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Comparative study of attitude towards research, academic motivation, goal orientation and attributional styles in nursing and educational sciences students

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Abstract: In recent years, the number of doctoral theses has decreased, a fact that jeopardises the progress of such important disciplines as education and health, which are also fundamental human rights. It is important to know the interest and its attributions in students; Methods: An observational, descriptive, correlational and cross-sectional study was carried out using the EACIN and CEAP-48 scales; Results: A total of 429 individuals participated. Age influenced research interest, decreasing as the individual grew older. Interest between genders did not show significant differences, however, the female gender showed a greater relationship with motivation. Students from public universities significantly related interest to motivation and those from private universities also related interest to performance. Conclusions: the students of both sciences show neutral values of interest in research that are directly related to academic motivation, making it necessary to know the teaching methodologies used by the teaching staff for their teaching, which is essential to respond to future social needs.

Keywords: *Attitude, Education, Innovation, Methodology, Motivation, Nursing, Professor, Research, Teaching, University.*

1. Introduction

Arising from the human being's concern for finding answers to his questions, research is the process that allows objective knowledge to be achieved through techniques using the scientific method [1]. The scientific method establishes the formulation of a hypothesis that, after being subjected to different empirical tests, is accepted or refuted, being a method that can be extended to all fields of knowledge, which makes it optimal for use in higher education and providing students with skills and aptitudes that address the social needs of the moment [2].

Although the scientific method is unique, there are different ways of applying it, ranging from the more objective and measurable (quantitative) approach, more characteristic of the experimental and health sciences, to complex phenomena in the social sciences that can hardly be observed with a more qualitative approach, giving rise to various forms of classification of research [3].

In the field of health sciences, and more specifically in nursing, practice based on the best scientific evidence is promoted, so it is important to encourage scientific production through research [4]. From the educational point of view, research promotes the progress of education by strengthening its validity and reliability, being a relevant topic [5].

In the European Higher Education Area, the doctoral degree is the highest degree that can be achieved, and to obtain it, it is essential to complete a doctoral thesis consisting of an unpublished research work. In recent years, in Spain, there has been a downward trend in the number of theses approved per year (Figure 1), which represents a lack of interest among students, possibly due to the

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consideration of research as a complex process and to the conditions and methodology of the teacher who provides research training [6].

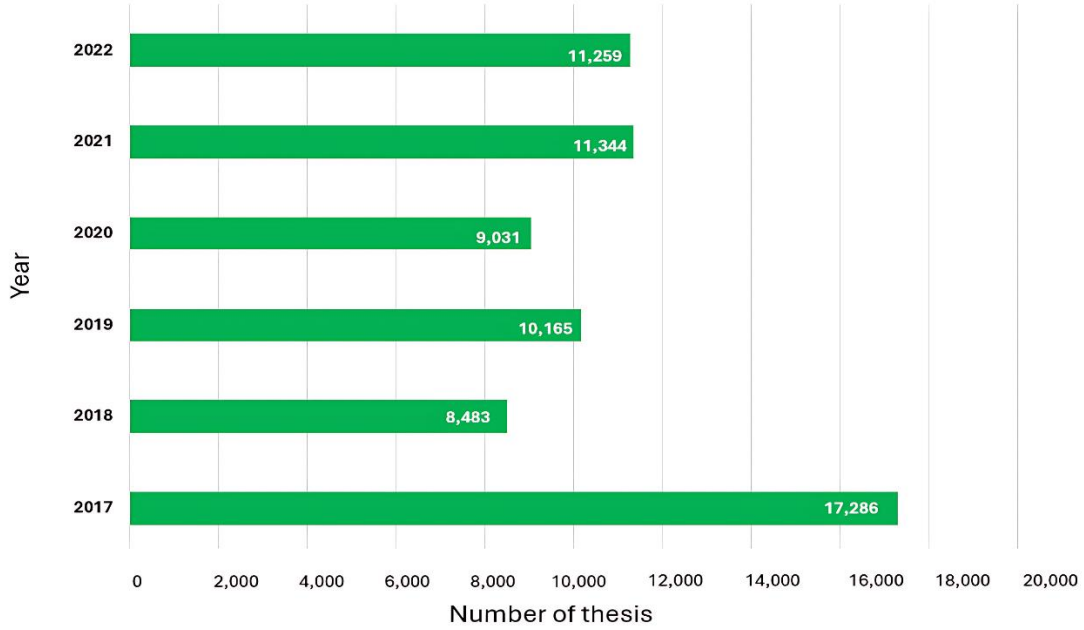

Figure 1.
Evolution of the number of theses approved in Spain [7].

Attitude is defined as a positive or negative preference towards something made up of three components: cognitive, affective and behavioural. Attitude is closely related to motivation which is one of the best predictors of academic achievement with student attributions associated with the teaching methodologies used, effort, persistence and goals attained [8, 9].

UNESCO affirms that education has the power to transform the lives of students with a direct relation on health [10] and intends to extend the right to education to include higher education, considering it as a creative place for the diffusion of knowledge [11]. The relationship between nursing and education has been established since the beginnings of modern nursing where Virginia Henderson considers among its fourteen basic needs the need for learning associated in turn with the curiosity of knowledge [12].

The interrelationship between all the above makes it appropriate to establish the objectives of this study.

1.1. Objectives

The main objective of this study is to explore the attitude towards research and its relationship with academic motivation, goal orientation and attributional styles of university students of Nursing and Educational Sciences in Spain.

It also aims to assess the three dimensions of attitude in the participating grades, to analyse academic motivation, goal orientation and attributional styles, to investigate socio-demographic variables and their influence on the students and to explore the relationships between attitude, motivation, goal orientation and attributional styles of the participants.

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2. Materials and Methods

An observational, descriptive, correlational, cross-sectional and descriptive study was carried out to assess attitude towards research and academic motivation, goal orientation and attributional styles and the relationship between them.

2.1. Participants

The sample consisted of students of the Bachelor's Degree in Nursing (BSN) and the Bachelor's Degrees in Education Sciences (BEd): Bachelor's Degree in Primary Education (BPE) and Bachelor's Degree in Social Education (BSE); a probabilistic sampling by clusters was carried out. The socio-demographic variables selected were age, sex, university of enrolment, type of university (public or private), degree studied and the branch of science to which the degree belongs. A total of 429 individuals participated.

2.2. Instrument and Procedure

The EACIN-R scale [13] was used to determine attitude towards research, and for academic motivation, goal orientation and attributional styles the CEAP-48 scale [14] was chosen, both of which have already been validated.

The EACIN-R scale consists of 28 likert-type items grouped into three subcategories: disinterest in research (DRS), vocation for research (VRS) and valuing research (RRS). The maximum score is 112 points, with high values being compatible with a positive attitude towards research, while low values are negative.

On the other hand, the CEAP-48 scale is also likert-type and consists of 47 items distributed in two subscales: the SEMA-01 on academic motivation with the factors deep motivation (DM), performance motivation (PM) and surface motivation (SM); and the SEAT-01 on goals and attributional styles (Figure 2). The maximum score is 280 points.

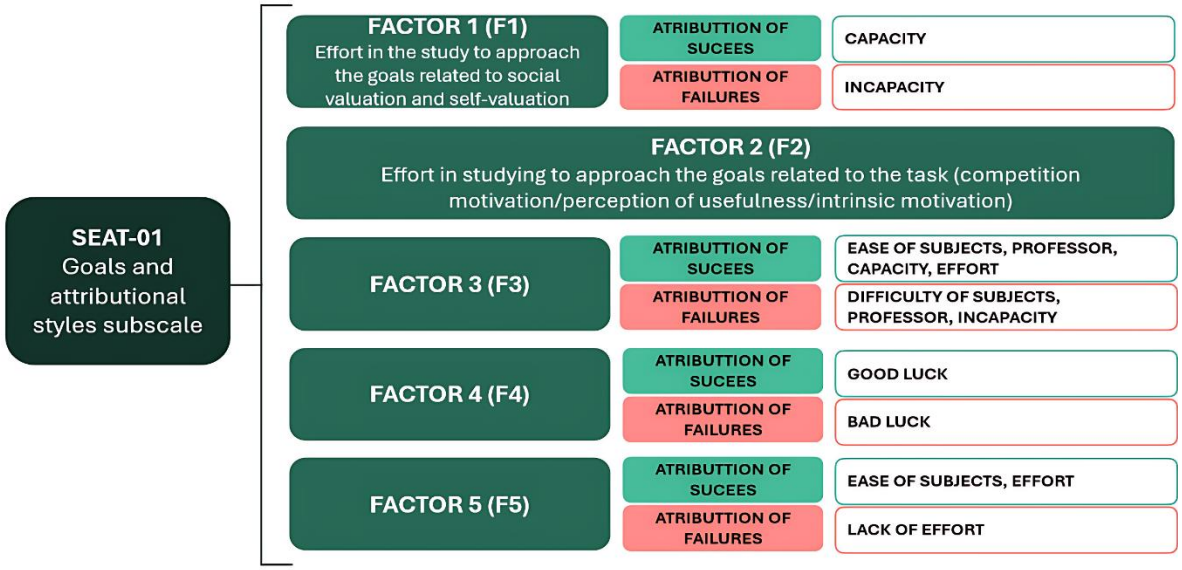

Figure 2.
Factors of the SEAT-01 subscale of the CEAP-48 scale.

Data collection was done through the dissemination of an online questionnaire via Google Forms, always ensuring the anonymisation of participants' data and with clear indications on the criteria for inclusion of respondents.

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2.3. Data Analysis

The statistical calculation of the data was carried out with SPSS software version 25.

In the contrast analysis, mean values were calculated for the different study variables. Also, as non-parametric scales were used, the Mann-Whitney U test was calculated for variables of two categories, and the Kruskal Wallis test for those of three or more.

For the correlational analysis, focusing on a linear relationship, Spearman's Rho test was used, as there is no normal distribution between the variables studied.

3. Results

3.1. Descriptive and Contrast Analysis

The infographics of the descriptive analysis can be seen in Figure 3, where in relation to the university degrees of the study, following the inclusion criteria, 218 were students from the Degree in Nursing, 55 from the Degree in Social Education and 156 from the Degree in Primary Education. In turn, there were 70 males and 359 females.

In terms of the year of enrolment, 139 students were first-year students, 77 second-year students, 135 third-year students and 78 fourth-year students, mostly enrolled in public universities.

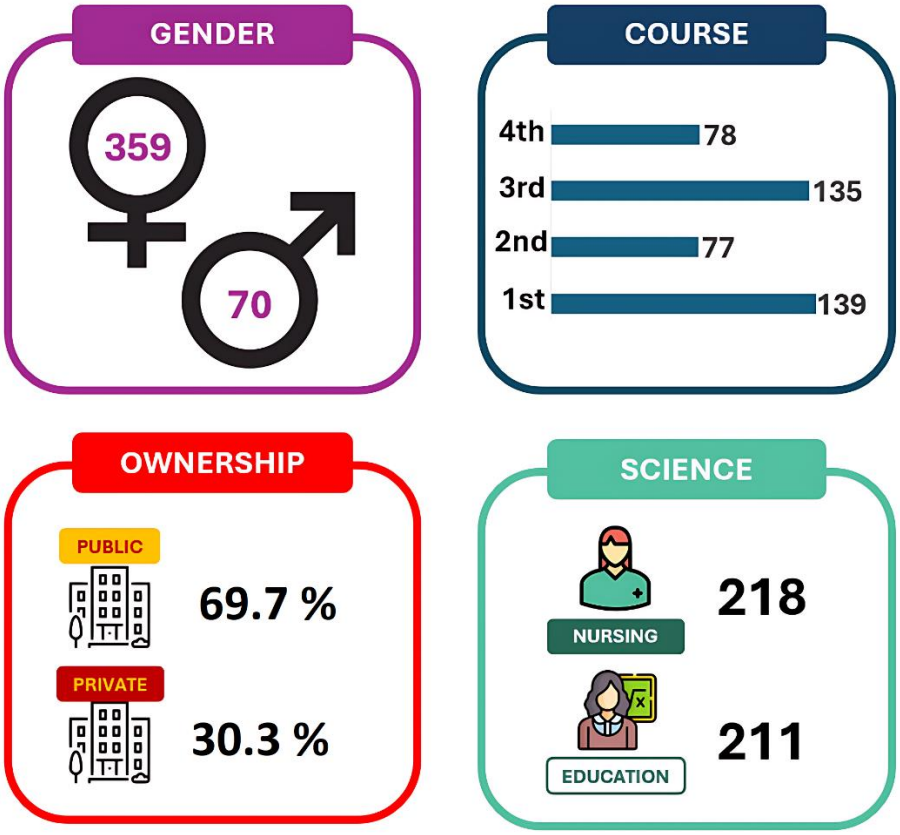

Figure 3.
Descriptive analysis infographic.

The age of the participants ranged from 17 to 53 years, with 51% belonging to the 17-20 age group, 38% to the 21-25 age group, 5% to the 26-30 age group, and finally 6% to the 30+ age group. The average age was 21.97 years.

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Regarding the data obtained in the questionnaires, the mean value for the CEAP-48 was 197.59 points and for the EACIN-R 74.84 points, as shown in Table 1 and Table 2.

Table 1.
General results for the CEAP-48 scale.

Scale / Subscale / Factor	Mean	STD
CEAP-48	197.59	33.07
SEMA-01	106.16	18.99
Deep motivation (DM)	48.53	9.66
Performance motivation (PM)	27.40	7.91
Superficial motivation (SM)	30.17	8.65
SEAT-01	91.44	17.31
Factor 1	21.12	6.57
Factor 2	19.52	4.90
Factor 3	24.09	5.47
Factor 4	10.01	4.56
Factor 5	16.70	4.22

Table 2.
General results for the EACIN-R scale.

Scale / Subscale	Mean	STD
EACIN-R	74.80	13.87
DRS	20.06	5.38
VRS	27.24	8.11
RRS	21.53	4.20

The overall result obtained in the EACIN-R shows a neutral attitude towards research with lower scores in the subscale of valuing research; the CEAP-48 concludes that the lowest results correspond to the luck factor. As can be seen in Table 3, in all the options, the female sex obtains higher results than the male sex, which coincides with greater motivation and interest. The results of CEAP-48, SEMA-01, the deep motivation factor, SEAT-01, the factor on task-related goals, ability and effort above all, are significant. In the EACIN-R, although higher results are also obtained in the female sex, the difference is not significant.

Table 3.
EACIN-R and CEAP-48 results by sex.

Scale / Subscale	Male	Female	Total			Sig (p) U
	□	□	□	$\tilde{X}$	IQR	
EACIN-R	74.00	75.00	78.84	75.00	17	0.535
DRS	25.11	26.24	26.06	27.00	7	0.090
VRS	27.53	27.19	27.24	28.00	11	0.744
RRS	21.36	21.57	21.53	22.00	5	0.840
CEAP-48	185.04	200.04	197.59	199.00	33	<0.001
SEMA-01	100.04	107.35	106.16	109.00	21	0.006
DM	44.93	49.23	48.53	50.00	12	<0.001
PM	26.21	27.70	27.46	28.00	13	0.208
SM	28.90	30.42	30.17	31.00	12	0.417
SEAT-01	85.00	92.69	91.44	92.00	20	0.001
Factor 1	19.57	21.42	21.12	21.00	9	0.036
Factor 2	17.29	19.96	19.52	20.00	6	<0.001
Factor 3	22.23	24.45	24.09	24.00	7	0.002
Factor 4	10.01	10.01	10.01	9.00	7	0.926
Factor 5	15.90	16.86	16.70	17.00	6	0.109

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3.2. Correlational Analysis

The interpretation of the correlation coefficient has been carried out following the classification in Table 4.

Table 4.
Interpretation of the r value in correlational analysis.

r Value	Correlation
r =1	Perfect
0.9 ≤ r < 1	Excellent
0.8 ≤ r < 0.9	Good
0.5 ≤ r < 0.8	Regular
r < 0.5	Bad

Comparing the EACIN-R and CEAP-48 scales (Table 5) with their respective subscales and factors, positive correlations are observed in most of them, being a very important finding the positive significant relationship of research disinterest with deep motivation as well as the negative significant relationship of disinterest with effort, attribution to teachers, subjects and chance, which is in line with the researcher's scientific evidence and the disregard of chance and luck.

Table 5.
Results of correlational analysis of the EACIN-R and the CEAP-48.

	DRS	VRS	RRS	EACIN-R
DM	0.254**	0.565**	0.545**	0.596**
PM	-0.051	0.208**	0.184**	0.161**
SM	-0.424**	-0.010	0.021	-0.123*
SEMA-01	-0.103*	0.340**	0.328**	0.274**
Factor 1	-0.121*	0.134**	0.076	0.064
Factor 2	0.269**	0.494**	0.449**	0.528**
Factor 3	-0.291**	0.067	0.114*	-0.013
Factor 4	-0.382**	-0.117*	-0.137**	-0.243**
Factor 5	-0.086	0.164**	0.164**	0.129**
SEAT-01	-0.153**	0.205**	0.189**	0.131**
CEAP-48	-0.142**	0.302**	0.272**	0.215**

Note: * The correlation is significant at the 0.05 level (two-sided), ** The correlation is significant at the 0.01 level (two-sided).

Regarding gender (Table 6), significant results are obtained for females, with a positive correlation between PM and SM of the SEMA-01, which relates performance motivation to superficiality; the same occurs with PM and Factor III of the SEAT-01, which attributes performance motivation to facility and ability. Research vocation is positively correlated with effort and SEAT-01 and valuing research with facility. Negative correlation is significant between SM and Factor I of the SEAT-01 which inversely relates surface motivation to effort; also Factors I and IV between effort and luck.

Male gender is significantly positively related to surface motivation and study effort, and to motivation and luck. Ability is positively correlated with valuing research and ability. Research disinterest and effort are negatively correlated.

Table 6.
Results of correlational analysis of the CEAP-48, EACIN-R and sex.

	DRS		VRS		RRS		EACIN-R	
	Male	Female	Male	Female	Male	Female	Male	Female
DM	0.272*	0.247**	0.484**	0.594**	0.540**	0.557**	0.549**	0.610**
PM	0.043	-0.065	0.292*	0.190**	0.324**	0.155**	0.303*	0.134*
SM	-0.372**	-0.434**	-0.107	0.006	0.043	0.014	-0.139	-0.120*
SEMA-01	-0.085	-0.109*	0.250*	0.359**	0.386**	0.319**	0.255*	0.278**
Factor 1	-0.084	-0.127*	0.057	0.146**	0.202	0.061	0.063	0.066
Factor 2	0.269*	0.268**	0.534**	0.494**	0.531**	0.439**	0.565**	0.522**

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Factor 3	-0.275*	-0.307**	-0.039	0.083	0.250*	0.089	-0.042	-0.017
Factor 4	-0.374**	-0.377**	-0.258*	-0.090	-0.033	-0.147**	-0.298*	-0.229**
Factor 5	-0.233	-0.067	0.075	0.181**	0.085	0.179**	0.014	0.146**
SEAT-01	-0.134	-0.158**	0.169	0.212**	0.343**	0.161**	0.157	0.124*
CEAP-48	-0.120	-0.147**	0.243*	0.319**	0.386**	0.254**	0.233	0.215**

Note: * The correlation is significant at the 0.05 level (two-sided), ** The correlation is significant at the 0.01 level (two-sided).

It is significant for both that research interest is negatively correlated with surface motivation, although more significantly so for females than for males, where they also clearly differ in ease, goal orientation and general attributional styles.

The age variable for the EACIN-R scale (Table 7) shows significant results with a very low positive correlation, meaning that as the age of the individual increases, his or her research interest decreases. Furthermore, the loss of interest in research correlates positively with vocation and research, so it cannot be directly related to social valuation or individual vocation, this being an external attribution. In the CEAP-48 scale (Table 8) we can state that with increasing age, motivation oriented towards the avoidance of failure decreases, and the attribution of ease, teachers and luck to success decreases.

Table 7.
Results of correlational analysis of the EACIN-R and age.

	Age	DRS	VRS	RSS	EACIN-R
Age	1,000				
DRS	0.100*	1.000			
VRS	0.060	0.367**	1.000		
RSS	-0.009	0.217**	0.575**	1.000	
EACIN-R	0.047	0.630**	0.900**	0.714**	1.000

Note: * The correlation is significant at the 0.05 level (two-sided), ** The correlation is significant at the 0.01 level (two-sided).

Table 8.
Results of correlational analysis of the CEAP-48 and age.

	Age	DM	PM	SM	SEMA-01	F1	F2	F3	F4	F5	SEAT-01	CEAP-48
Age	1.000											
DM	-0.004	1.000										
PM	-0.066	0.398**	1.000									
SM	-0.262*	-0.011	0.217**	1.000								
SEMA-01	-0.175**	0.628**	0.772**	0.583**	1.000							
F1	-0.081	0.181**	0.652**	0.206**	0.491**	1.000						
F2	0.022	0.717**	0.369**	-0.100*	0.428**	0.347**	1.000					
F3	-0.183**	0.136**	0.305**	0.497**	0.414**	0.428**	0.197**	1.000				
F4	-0.207**	-0.131**	0.130**	0.523**	0.256**	0.268**	-0.117*	0.557**	1.000			
F5	0.076	0.333**	0.340**	-0.053	0.244**	0.346**	0.265**	0.176**	-0.045	1.000		
SEAT -01	-0.118*	0.335**	0.580**	0.309**	0.564**	0.805**	0.488**	0.742**	0.521**	0.472**	1.000	
CEAP-48	-0.170**	0.530**	0.755**	0.490**	0.878**	0.726**	0.517**	0.637**	0.435**	0.391**	0.872**	1.000

Note: * The correlation is significant at the 0.05 level (two-sided), ** The correlation is significant at the 0.01 level (two-sided).

The results corresponding to the analysis of the degrees dedicated to educational sciences (Table 9) conclude that the primary education degree correlates positively with research disinterest with deep motivation and task-related goals, with a striking difference between research disinterest in relation to subjects and effort, where the Bachelor's Degree in Primary Education correlates negatively, in contrast to the Bachelor's Degree in Social Education.

Table 9.
Results of correlational analysis of the CEAP-48, EACIN-R and Bed.

	DRS		VRS		RRS		EACIN-R	
	BSE	BPE	BSE	BPE	BSE	BPE	BSE	BPE
DM	0.176	0.247**	0.652**	0.661**	0.473**	0.579**	0.671**	0.670**
PM	0.036	-0.039	0.173	0.283**	0.228	0.195*	0.206	0.225**

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SM	-0.298*	-0.460**	0.236	-0.012	0.264	0.024	0.212	-0.117
SEMA-01	0.008	-0.099	0.499**	0.451**	0.411**	0.351**	0.519**	0.364**
Factor 1	-0.020	-0.138	0.019	0.110	0.063	0.095	-0.030	0.069
Factor 2	0.261	0.300**	0.598**	0.569**	0.293*	0.496**	0.589**	0.616**
Factor 3	-0.317*	-0.275**	0.051	0.051	0.134	0.172*	0.023	0.021
Factor 4	-0.561**	-0.337**	-0.195	-0.129	0.020	-0.186*	-0.257	-0.221**
Factor V	0.033	-0.176*	0.373**	0.240**	0.311*	0.220**	0.341*	0.175*
SEAT-01	-0.163	-0.134	0.225	0.248**	0.288*	0.252**	0.165	0.210**
CEAP-48	-0.095	-0.119	0.414**	0.396**	0.434**	0.310**	0.405**	0.315**

Note: * The correlation is significant at the 0.05 level (two-sided), ** The correlation is significant at the 0.01 level (two-sided).

The Bachelor's Degree in Nursing and the Bachelor's Degrees in Education Sciences obtain similar results in most cases (Table 10). As for age, its increase decreases superficial motivation, although this also occurs with ability and effort. There is also a negative correlation between research disinterest and CEAP-48, assuming that the greater the research disinterest, the lower the academic motivation, reaching a significant value only in the Bachelor's Degree in Nursing.

Social recognition and research vocation are positively correlated in nursing but not in education, contrary to the negative correlation in vocation, which is only significant in education.

The research assessment shows a positive correlation in effort and ability and the totality of attributional styles, although it only obtains significance in educational sciences.

It is striking that research interest has a significant positive correlation in both sciences and its relationship with deep motivation, as well as negative for surface motivation, although it is only significant in nursing, something that does not occur with effort, attributional styles and academic motivation, where it is only significant in education.

Table 10.
Results of correlational analysis of the CEAP-48, EACIN-R, BEd and BSN.

	DRS		**VRS**		**RRS**		**EACIN-R**	
	BSN	**BEd**	**BSN**	**BEd**	**BSN**	**BEd**	**BSN**	**BEd**
DM	0.272**	0.237**	0.485**	0.657**	0.556**	0.550**	0.536**	0.664**
PM	-0.077	-0.020	0.173*	0.260**	0.169*	0.202**	0.109	0.226**
SM	-0.402**	-0.444**	-0.061	0.034	-0.032	0.075	-0.183**	-0.062
SEMA-01	-0.128	-0.080	0.222**	0.463**	0.286**	0.373**	0.156*	0.398**
Factor 1	-0.128	-0.116	0.171*	0.104	0.064	0.092	0.070	0.064
Factor 2	0.237**	0.293**	0.428**	0.568**	0.449**	0.450**	0.457**	0.607**
Factor 3	-0.297**	-0.287**	0.085	0.055	0.058	0.170*	-0.045	0.024
Factor 4	-0.378**	-0.396**	-0.092	-0.143*	-0.134*	-0.138*	-0.250**	-0.238**
Factor 5	-0.069	-0.101	0.089	0.248**	0.105	0.231**	0.058	0.210**
SEAT-01	-0.172*	-0.142*	0.183**	0.243**	0.129	0.261**	0.069	0.205**
CEAP-48	-0.175**	-0.114	0.204**	0.412**	0.209**	0.341**	0.099	0.343**

Note: * The correlation is significant at the 0.05 level (two-sided), ** The correlation is significant at the 0.01 level (two-sided).

In the analysis of university ownership (Table 11), a negative correlation is observed between research disinterest and goals related to social valuation and self-esteem, being significant mainly in the case of public ownership.

There is an increase in vocation while capacity and effort increase, being more significant in private universities, but not in public universities, as opposed to the luck factor. The valuation of research is positive and higher in public than in private universities.

Finally, research interest is positively related to academic performance, social valuation and effort, mainly being very significant in private universities, in contrast to the relationship between formal motivation and research interest, where it is significant in public universities.

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Table 11.
Results of correlational analysis of the CEAP-48 and ownership of the university.

	DRS		VRS		RRS		EACIN-R	
	PUBLIC	**PRIVATE**	**PUBLIC**	**PRIVATE**	**PUBLIC**	**PRIVATE**	**PUBLIC**	**PRIVATE**
DM	0.243**	0.282**	0.582**	0.545**	0.508**	0.616**	0.579**	0.624**
PM	-0.088	0.059	0.137*	0.377**	0.113	0.333**	0.074	0.351**
SM	-0.379**	-0.494**	-0.014	-0.005	0.010	0.039	-0.130*	-0.113
SEMA-01	-0.103	-0.079	0.336**	0.364**	0.285**	0.427**	0.246**	0.336**
Factor 1	-0.118*	-0.104	0.067	0.281**	0.035	0.169	0.000	0.198*
Factor 2	0.304**	0.217*	0.454**	0.597**	0.386**	0.578**	0.494**	0.602**
Factor 3	-0.205**	-0.404**	0.004	0.188*	0.095	0.162	-0.042	0.050
Factor 4	-0.333**	-0.447**	-0.134*	-0.087	-0.135*	-0.140	-0.239**	-0.248**
Factor 5	-0.068	-0.116	0.140*	0.232**	0.116*	0.272**	0.089	0.216*
SEAT-01	-0.115*	-0.221*	0.135*	0.343**	0.164**	0.263**	0.082	0.228**
CEAP-48	-0.121*	-0.171	0.275**	0.365**	0.241**	0.334**	0.188**	0.267**

Note: * The correlation is significant at the 0.05 level (two-sided), ** The correlation is significant at the 0.01 level (two-sided).

4. Discussion

Research as a process of enquiry and evidence gathering is nowadays present in practically all academic disciplines and studies. In particular, several authors highlight the relevance and need for research in both the educational and nursing fields and outline specific methodologies for its application [15, 16].

We can observe how nursing, which belongs to the branch of health sciences, has an essence of a high vocation for research together with the continuous need to update knowledge. The educational sciences, which belong to the social sciences branch, have a research factor which, although also vocational, is more related to interest and effort [17]. However, the lack of interest in research, especially in the health sciences, is often due to a lack of knowledge about it, which is directly related to how it is Campos-Outcalt, et al. [18]; Dumitru [19] and Amin, et al. [20].

In line with the above, the present study has yielded very varied results in which the main groupings of information stand out: the relationship between the perception of academia and research and the lack of interest in research and its connection with academia.

This study shows a direct correlation between academics and research, which is common, as research progress is influenced by three academic factors: initial training, the consolidation of competencies during this training, and the research spaces and environments that are generated in the educational centres [21, 22].

In general terms, there is a neutral tendency in the results obtained, which means that the subjects neither promote nor criticise research, apart from the social evaluation of it, which obtains lower scores. Other studies conclude a series of characteristics that subjects with this inclination have, such as their relationship with teaching, the perception of research, low and difficult scientific production, lack of knowledge of methodology and low motivation [23, 24].

The concept of research in today's university education has lost its essential purpose, and although there are studies that have reflected this for decades, it continues in this line that has a negative impact on the student body [25-27].

In recent times, the role of the lecturer in university education has increased the demand for research and scientific production, which has led, on some occasions, to less time being invested in the preparation of active teaching methodologies, in favour of traditional lectures of a theoretical-magisterial nature [28, 29]. This practicality is reflected in the students, who, lacking research skills and motivation, tend to use re-sources incompetently [30].

Research learning has a multifactorial vision that integrates those of an institutional nature, such as support for research by educational centres; those of a personal nature, such as vocation; and the student's own consolidation of knowledge [31]. Although traditional methodology has served to transmit and fix knowledge over a long period of time, the implementation of active and innovative

teaching and assessment methodologies is preferable as they increase motivation, interest and better acquisition of competences compared to traditional methodologies [32-34].

The COVID-19 pandemic in 2020 marked a turning point in pedagogical adaptation in higher education worldwide. In some countries, face-to-face classes were completely suspended, and an online model was adopted, where the lack of interaction with lecturers, the impossibility of using active methodologies and the lack of shared spaces considerably reduced the acquisition of certain competences [35-37].

Educational sciences are continually innovating in the use of new teaching methodologies, which is a feature of their speciality. Although other teaching methods have been implemented, the research interest is still neutral, so it would be optimal to implement new technologies in purely research-based teaching [38, 39].

From the nursing point of view, research has a significant influence on the development of the profession, both in the academic, administrative and clinical spheres where evidence-based nursing is conceived as a method of using existing scientific evidence for optimal decision making. Although the scientific production of nursing worldwide has increased considerably throughout history and its topics are related to the needs of each era, it is necessary to maintain this continuity by embracing it from its teaching [40-42].

5. Conclusions

The findings of the present study follow the general line of previous studies where a similar average attitude towards research and the influence of teachers on research is evident [43].

The individuals studied have a value-neutral attitude towards research, which can be attributed to two main causes. On the one hand, there is a direct relationship with the teaching staff and their lack of stimulation; and on the other hand, and related to the above, the lack of academic motivation for research, which is generally related to the teaching methodologies used for their training.

It is essential to foster academic motivation through experiences that serve to identify the inclination of each student, relate it to research and encourage increased interest in it, since otherwise an academic disconnection of ineffective characteristics for the acquisition of research competences is produced.

Specifically, no major differences are observed in the results of the degrees studied. Specifically, Education Science students show greater research interest related to their teaching staff and, consequently, the teaching methodologies used, which may be typical of a purely educational science. However, the nursing students stand out for their greater vocation for research, which is typical of degrees of a scientific nature. In general terms, the usual patterns are followed for each degree, concluding, as mentioned above, a lack of motivation linked to a scarce academic development of research.

The high demands placed on university teaching staff in terms of scientific production and research development means that they focus their attention more on this objective, with full teaching competences taking second place, seeking a practicality that allows them to combine teaching and research.

Different studies on the use of active and innovative teaching methodologies in technical skills in each of the disciplines have demonstrated their improvement in the student experience, increased motivation and achievement, which suggests that the application of these methodologies in research teaching

To increase academic motivation in the research environment, it is necessary to include students in the research environment by encouraging their early participation and giving them the role they need at any given moment, with their responsibility gradually increasing as they acquire competences. Although online learning can be optimal for achieving sufficient knowledge, the lack of interaction with teachers and the research environment has a negative impact on interest and motivation.

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For the continuity of science and scientific production, demonstration by evidence and updating of knowledge it is necessary that nursing students have knowledge of research and adequate motivation to be able to perform it.

It is necessary to study the teaching methodologies currently used for research teaching in university education. In the future, universities must adequately manage resources, focusing on the student and embracing a transversal approach to research that is capable of promoting academic motivation through the use of new teaching methodologies, the training and updating of their teaching staff, face-to-face teaching and the creation of suitable spaces and resources, which will have a positive impact on increasing students' research interest and adapting to current social needs.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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