al., 2021).

One of the characteristics of today's emerging adults is characterised by individualisation, focusing on themselves and the search for identity. Hence, *biological and chronological transition* is another factor to take into account when it comes to perceiving oneself as an adult. In some cases, they do not perceive that they have fully reached adulthood (Arnett & Mitra 2020). An important aspect of the pandemic relates to the experience of these young people with regard to the death of a family member (Weaver et al., 2022; Broner et al., 2022). It was felt as a phenomenon that impacted their lives and they requested support from university institutions and campuses (Cupit et al., 2021). In addition, the restrictions resulting from the pandemic led to the perception of losing control over their future and health (Migliorini et al., 2021).

COVID-19 suspended the daily activities of emerging adults by mandating the closure of leisure, social or cultural venues, posing an obstacle to social life (Preetz et al., 2021; Weaver et al., 2022). The transition to adulthood and social relationships at this stage were limited to online interactions, with a sharp physical distancing (Dotson et al., 2022). There can be an added sense of independence and freedom for first-year students to explore their

identity outside the familiar environment (Hall & Zygmunt, 2021). The transition to working life for the emerging adult has also been disrupted, with the consequences of the pandemic making it difficult to maintain employment and education (Halliburton et al., 2021). When this study is contextualised in Spain, it could be considered one of the places where the conceptualization of the emerging adulthood better adapts on account of the high levels of youth unemployment, the average age of emancipation and their age when having their first child, both around 30 years. The possibility of adopting adult roles is conditioned by the future possibilities of youth unable to find stability in this context (Sánchez-Queija et al., 2023). In particular, young adults who decide against going to university and are confronted with adulthood challenges at the age of 19 or 20 years, perceive this period as a period of uncertainty and/or despondency, especially when taking into account the high level of youth unemployment among Spanish adults (Sánchez-Queija et al., 2020).

Fierro-Arias & Moreno-Hernández (2007) carried out a comparative study on how young Mexicans and Spanish adults perceive the transition to adulthood, highlighting significant differences between them, such as the lack of stability when taking on different aspects which define the entry to adult age. These differences are highly conditioned in the context in which they take place. To this regard, Smorti et al. (2002) state that in Latino or Italian cultures, there is a strong family bond that becomes evident in the warm and close relationship between parents and their offspring, leading to an ideal atmosphere for the bonding between adults and developing youth to be effectively satisfied. Having social and family support is essential for the development and maturity of young people, despite living in a period characterised by achieving independency and autonomy (De La Fuente et al., 2023).

### *Objectives and Hypotheses*

For all these reasons and taking into account that the sample under study is made up of two groups of university students, one before and the other after the Covid-19 pandemic, the purpose of this study is to establish whether there are differences in how both groups of students perceive the transition to adulthood. At the same time, this paper will analyse whether there are differences according to gender, age and field of knowledge.

## Method

### *Design*

The methodology is quantitative, with a descriptive and comparative design, in a natural situation. In addition to considering the socio-demographic variables of gender, age and field of knowledge, the quantitative analysis was based on a simple random sampling (Cochran and Bouclier, 1980:41) of university students; one group was made up of students who studied before the pandemic (Covid-19), and the other group was made up of students who are currently studying.

### *Participants*

The number of students enrolled at the University of Las Palmas de Gran Canaria in the last five years is around 20,000 students (ULPGC, 2021). To obtain a confidence level of 99% in the parameters to be studied, with a level of heterogeneity of 50% and a margin of error of 5%, the sample needs to be of approximately 645 students. The sample under study consisted of 780 students, of which 71.7% were female and the rest, 28.3%, were male. Students between 18 and 20 years of age represented 51.8% of the sample and those aged between 21 and 23 years, 26.8%, whilst the Arts branch, with 57.8%, has a slightly higher participation than the Science branch (42.2%). The average age of the sample is 20.89 years (Dt.= 2.971).

A simple random sample has been used to ensure that the results are extrapolated (Vallejo, 2012) and, furthermore, to obtain representative samples since the participants in this research paper, taking into account that the sample is of small or simple-structured populations, were selected at random, so that the only cause of error is its randomness (Cochran, 1981; Pérez, 2005; Rodríguez, 1991, 1993).

Two groups were obtained from the aforementioned sample, one (SM<sub>1</sub>) composed of students who were studying at university in 2014, before the Covid-19 pandemic outbreak (N=453), and the other (SM<sub>2</sub>), students who are currently studying at university (N=327), so that these two subsamples can be compared in the independent variables to be studied and to check if there are differences between them.



Table 1 shows the distribution of frequencies obtained for the different socio-demographic variables.

Table 1. *Socio-demographic variables. Distribution of frequencies in SM<sub>1</sub> and SM<sub>2</sub>*

Group	Gender			Age				Study Branch			
	M	F	N	18-20	21-23	24-26	>27	N Total	Science	Arts	N Total
SM <sub>1</sub>	142	311	453	254	126	47	23	450	196	257	453
SM <sub>2</sub>	79	248	327	150	83	26	68	327	133	194	327
$\Sigma$	221	559	780	404	209	73	91	777	329	451	780

### *Instruments*

The Questionnaire was applied on the perception of university students on the transition to adulthood (Guerra-Santana, 2022), adapted from Arnett's Transition to Adulthood Scale (2001). This tool, which has construct validity and reliability, consists of items related to socio-demographic variables and 21 other polytomous items, the statements of which analyse the students' perception of the transition to adulthood, which are assessed on a Likert-type scale with six possible answers, where 1= not at all important and 6= very important.

The exploratory factor analysis carried out, using the maximum likelihood method, with varimax rotation, eigenvalues >1 and factor saturations > 0.50, showed a factor structure of 3 factors responsible for 63.043% of the total variance: (F1) ability to create a family and take care of its needs, (F2) personal responsibility and maturity and (F3) biological and chronological transition, with quite satisfactory fit indices ( $KMO= .926$ ; Barlett's sphericity,  $p= .000$ ; determinant= 4.06E-0.10; scores on the diagonal of the anti-image correlation matrix > .5; Degree of Approximation = 79%), as well as notable reliability coefficients (total scale,  $\alpha= .895$ ; F1,  $\alpha= .855$ ; F2,  $\alpha= .897$ ; F3,  $\alpha=.674$ ). The data obtained from the factor structure were verified in a confirmatory factor analysis; for this purpose, the structural equation model (SEM) was used, taking into account the ad hoc goodness-of-fit indices of the model to corroborate the empirical structure, through the maximum likelihood estimation method and the regression weight as a measurement error estimator, which was set at the value 1:  $Chi-square (p. value) \neq 0$ ;  $GFI= .948$ ;  $AGFI= .934$ ;  $SRMR= .043$ ;  $RMSEA= .057$ ;  $CFI= .977$ ;  $NNFI= .981$ ;  $NFI= .961$ ;  $AIC= 327.562$ .

These results confirmed the construct validity of the questionnaire (Lloret- Segura et al., 2014) and the goodness of the applied model (Hair, et al., 2005; Montero & León, 2007). Table 2 illustrates the empirical structure of the questionnaire and its component items.

Table 2. *Empirical structure of the Questionnaire on university students' perception of the transition to adulthood (Guerra-Santana, 2022).*

Factor	Items
Ability to create a family and provide for its needs	1.- Being able to meet the needs of a son or a daughter
	2.- Deciding responsibly to have a first child
	3.- To have the capacity to educate a son or daughter.
	4.- To be able to run a household
	5.- To be able to take care of the family financially.
	6.- To be independent from the parents.
Personal responsibility and maturity	7.- To have the ability to resolve difficult situations
	8.- Use language that is respectful of others.
	9.- To be coherent with my ideas and my actions.
	10.- Establish good relationships with my parents and other adults
	11.- Respect established social norms
	12.- To be able to promote a good family climate
	13.-Accept the consequences of actions responsibly
	14.- Ability to work in a team
	15.- Learning to control emotions
	16.- To be tolerant of different cultures
	17.-Having healthy, safe sexuality
Biological and chronological transition	18.- To pursue a university degree
	19.- To have the right to vote in state elections
	20.- Obtaining a driving licence
	21.- Turn 18 years old

### *Procedure*

In order to collect the information, the collaboration of the lecturers of the different Schools and Faculties of the University of Las Palmas de Gran Canaria was requested. Initially, lecturers were contacted by e-mail to explain the purpose of the study. Afterwards, the lecturers were provided with the questionnaire so that they could voluntarily ask their students to participate in the study during class hours. This procedure was followed both for the sample collection before and after the SarsCov-2 pandemic.

### *Data Analysis*

The instrument enjoys construct validity and good adjustment of the goodness-of-fit model, nevertheless, the feasibility of the questionnaire applied to both groups is analysed to corroborate its empirical structure and internal consistency, using multivariate analysis and reliability techniques. Thus, the variables are subjected to analysis to confirm the relevance that they can be factored, which will allow the exploratory factor analysis to be carried out, through the principal components method, to verify the factor structure of the instrument, thereby reducing and identifying a number and composition of necessary components (factors) that summarise the scores of the set of variables observed (Lloret-Segura, et al., 2014: 1153).

The reliability analysis is applied to check whether both the test as a whole and the factors generated have satisfactory internal consistency; to this extent, the Cronbach's alpha coefficient (Nunnally, 1978) was used to calculate it.

Likewise, univariate descriptive analyses are carried out to summarise the characteristics of the data set. On the other hand, contrast analyses are performed, with a significance level of  $p < 0.05$ , by means of tests of equality of means, Levene's t-tests, according to group, gender and field of knowledge, and Anova according to age.

The different analyses were carried out using IBM SPSS 20 and IBM SPSS AMOS 21 statistical software.

## Results

### *Indicators of relevance and appropriateness of conducting the EFA*

The indices shown in Table 3 reveal, in both groups, the goodness-of-fit of the model so that the correlation matrix of the variables can be factored and the EFA can be performed:

- a) The Kolmogorov-Smirnov and Shapiro-Wilk tests meet the assumptions of normality and show p-values  $>.05$ .
- b) Bartlett's test of sphericity shows a significance of  $.000$ , less than  $.05$ .
- c) In both cases, the determinant  $\neq 1$ , therefore, the null hypothesis, i.e. that the determinant = 1, is rejected and the alternative hypothesis, that the determinant of the matrix is different from 1, is accepted.
- d) The KMO coefficient reflects scores close to 1, indicating that the correlation matrix can be factored.

These indices and tests confirm the relevance of the fact that the correlation matrix of the variables under study can be factored and, therefore, the possibility of carrying out the EFA.

Table 3. *Fit coefficients of the variables verifying the validity of the EFA in the SM<sub>1</sub> and SM<sub>2</sub> groups.*

Group	<i>Kolmogorov-Smirnov</i>	<i>Shapiro-Wilk</i>	<i>KMO</i>	<i>Barlett's sphericity</i>	<i>Determinant</i>
SM <sub>1</sub>	p>.05	p>.05	.905	.000	4.87E-005
SM <sub>2</sub>	p>.05	p>.05	.873	.000	.001

### *Exploratory Factor Analysis and reliability analysis*

The EFA carried out using the principal components method and varimax rotation with Kaiser normalisation extracts, in both groups, a 3-factor structure that explains, for the SM<sub>1</sub>, 60.08% of the variance and, for the SM<sub>2</sub>, 59.65% of the total variance. Thus, this structure is, a priori, the validated factorial solution of the Questionnaire for university students' perception of the transition to adulthood (Guerra-Santana, 2022).

Table 4. *Questionnaire Perception of university students regarding the transition to adulthood. Factor structure, explained variance, and reliability in the SM<sub>1</sub> and SM<sub>2</sub> groups.*

Factors	SM <sub>1</sub>		SM <sub>2</sub>	
	Variance %	Cronbach's $\alpha$	Variance %	Cronbach's $\alpha$
(F1) Ability to create a family and provide for its needs	37.25	.855	30.92	.816
(F2) Personal responsibility and maturity	12.21	.897	16.04	.850
(F3) Biological and chronological transition	10.62	.674	12.69	.637

Both groups have fairly adequate internal consistency indices for each factor. Overall, the SM<sub>1</sub> has a high reliability,  $\alpha = .895$ , whilst the SM<sub>2</sub> has a very satisfactory coefficient,  $\alpha = .856$ .

The indicated data and the different analyses carried out corroborate the soundness of the Questionnaire, as it presents a parsimonious factorial structure. Therefore, the results obtained confirm the empirical structure of the instrument applied, its reliability and its good applicability.

### ***Contrast Analysis***

If the variables measured in the students of the SM<sub>1</sub> are compared with those of the SM<sub>2</sub> according to the group to which they belong, students who were studying a degree before the pandemic-students with training received at present, the results are as follows:

Table 5. *T-test for two independent samples based on the group the student belongs to*

FACTORS		Levene's test for equality of variances		T-test for equality of means				
		F	Sig.	t	gl	Sig. (bilateral)	Difference in averages	Standard error of the difference
CAPACITY TO CREATE FAMILIES AND MEET NEEDS	Equal variances have been assumed	6.857	.009	-3.998	754	.001	-.290	.0726

	Equal variances have not been assumed			-4.045	728.479	.001	-.290	.0718
PERSONAL RESPONSIBILITY AND MATURITY	Equal variances have been assumed	35.918	.000	-7.114	754	.001	-.505	.0711
	Equal variances have not been assumed			-7.405	753.152	.001	-.505	.068
BIOLOGICAL AND CHRONOLOGICAL TRANSITION	Equal variances have been assumed	1.875	.171	-.196	754	.845	-.0143	.073
	Equal variances have not been assumed			-.198	726.813	.843	-.0143	.0726

There are significant differences in the factors "Ability to create a family and care for its needs" and "Personal responsibility and maturity" depending on whether the students studied before the pandemic or are currently studying. In both cases,  $p(t) < 0.05$ . The null hypothesis is rejected, as there are differences between the groups. Specifically, the differences are concentrated in the following variables for each factor:

**Table 6.** Mean scores, standard deviations and mean differences found in the variables measured according to the group to which the student belongs.

(F1) ABILITY TO CREATE A FAMILY AND PROVIDE FOR ITS NEEDS								
Variables	SM <sub>1</sub>		SM <sub>2</sub>		F	gl	Sig (bilateral)*	
	M	Dt	M	Dt				
v1.- Being able to meet the needs of a son or daughter	4.43	1.529	5.01	1.476	5.250	2.776	.001	
v2.- Deciding responsibly to have a first child	4.56	1.634	5.18	1.394	25.200	2.774	.001	
v3.- To have the capacity to educate a son or daughter.	4.74	1.415	5.09	1.285	6.890	2.775	.001	
v4.- Being able to run a household	4.61	1.236	4.69	1.239	.035	2.776	.384	
v5.- Being able to take care of the family financially	4.52	1.387	4.77	1.233	7.881	2.774	.901	
v6.- Being independent of parents	3.76	1.415	4.22	1.317	3.831	2.776	.001	
(F2) PERSONAL RESPONSIBILITY AND MATURITY								
Variables	SM <sub>1</sub>		SM <sub>2</sub>		F	gl	Sig (bilateral)*	
	M	Dt	M	Dt				
v7.- To have the ability to resolve difficult situations.	5.14	.897	5.36	.762	5.618	2.776	.001	

v8.- Use language that is respectful of others.	5.14	.947	5.51	.751	14.291	2.775	.001
v9.- Being consistent with my ideas and actions	5.34	.862	5.56	.706	19.558	2.775	.220
v10.- Establish good relationships with both parents and other adults.	5.12	.962	5.39	.772	6.294	2.776	.112
v11.- Respecting established social norms	4.76	1.120	5.17	.990	4.205	2.776	.001
v12.- Being able to promote a good family climate	4.60	1.037	5.19	.890	3.418	2.775	.001
v13.-Accepting responsibly the consequences of one's actions	5.39	.845	5.64	.635	35.293	2.777	.245
v14.- Ability to work in a team	4.61	1.175	5.17	.944	18.382	2.776	.001
v15.- Learning to control emotions	4.58	1.193	5.23	.962	15.294	2.772	.012
v16.- Being tolerant of different cultures	5.09	1.096	5.62	.720	57.283	2.774	.001
v17.-Having a healthy, safe sexuality	4.90	1.204	5.35	.905	17.820	2.774	.001

\* The difference in means is significant  $p < 0.05$  (bilateral).

Value scale: 1=Not at all important; 2= Not very important; 3= Somewhat important; 4= Important; 5= Quite important; 6= Very important.

Table 6 shows that in four of the six variables that comprise the first factor, there are differences in means and that, in these, the perception of the group currently studying is more favourable than that of the sub-sample with education received before the pandemic. Thus, and by way of example, in v3: "Having the capacity to educate a son or daughter", the students who are currently studying rate this statement more positively ( $F_{2,775} = 6.890$ ;  $p < 0.001$ ).

Similarly, in the second factor regarding Responsibility and Personal Maturity, the perception of the group currently in education is more positive than that of the sub-sample with pre-pandemic education. In this case, there are differences in eight of the eleven variables that make up this dimension.

However, where the factors are analysed by gender, field of knowledge and age, it can be observed that for the first two variables measured:  $p(t) > 0.05$  and, therefore, the null hypothesis of no differences between the groups is not rejected (= accepted). Therefore, there are no statistically significant differences either in "Ability to create a family and attend to its needs", or in "Personal responsibility and maturity", or in "Biological and chronological transition" according to gender and the field of knowledge to which the pupils belong. In this regard, the mean scores of these groups are considered statistically similar.

Since the variables are continuous and normal, the results from the t test for two independent groups based on gender and field of knowledge, respectively, do not show significant differences.

However, when focusing on the age, statistically significant differences were found,  $p < 0,05$ , regarding the *Capacity to create a family*  $p = 0.001$ ; as well as regarding *Personal responsibility and maturity*  $p = .024$ .

As with the group variable (pre-pandemic-post-pandemic), there are also statistically significant differences according to age in the factors "Ability to create a family and care for its needs" and "Personal responsibility and maturity". Table 7 presents the variables of both factors where differences were found.

With regard to the first factor, data reveals that students aged 27 and over have the highest mean scores and, therefore, give greater importance to the ability to create a family and look after its needs; with means above 5 points, they consider it essential to be responsible and able to look after the family and the needs of a son or daughter, to know how to educate the latter and to be independent from parents. The rest of the age groups have the same point of view, but the assessment they make in each of the variables is lower.

With regard to the statistically significant differences in the second factor, data indicates that it is also the subgroup aged 27 years and older that makes such differences with the other age groups; for this age subgroup, personal responsibility and maturity are important for the transition to adulthood.

**Tabla 7.** Mean scores, standard deviations and mean differences found for variables measured by age

(F1) ABILITY TO CREATE A FAMILY AND PROVIDE FOR ITS NEEDS					
Variables	Ages	N	M	D.T.	Sig.*
v1.- Being able to attend to the needs of a child	18-20 years	403	4.57	1.555	
	21-23 years	208	4.70	1.500	
	24-26 years	71	4.29	1.775	.001
	27 years and over	91	5.31	1.082	
	Total	775	4.67	1.534	



v2.- Deciding responsibly to have a first child	18-20 years	402	4.78	1.562	.015
	21-23 years	208	4.73	1.614	
	24-26 years	71	4.66	1.766	
	27 years and over	90	5.31	1.215	
	Total	773	4.82	1.568	
v3.- To have the capacity to educate a son or daughter.	18-20 years	403	4.84	1.364	.004
	21-23 years	208	4.84	1.438	
	24-26 years	71	4.68	1.471	
	27 years and over	91	5.36	1.070	
	Total	774	4.89	1.373	
v5.- Being able to take care of the family financially	18-20 years	401	4.54	1.345	.001
	21-23 years	208	4.67	1.297	
	24-26 years	71	4.27	1.377	
	27 years and over	91	5.13	1.157	
	Total	773	4.62	1.329	
v6.- Being independent from parents	18-20 years	403	3.80	1.371	.001
	21-23 years	208	4.05	1.365	
	24-26 years	71	3.68	1.363	
	27 years and over	91	4.60	1.357	
	Total	775	3.95	1.390	

**(F2) PERSONAL RESPONSIBILITY AND MATURITY**

Variables	Ages	<i>N</i>	<i>M</i>	<i>D.T.</i>	<i>Sig.*</i>
v8.- Use language that is respectful of others.	18-20 years	402	5.25	.854	.015
	21-23 years	208	5.22	1.005	
	24-26 years	71	5.37	.808	
	27 years and over	91	5.55	.778	
	Total	774	5.29	.889	
v10.- Establish good relationships with both parents and other adults.	18-20 years	402	5.22	.894	.007
	21-23 years	209	5.11	.989	
	24-26 years	71	5.32	.797	
	27 years and over	91	5.49	.705	
	Total	775	5.23	.898	
v11.- Respecting established social norms	18-20 years	403	4.98	1.048	.001
	21-23 years	208	4.71	1.160	
	24-26 years	71	4.81	1.186	
	27 years and over	91	5.32	.855	
	Total	775	4.93	1.086	
v12.- Being able to promote a good family climate	18-20 years	402	4.97	1.005	.001
	21-23 years	208	4.93	1.026	
	24-26 years	71	5.00	.898	
	27 years and over	91	5.43	.791	
	Total	774	5.02	.988	
v14.- Ability to work in a team	18-20 years	403	4.75	1.110	.019
	21-23 years	208	4.86	1.186	
	24-26 years	71	4.95	1.079	
	27 years and over	91	5.14	.973	
	Total	775	4.85	1.118	
v17.-Having a healthy, safe sexuality	18-20 years	401	4.98	1.155	.001

21-23 years	208	5.06	1.132
24-26 years		5.25	1.038
27 years and over	91	5.49	.780
Total	773	5.09	1.111

\* The difference in means is significant  $p < 0.05$ .

Value scale: 1=Not at all important; 2= Not very important; 3= Somewhat important; 4= Important; 5= Quite important; 6= Very important

## Discussion and conclusion

The purpose of this research was to study how the transition to adulthood is perceived by a group of university students trained before the pandemic and another group currently studying a degree (post-pandemic). To this extent, a validated questionnaire was applied that measures criteria related to the ability to create and care for a family, biological and chronological transition, and maturity and responsibility, all of which are desirable aspects of adulthood.

Both pre-pandemic and post-pandemic university students consider that the ability to create a family and take care of their needs, and personal responsibility and maturity, are important criteria to take into account in order to consider a person to be an adult, whereby the first group (pre-pandemic) presents a worse perception of the above factors; in this regard, significant differences have been found between the two groups. During the pandemic, many young people saw their university life interrupted, many returned home, abandoned face-to-face classes for online learning (Halliburton et al., 2021), and increased their stress level due to the suspension of social life (Preetz et al., 2021). It is worth considering that Spain is one of the countries with the highest youth unemployment rate in Europe, together with an age of emancipation and having a first child towards the age of 30 years. Therefore, this situation conditions the future possibilities of the youth who are unable to find stability in this context (Sánchez-Queija et al., 2023). The perception of being an adult now takes on a different value for them (Hall & Zygmunt, 2021). On the other hand, it was found that there are no differences in the biological and chronological transition factor, understanding that these indicators are assumed to be part of their evolution towards adulthood.

Regarding socio-demographic variables, it should be noted that no statistically significant differences were found by gender or field of study. However, other studies confirm that uni-

versity students studying demanding degrees have a greater perception of emerging adulthood, which may be due to the responsibility that these studies entail (Raikou & Konstantopoulou, 2021). In contrast, there are differences in the age variable. It is students aged 27 and over who consider the factors ability to create a family and take care of its needs, and personal responsibility and maturity, to be of greater importance for perceiving a person as an adult. Students in higher years are likely to have more competences to cope with constraints and problems than those in their initial years (Hall & Zygmunt, 2021). They are aware of their situation, give importance to a series of factors about adulthood more appropriate to their age, such as creating a family and taking care of their needs, but they find that in Spain, the vast majority of young people live in the family unit until they are almost 30 years old (Eurostat, 2020), there is a permanent crisis in the access to housing for young people (Echavas-García and Martínez-del Olmo, 2021) and that there are few social policies to support families (Seller, 2020). In this temporal laps, despite observing an increase in the trend of self-sufficiency as adults, it does not seem to be a defining criterion, even for those who are approximately 30 years old. The studies of Zacarés et al. (2015) suggest that, despite thirty-year-old sharing certain beliefs regarding the perception of adulthood, the context, socio-economic variables and cultures lead to notable variations in the transition towards adulthood. Lower family incomes have an impact on the development of youth since they have less resources to continue their studies, among other reasons (De La Fuente et al, 2023). This, in Spain, is particularly important in early ages, and coincides with the statements of Sánchez-Queija et al. (2020) regarding the youth who abandon their studies to confront a challenging labour world with a high level of youth unemployment.

It is considered that this paper has certain limitations related to the sample. Firstly, in order to generalise the results, it would be advisable to extend the sample, by means of stratified random sampling, to other universities and levels in order to achieve, in this way, an adequate sample suitability and proportionality. Secondly, it is deemed appropriate and desirable to include a sample of the youth population in general, whether students and employed or not, which would represent a future line of research.

Universities can offer support in the form of counselling or psychological resources to help students cope with problematic situations. It is also necessary to cope with different types of schooling, such as online learning, in which many students have not previously been able to cope. Thus, many academic institutions can offer support to teachers and students on

what works well or connect university social life (Halliburton et al., 2021). On the other hand, in order to study the effects of the variables of the gender, age and level of study factor (independent variable) may have regarding the variables *Capacity to create a family and cover its needs*, *Personal responsibility and maturity* and *Biological and chronological transition* (dependent and result variable), it would be of interest to perform a multivariate variance analysis, MANOVA, in order to determine whether the changes in the independent variable have a statistically significant impact on the dependent variable.

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