



BMJ Open Empathy in occupational therapy students: a cross-sectional study at a Spanish university

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ABSTRACT

Introduction Empathy is an important interpersonal skill and a fundamental component in the professional–patient relationship, being the basis for implementing person-centred practice. In several studies, a decrease in empathy levels throughout training in medicine, nursing or dentistry, among others, has been shown. There are few studies on the occupational therapy branch of healthcare. The aim was to determine the degree of empathy perceived by students of occupational therapy at a Spanish university, as well as to analyse the differences between empathy levels according to the different degree courses and gender.

Methods A descriptive cross-sectional study was designed with a sample of 221 occupational therapy students from a Spanish university. The Davis Interpersonal Reactivity Index (IRI) and the Jefferson Scale of Empathy–Health Profession Student's Spanish version (JSPE-HPS-S) were used as outcome measures.

Results According to the results found, high level of empathy was found on all dimension of the IRI (69.84 (9.80)) and the JSPE-HPS-S (122 (94–140)). Although high levels of empathy among occupational therapy students are observed in all degree courses, no significant differences were found between them. Statistically significant differences and a moderate effect size (*r*) were found between the variables according to the gender of the participants, with females showing greater empathy in the overall scores of the IRI as well as in the JSPE-HPS-S (*p*=0.002, *r*=0.212; *p*=0.001, *r*=0.327, respectively).

Conclusions Empathy is an essential competence for the development of quality occupational therapy practice. According to the results and although occupational therapy students showed high levels of empathy, it is important to pay attention to the evolution of empathy and to provide students with learning experiences that prevent its possible decline.

INTRODUCTION

Empathy covers a broad spectrum of cognitive and emotional factors that enables putting ourselves in the place of others by appreciating their perspectives and emotional state, generating a shared affection or vicarious feeling.^{1 2} Being empathic in the context of patient-centred care lies in having an open

Strengths and limitations of this study

- This is the first cross-sectional study conducted in Spain to assess empathic skills in occupational therapy students.
- The culturally adapted and validated Spanish version of the Jefferson Medical Empathy Scale for health professionals was used.
- The results are specific to a single university and do not represent the totality of occupational therapy university students in the Spanish context.

predisposition to the complaint and the demand made by the patient, whoever the patient is and whatever the demand is, and trying to understand it from the patient, not only from the healthcare provider.³ For this reason, empathic behaviour is considered an important interpersonal skill and a fundamental component of the professional–patient relationship that allows laying and implementing the foundations for the development of a person-centred practice.⁴ In this context, multiple investigations have determined that a high level of empathy in healthcare professionals improves clinical competence and care^{4 5} and patient satisfaction,⁶ among others. However, this skill is not completely innate and can be learnt in both its cognitive and affective dimensions.⁷ According to Blanco *et al*,⁸ there are cultural, environmental, experiential and educational factors that influence and condition its development.

Because in patient-oriented healthcare, recognising and seeking occasions to display empathetic behaviour is a central element of the healthcare professional–patient relationship, in recent years the study of empathy among students in different healthcare settings has gained increased interest, as current published studies showed a decline in empathy scores among medical



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professionals.^{9–13} In addition, a decline has been similarly observed throughout the first year of training in other health professions, such as nursing or dentistry,¹⁴ as a result of the need to cope with new responsibilities and excessive workload.

In occupational therapy, empathy is a key element to consider during the intervention process in order to provide the support and understanding that are necessary to face the difficulties that may arise as a consequence of difficulties in occupational performance. In addition, the development of empathic attitudes has been shown to improve patient health outcomes.¹⁵ However, although the literature on health professions students' empathy has increased, little research has been done to assess the level of empathy in occupational therapy students. Historically, the first study, developed by Christiansen,¹⁶ assessed empathic skills in occupational therapy students, using the Hogan Empathy Scale¹⁷ and indicated that healthcare professionals show innate skills that facilitate and aid therapeutic relationships. Similarly, Wise and Page,¹⁸ who were more focused in assessing the emotional dimension of empathy and used the Affective Sensitivity Scale¹⁹ with first-year occupational therapy students, suggested that the implementation of a formative process on empathic skills could have positively affected students' empathy levels.

Currently, the few existing studies that are available in the field of occupational therapy have preferably used the Jefferson Medical Empathy Scale, version for health professionals (JSPE-HPS)²⁰ and have been carried out in Australia²¹ and the USA.²² The research conducted by Brown *et al.*²¹ with a sample of 92 occupational therapy undergraduate students, indicated that although students showed high levels of empathy, these values were lower than those observed in other health professionals and no significant changes occurred throughout the university programme. On the other hand, Metz and Christoff,²² using a convenience sample of three rehabilitation science professional programmes, in which students enrolled in the clinical Occupational Therapy Doctorate programme were included, suggested that higher levels of empathy may be associated with greater capacity and better abilities to respect and consider people with a stigmatising medical condition or disease.

Similarly, gender differences in empathic skills have also been a subject of research, and although there has been controversy regarding gender differences in empathy among healthcare and medical student, some authors suggest that the gender differences observed in psychological research may be due to cultural expectations and stereotypical beliefs, which determine and facilitate the tendency to imitate certain socially expected models of behaviour.²³ In this regard, Abe *et al.*²⁴ indicated that personality type is a factor with a stronger strength of association with empathy than gender. In contrast, several studies^{12 21 24–27} have found significant differences in empathy according to gender, identifying gender differences related to cognitive and affective factors that determine empathy.²⁵

Due to the scarce existing literature and considering the importance of empathy throughout occupational therapy training, the purpose of this study was to determine the level of empathy of students in the 4 years of the occupational therapy degree at a Spanish university, as well as to analyse the differences between empathy levels according to gender and degree course.

MATERIAL AND METHODS

Study design and participants

A cross-sectional descriptive observational study was carried out. For its realisation, students of the bachelor's degree in occupational therapy at the Faculty of Health Sciences of the Universidad Rey Juan Carlos in Alcorcón (Madrid, Spain) volunteered to participate in the project. The occupational therapy degree has a total duration of 4 years and has recently been reapproved by the World Federation of Occupational Therapists (WFOT), ensuring that the WFOT Minimum Standards for Occupational Therapist Training have been met. The study was carried out at the beginning of the second semester, so that none of the students could be conditioned by external factors, such as the exam period. In addition, the third-year and fourth-year students had already completed their first practicum in different healthcare settings.

The sampling was consecutive non-probabilistic. Recruitment of undergraduate students was carried out by means of information on internal campus media. The data collection process was organised in such a way that occupational therapy degree professors will oversee delivering the Interpersonal Reactivity Index (IRI) and the JSPE-HPS questionnaires in the university classroom corresponding to each degree course at the Faculty of Health Sciences of the Universidad Rey Juan Carlos. For each level of the occupational therapy degree programme, a faculty member who did not teach in that degree course was assigned to avoid students being conditioned to fill out the questionnaire for academic reasons. Before completing the questionnaire, students received an explanatory statement and information about their participation, which would be voluntary and anonymous. All questionnaires were anonymised in such a way that the privacy of the participants was preserved. Once the students completed their questionnaires, the professor responsible for each occupational therapy degree level gave all the questionnaires to a professor who did not participate in the previous phases. This professor considered each questionnaire as completed when the information on age, degree course, gender, questionnaire's items were filled in and informed consent document was signed.

All students who participated in the study met the following inclusion criteria: being between 18 and 65 years of age, being a student of the Universidad Rey Juan Carlos (URJC) occupational therapy degree, having signed the informed consent form and having completed both questionnaires. As exclusion criteria, it was considered that

the student did not complete both questionnaires, or did not sign the informed consent form.

Participants and public involvement

Patients and the public were not involved in the design and planning of this study.

Assessment instruments used

1. Davis Interpersonal Reactivity Index (IRI): this scale is especially useful in research on the multidimensionality of the empathic process in the general population.²⁸ It is adapted to Spanish²⁹ and consists of 28 items accompanied by a Likert-type scale with 5 response alternatives according to the degree to which the statement describes the person (0: does not describe me well to 4: describes me very well). In accordance with the model proposed by Davis, the items are grouped into four subscales of seven items each called: perspective taking, fantasy, empathic concern and distress or personal discomfort, with seven items each. The perspective taking (dimension 1) and fantasy (dimension 3) subscales assess the more cognitive processes, while the empathic concern (dimension 2) and personal distress (dimension 4) subscales measure people's emotional reactions to the experiences of others of discomfort and anxiety in the face of discomfort and anxiety in the face of negative experiences of others. The four subscale ranges from 0 to 28, so the higher the score, the greater the empathy level. The confirmatory factor analysis of Spanish adapted version of the IRI showed an acceptable fit ($\chi^2/df=9291$; GFI=0.899; (Root Mean Square Error of Approximation) RMSEA=0.06) as well as good internal consistency for all the dimensions with Cronbach's alpha values between 0.69 and 0.80.
2. Jefferson Scale of Empathy-Health Profession Student's version (JSPE-HPS)²⁰: it assesses empathy in the context of the clinical relationship from a cognitive approach and from the perspective of emotions and is composed of 20 items within 3 dimensions: dimension 1 perspective taking, dimension 2 compassionate care and dimension 3 putting oneself in the patient's place. They are scored according to a Likert scale from 1 (strongly disagree) to 7 (strongly agree). Scores range from a minimum of 20 to a maximum of 140 and the higher the score, the higher the participant's level of empathy. The reliability and validity of the JSPE-HPS has previously been demonstrated.^{18 21 30-32} Its Spanish validation, JSPE-HPS-S,³³ show adequate psychometric properties: Cronbach's alpha=0.786; ICC=0.90 (95% CI=0.86 to 0.93; $p<0.0001$) and the resulting model showed an acceptable fit ($\chi^2=269095$, $df=167$, $p<0.001$; CFI=0.87; RMSEA=0.04).

Statistical analysis

The estimated effect size for the main outcome measures established in the present work was 0.60. Considering a power of the statistical test of 0.90 and an alpha error of 0.05 for the comparison of means for independent

samples, a minimum of 44 subjects in each group is required, according to the G*Power software (V.3.1.9).

Normality analysis of the sample was performed using the Kolmogorov-Smirnov test. Subsequently, descriptive statistics were calculated for the study variables. Given the non-parametric distribution of the variables, the mean difference of the scores between groups was analysed: Kruskal-Wallis tests were used to compare the differences between the four different degree courses and the Mann-Whitney U test was performed for comparing gender differences. To estimate the difference between the four different degree courses, the epsilon-squared estimate (ϵ^2) of effect size was proposed.³⁴ To estimate the differences between two groups, Rosenthal's r (r) was calculated and Cohen's guidelines for r were considered (a large effect is 0.5, a medium effect is 0.3 and a small effect is 0.1³⁵).

The analysis of the variables was performed with the statistical programme IBM SPSS Statistics for Windows, V.27.0 (Copyright 2013 IBM SPSS Corp).

RESULTS

Out of a total of 290 students enrolled in the occupational therapy programme, a sample of 221 students (76.2%) finally participated in the study. The majority were female (88.2%) with a mean age of 20.62 years. **Table 1** describes the sociodemographic results of the sample and the descriptive statistics of the empathy scales. In general, the students reported high level of empathy according to the data found in the IRI_{total score}: 69.84 (9.80) as well as in the JSPE-HPS-S_{total score}: 122 (94-140). When the analysis was carried out according to the degree course to which they belonged, the results indicated that no differences were found between groups (**table 2**), so as no significant correlations were found, ϵ^2 of effect size were not calculated. However, statistically significant differences were evident between the groups of participants, in relation to the gender variable. **Table 3** shows the differences and effect size according to the level of empathy between males and females. A moderate effect size was observed, and the group of women showed higher scores in the global scores of both the IRI ($p=0.002$, $r=0.212$) and JSPE-HPS-S Scale ($p=0.001$, $r=0.327$). In the IRI, statistically significant differences were found in dimensions 2 (empathic concern) and 3 (fantasy), while in the JSPE-HPS-S, such differences were observed in all three test dimensions.

DISCUSSION

The aim of the present study was to determine the degree of empathy self-perceived by students of the occupational therapy degree programme at a Spanish university as well as analysing empathy levels in four independent samples of students from all 4 years of the degree programme and across genders.

Table 1 Descriptive data according to subsamples

	Full sample (n=221)	First year (n=71; 32.1%)	Second year (n=54; 24.4%)	Third year (n=46; 20.8%)	Fourth year (n=50; 22.6%)
Gender					
Males (n, %)	26 (11.8)	10 (14.1)	2 (3.7)	8 (17.14)	6 (12)
Females (n, %)	195 (88.2)	61 (85.9)	52 (96.3)	38 (82.6)	44 (88)
Age, median (IQR)	20.02 (18–47)	18 (18–26)	19 (18–25)	20 (20–47)	22 (20–28)
JSPE-HPS-S _{total score} , median (IQR)	122 (94–140)	123 (94–136)	122 (100–140)	122 (102–136)	123 (104–137)
Perspective taking, median (IQR)	66 (49–70)	67 (49–70)	64 (52–70)	66 (51–70)	65.60 (56–70)
Compassionate care, median (IQR)	498 (33–56)	49 (33–56)	48.50 (37–56)	49 (36–55)	49 (40–55)
Standing Patient's Shoes, median (IQR)	9 (3–14)	8 (3–13)	10 (5–14)	9.50 (4–13)	9 (4–13)
IRI _{total score} , mean (SD)	69.84 (9.80)	71.20 (11.02)	69.91 (9.19)	67.28 (8.66)	70.20 (9.43)
Perspective taking, median (IQR)	18 (9–25)	19 (11–25)	18 (9–24)	17.50 (11–25)	19 (11–24)
Empathic concern, median (IQR)	19 (6–28)	19 (7–28)	19 (9–28)	17.50 (7–28)	18.50 (6–28)
Fantasy, median (IQR)	22 (13–28)	23 (14–28)	22 (13–27)	21 (14–26)	22.50 (14–28)
Personal distress, mean (SD)	11 (3–23)	11 (3–23)	10 (5–16)	10.50 (4–21)	11 (5–21)

IRI, Interpersonal Reactivity Index; JSPE-HPS-S, Jefferson Scale of Empathy Health Profession Students' Spanish version.

According to the results found in our study, occupational therapy students showed a high level of empathy. Previous studies with occupational therapy students^{18 21 22} not only showed high levels of empathy, but also indicated a correlation between empathy and the ability to empathise.¹⁸ However, different international studies,^{36–39} where empathy was analysed in other health professions (medicine, nursing, dentistry), showed lower mean scores, such as 113.52 (nursing), 106.37 (paramedic), 116.54 (osteopathic medicine), 110.92 (medicine), 113.65 (physiotherapy) compared with 123.12 (occupational therapy, according to our findings). It is possible that these scores may depend on other factors such as cultural, social, curriculum or academic load. According to a study by Williams *et al*,³⁹ a low level of empathy was correlated with deficiencies in self-awareness of emotional states. This circumstance can lead health professionals to behave in a cold and

disinterested manner to protect themselves emotionally in the face of painful and shocking scenes, as noted in a study by Williams *et al*,⁴⁰ in which they found lower scores in paramedical students compared with other professions. However, empathetic professionals are more successful in healthcare and are more reflective and able to think about issues such as the impact of a technological product on its users.^{41 42} In this line, another of the main aspects investigated and analysed, according to which a decrease in empathy levels of students may occur, is the excessive use of technology compared with the holistic perspective of patient care during the establishment of the therapeutic relationship.²⁰ This fact would favour affective distancing and depersonalisation of the patient.⁴³ In this sense, the occupational therapy profession is patient oriented, while other health professions are more procedure oriented, may require

Table 2 Descriptive and comparative analysis of scale scores between groups according to university years

	First year	Second year	Third year	Fourth year	H	Sig.
JSPE-HPS-S _{total score} , median (IQR)	123 (94–136)	122 (100–140)	122 (102–136)	123 (104–137)	0.758	0.860
Perspective taking, median (IQR)	67 (49–70)	64 (52–70)	66 (51–70)	65.50 (56–70)	5.307	0.151
Compassionate care, median (IQR)	49 (33–56)	48.50 (37–56)	49 (36–55)	49 (40–55)	2.187	0.535
Standing Patient's Shoes, median (IQR)	8 (3–13)	10 (5–14)	9.50 (4–13)	9 (4–13)	1.651	0.648
IRI _{total score} , mean (SD)	71.20 (11.02)	69.91 (9.19)	67.28 (8.66)	70.20 (9.44)	4.686	0.196
Perspective taking, median (IQR)	19 (11–25)	18 (9–24)	17.50 (11–25)	19 (11–24)	3.487	0.322
Empathic concern, median (IQR)	19 (7–28)	19 (9–28)	17.50 (7–28)	18.50 (6–28)	4.857	0.183
Fantasy, median (IQR)	23 (14–28)	22 (13–27)	21 (14–26)	22.50 (14–28)	3.624	0.305
Personal distress, mean (SD)	11 (3–23)	10 (5–16)	10.50 (4–21)	11 (5–21)	2.854	0.415

Note: H: h-statistic

IRI, Interpersonal Reactivity Index; JSPE-HPS-S, Jefferson Scale of Empathy in Health Profession Students' Spanish version.

Table 3 Descriptive and comparative analysis of scale scores between groups according to gender

	Males	Females	Z	Sig.	r
JSPE-HPS-S _{total score} , median (IQR)	112 (94–133)	124 (103–140)	4.870	0.001	0.327
Perspective taking, median (IQR)	61 (49–70)	66 (54–70)	4.335	0.001	0.291
Compassionate care, median (IQR)	45 (33–53)	49 (36–56)	3.423	0.001	0.230
Standing Patient's Shoes, median (IQR)	8 (6–10)	10 (3–14)	2.199	0.028	0.147
IRI _{total score} , mean (SD)	64.50 (7.27)	70.55 (9.89)	3.151	0.002	0.212
Perspective taking, median (IQR)	18 (13–24)	18 (9–25)	0.206	0.836	0.013
Empathic concern, median (IQR)	16 (9–23)	19 (6–28)	2.893	0.004	0.198
Fantasy, median (IQR)	19 (14–26)	23 (13–28)	4.928	0.001	0.331
Personal distress, mean (SD)	12 (5–16)	10 (3–23)	1.379	0.168	0.092

Note: Z: z-score

IRI, Interpersonal Reactivity Index; JSPE-HPS-S, Jefferson Scale of Empathy in Health Profession Students' Spanish version ; r, Rosenthal's effect size.

less interaction, or require more training in technology management.

Clinical practice, as part of the training of health science professionals, is a determining moment in the acquisition and maintenance of empathy, because it is the time when they are in contact with the patient. However, there are discrepancies in the level of empathy throughout the degree courses. Some studies have shown an increase,⁴⁴ while others observed a decrease during the educational trajectory,⁴⁵ without being able to establish a consensus as to whether clinical practices increase or decrease empathy. The present study is in line with that conducted by Brown *et al*²¹ with occupational therapists, in which they observed no statistically significant differences in empathy scores, regardless of the degree course the student was in. In this sense, such as future studies, it would be appropriate to analyse the multiple factors that may be contributing to the results of our study, such as the duration and type of clinical practice, learning of communication skills, personality, application of teaching methodologies, experiential learning, among others, throughout the 4 years. For occupational therapists, empathy facilitates patient-centred understanding and the achievement of significant therapeutic results for each person.⁴⁶ Therefore, it is especially indicated as an emotional competence in the training curriculum and is one of the objectives of education in this profession. This is reflected in the 2016 WFOT Minimum Standards for the Education of Occupational Therapists,⁴⁷ which recommends a broader training that not only focuses on technical, clinical and professional skills, but also emphasises emotional competencies. Within these competencies, as a requirement for acquiring the clinical competence of communicating with the patient and picking up their concerns, training in communication skills, interpersonal relationships and affective sensitivity is contemplated as an essential part of the programmes.^{47 48} The training programme of the occupational therapy degree of the URJC in Madrid has the approval of the WFOT and

includes among its training the development of competencies that allow students to develop specific skills for the establishment of relationships with people during their practical training and future professional experience, SE competencies are directly assessed during the practical training that takes place during the last two university years in different health and/or social-health contexts. This practical training requires a specific evaluation by the professionals who supervise their practical stay, so that during and at the end of their training, the student receives direct feedback on the development of their professional competences, as well as on the personal skills and attitudes shown towards the users. This continuous training, which supports the development in emotional competencies, may be a factor that favours empathy among students of this degree, regardless of the course evaluated. There is not any indication if individuals who select occupational therapy as a profession are already more empathetic than average. In fact, a recent study⁴⁹ conducted with a sample of 1160 health sciences students (nursing, pharmacy, occupational therapy, physiotherapy, etc) indicates that these students show high scores in aspects related to self-confidence in themselves. This could imply that they choose what they like, confident in themselves. Although empathy is not mentioned, it is a profile for all health professions, so that 'all' would start from the same emotional conditions/skills.

However, in studies with other health professions,^{11 20} such as medicine, empathy levels decrease according to the degree course. Therefore, the Spanish educational context as well as the training programme of each institution is of utmost importance. Delgado-Bolton *et al*⁵⁰ not only highlight the training programme, but also the cultural reasons or access to health resources. A study by Blanco Canseco *et al*⁵¹ justified a decline in empathy according to the progress of the degree courses with the possible progress of responsibility assumed by the final year residents and the anxiety due to job uncertainty. Other authors¹⁵ found a correlation between age and this

decline, the older the patient, the less empathy. There are many possible reasons that can lead to this decline. However, as university professors, we must attend to those variables that are in our hands, such as those related to training and clinical practice, and not only focus on students obtaining optimal levels of empathy, but also have strategies for the prevention of burn out, as one of the causes of empathy loss.⁵² Furthermore, as suggested by Polonio-López *et al*,⁵³ in occupational therapy other aspects such as emotional intelligence can be improved through a structured practical programme, in order to reduce stress as well as improve the relationship with their patients.

The participants in our study were mostly female, which is similar to the actual proportion of students enrolled in the occupational therapy degree programme at the URJC. Gender differences have been found in most of the research conducted on empathy with health science students, where females obtained significantly higher scores than males.^{23 24 54} In contrast to a study conducted by Brown *et al*²⁰ with occupational therapy students, in our work we found statistically significant differences, with a moderate effect size, between females and males, both in the empathy outcome measure and in the fantasy and empathic concern dimensions of the interpersonal reaction outcome measure. It is likely that this difference may be due, in part, to cultural expectations about gender roles as noted by some authors,⁵¹ where females are expected to perceive others' emotions better and are more likely to provide emotional support. In addition, it may be that the caregiver role assigned to females in current Spanish society is still based on a paternalistic model that is influencing the development of more empathic skills in females than males.²³ According to the data found in our study, the greatest differences between females and males were observed in cognitive and affective aspects of empathy, considered essential factors in professional relationships with patients. This is even though, according to our data, both females and males show a similar cognitive capacity to understand the other's situation and to put themselves in the other's place. On the other hand, higher scores were found in the emotional components in females, which may indicate that females react more affectively, presenting more empathic behaviours than males.⁵⁵ Specifically, females scored higher than males in all dimensions of the interpersonal reaction outcome measure, although there were no significant differences in the ability to understand the other person's point of view or in personal distress. However, according to the data found, females presented greater imaginative ability to put themselves in the other person's place, with significantly more feelings of compassion, concern and caring for others. In this sense, some studies indicate that females have a greater capacity to identify with the patient's experiences and feelings.³⁷ However, a recent study,²⁴ conducted with Japanese medical students, indicated that personality type is a factor with a stronger strength of association with empathy than

gender. Furthermore, the teaching of empathy as part of the competencies to be acquired by the student seems to indicate that it is effective, as pointed out by a review with current meta-analysis.⁵⁶

One of the main limitations of the study is that the results do not correspond to a longitudinal follow-up of the sample, but rather the results report in a particular way on the event in a specific degree course. However, this methodology has been used in similar studies.^{9 39 44} On the other hand, although the sample size is adequate, it is not representative of the reality of occupational therapy students, since these data correspond to a single university and there is no equity between women and men in the sample analysed. However, studies conducted on occupational therapy students reflect this same variability.²¹ On the other hand, one of the strengths of our study is that to avoid response and social desirability bias, the professors who administered the test did not teach students in that degree course, as well as all the questionnaires were anonymised and administered in non-penalising situations, such as exams periods, as described by Hojat.³⁶ However, our study has interesting implications for the healthcare teaching context, since we found high levels of empathy regardless of the students' course which may suggest, despite the lack of longitudinal follow-up, that empathic skills remain stable throughout the 4 years of the degree. Moreover, it is also observed that final year students show high levels of empathy that may help in dealing with situations in the healthcare relationship with patients where empathic skills are necessary. However, we have not identified what other factors may impact or limit these skills, nor have we followed up senior students during their first year in the work setting, which could yield interesting results as the context and situation of the students varies.

Therefore, due to the importance of cognitive and emotional aspects, necessary to establish an adequate healthcare relationship, it would be advisable to evaluate and carry out longitudinal follow-ups of the students' empathic skills to identify how empathic competencies evolve throughout the different degree courses, as well as designing studies to identify the effectiveness of the university degree programmes in improving emotional skills and competencies.

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