



**Universidad, educación**

**afectivo-sexual,  
corporal y de género**

Investigación, formación  
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**Universidad, educación afectivo-sexual, corporal y de género: investigación, formación e innovación**

Francisco Manuel Morales-Rodríguez  
(coord.)

**Universidad, educación afectivo-sexual,  
corporal y de género: investigación,  
formación e innovación**

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## **Resumen**

Este libro aborda distintos capítulos de libro que versan sobre investigaciones y experiencias profesionales en materia de igualdad de género con objeto de contribuir a la mejora de la inclusión académica y profesional atendiendo a la diversidad afectivo-sexual. Pretenden seguir contribuyendo al estado del conocimiento en esta línea temática a nivel nacional e internacional. Además, permite aumentar la visibilidad y toma de conciencia de estas realidades para la mejora de la convivencia y la prevención de la violencia en un área tan necesitada de ello.

## Prólogo

La presente obra se enmarca en el proyecto de investigación en materia de igualdad titulado “Universidad, educación afectivo-sexual, corporal y de género: investigación, formación e innovación” (Ayuda del vicerrectorado de Igualdad, Inclusión y Sostenibilidad, INV-IGU170-2021). Contiene una selección de capítulos de libros que tratan sobre la importancia de la educación para la igualdad de género y la atención a la diversidad afectivo-sexual en distintos contextos y ámbitos educativos en coherencia con los compromisos que tienen las Universidades con la consecución de los objetivos de desarrollo sostenible de la Agenda 2030 de las Naciones Unidas. El primer capítulo titulado “Medidas inclusivas desde la orientación académica y profesional” aborda algunas de las herramientas relevantes para usar en el campo de la orientación académica y profesional para promover el respeto y la inclusión del alumnado. El segundo capítulo “Niveles de resiliencia en función del sexo en la universidad: Implicaciones educativas” examinó los niveles de resiliencia en estudiantado y profesorado universitario proporcionando información de utilidad para el futuro diseño de programas para la promoción de la resiliencia considerando el papel de variables como el género. En el tercer capítulo se realiza una revisión sistemática sobre los recursos existentes como guías y programas para la educación afectivo-sexual. En el cuarto capítulo se utiliza una metodología de análisis de contenido acerca de la formación del profesorado de educación primaria en diversidad familiar. Un quinto capítulo presenta una revisión sobre cómo ha ido evolucionado la brecha salarial de género en España. En el capítulo 6 se analizan los estereotipos hacia la homosexualidad presentes en una muestra amplia de estudiantado de Educación Secundaria en diferentes contextos de las aulas rurales de Andalucía. En el capítulo 7 también se analizan creencias sobre uso de condón en hombres gay que viven con VIH. También en población gay, el capítulo 8 versa sobre la adhesión y la prevalencia al DES (doble estándar sexual) en hombres gays de la población española. El capítulo 9 se centra en el desarrollo de competencias emprendedora para lograr la plena inclusión de mujeres en el ámbito rural en el que es aún más necesario promover dichas competencias. En el capítulo 10 desde un modelo reflexivo se enfatiza la necesidad en la actualidad de una educación afectivo-sexual como imprescindible desde temprana edad como se

plantea en actuales disposiciones legislativas como la recientemente aprobada que establece la ordenación y enseñanzas mínimas de la Educación infantil en España. En el capítulo 11 también se enfatiza la necesidad y relevancia de contribuir a una educación afectivo-sexual, corporal y de género desde el ámbito universitario. Los capítulos 12 y 13 versan sobre diferencias de género en la Educación Infantil y su enseñanza. En el capítulo 14 se examinan los niveles los niveles de percepción de bienestar y actividad física analizando diferencias entre hombres y mujeres. El capítulo 15 analiza aspectos relacionados con reflexiones y dispositivos pedagógicos en escuelas secundarias en contextos de extrema pobreza. Finalmente, el capítulo 16 versa sobre el nivel de felicidad laboral y bienestar en diferentes generaciones en función del género.

Francisco Manuel Morales-Rodríguez



# **“Gender differences in Early Childhood Education”**

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## ABSTRACT

Although gender differences can be considered a source of inequality considering the personalized education in the stage of Early Childhood Education, such differences can contribute to enriching student learning. Precisely, the fundamental objective of this study is to identify the most relevant gender differences that occur within the Early Childhood Education classroom nowadays as well as to know the possible relationship of the variables of empathy and aggressiveness with the gender of the child.

Through the interview with experts and the quantitative analysis of the data obtained, the results still reflect the existence of gender differences in both the empathy and aggressiveness variables, concluding with a series of indications to get the most out of these variables or differences that we found in the Early Childhood Education classroom.

Although gender differences are frequently associated with a certain negative nuance to the extent that they are considered to create inequalities, in this proposal we start from the idea that these gender differences represent an opportunity that is worth taking advantage of for the learning of children in the Early Childhood Education classroom, taking advantage of their potential. We will specifically focus on differences that occur between the different genders at this age, such as the greater capacity for empathy in girls and the greater number of aggressive behaviours in boys.

The general objective of this study is to find out the role that certain gender differences play in a mixed classroom in the second year of Early Childhood Education in which boys and girls who are aged 4 and 5 years old learn together.

## KEYWORDS:

Aggressiveness; Early Childhood education; empathy; gender differences

## 1. INTRODUCTION

This topic has been selected in view of the problems and the debate generated by gender differences and the opposing visions of co-education and differentiated (or segregated) education in the school environment.

Nowadays, there are 150 private schools in Spain that provide gender-differentiated education. These schools argue that separating both genders provides a more personalised education according to the needs, interests, and qualities of each sex. Mixed education, however, defends gender equality, arguing that both genders should have the same possibilities and the same rights, thus exercising education as a right for boys and girls that is given at the same time and in the same space without any difference between the two genders. At present, 96% of schools in Spain offer mixed education.

Both types of education have many defenders and detractors who either defend their benefits or argue against them. Although it seems paradoxical, both types of education defend equal opportunities for the genders in different ways. Segregated education argues that both genders are taught separately to provide them with equal opportunities and co-education argues that teaching both genders at the same time is how equal opportunities are promoted, as pupils of both genders have access to the same resources.

Moreover, these two visions of education are not only academic, but also consider the social and relational aspect of the learner. The followers of co-education argue that having children of different genders in the same classroom prepares them to know how to relate to each other and to live in society. The segregated school, however, argues that an education separated by gender does not harm personal relationships between the sexes, since in other areas of life, pupils interact with people of different genders.

Although gender differences are often associated with a certain negative nuance as they are considered to create inequalities, we start from the idea that these gender differences represent an opportunity that is worth taking advantage of for children's learning in the Early Childhood Education classroom.

In this respect, this paper focuses on the gender differences that occur in a mixed classroom, which is why it is also important to work on coeducation, focusing on the differences between the different genders at this age, such as the greater capacity for empathy in girls and the greater number of aggressive behaviours in boys.

The general objective of this study is to find out the role that certain gender differences play in the mixed classroom of the second year of Infant Education in which boys and girls aged 4 and 5 learn together. Within this general objective, the following specific objectives can be found:

- The first specific objective consists of identifying what are those gender differences present in the 2<sup>nd</sup> year Infant Education classroom, what advantages such differences may entail and what are their disadvantages.

- The second specific objective is to study the relationship between gender and empathy and to see if girls are more empathetic than boys.
- The third specific objective is to study the relationship between gender and aggressiveness. The intention is to find out whether girls show a less aggressive behaviour.
- The fourth specific objective reflects on how one gender can benefit from the differences of the opposite gender regarding the variables of empathy and less aggressiveness through coeducation.

## 2. THEORETICAL FRAMEWORK

Although a lot of research has been released lately on gender studies, sex differences or inequality between the sexes, no study has been focused on the effects of gender differences in schooling, and more precisely in the stage of Early Childhood Education. Therefore, with the goal of filling this gap is concretely where the novelty of this study lies on.

### *2.1 Segregated or differentiated education*

Differentiated education is education that separates people of different sexes. This type of education in our country dates back to before the 1970s. In 2008, there were around 150 schools in Spain that offered differentiated education, none of them public, they were private and/or state subsidised.

Calvo (2008) points out that the advocates of differentiated education argue that, during childhood and puberty, the cognitive, physical, and affective evolution of both sexes is different. It is therefore appropriate to treat them differently (hence the adjective differentiated). Many advocates of this type of education understand it as a form of attention to diversity, as a form of personalised attention, based on the difference between the sexes. Along the same lines, other authors argue that non-differentiated education pays insufficient attention to the different learning styles and emotional needs of the two sexes and fails to recognise the different pace at which they develop their abilities (Salomone, 2007).

Therefore, for the defenders of differentiated education, the arguments are correct and not only is there no attack on equality with differentiated education, but, on the contrary, this is true equality and for this they provide scientific studies and statistical studies of school success (Calvo, 2008). However, the defenders of coeducation, and therefore those opposed to this type of education, consider that the separation of the sexes does not prepare children for coexistence in a society in which there should be no gender discrimination, as García (1995) argues.

In addition, supporters of segregated education, as cited by Salomone (2007), explain both the short- and long-term reasons why this education is beneficial. Their main argument is based on educational equality for girls, improved overall academic achievement, development of interest and competence in mathematics, science and technology, increased self-esteem, and increased interest in traditionally male-dominated professions but also increased female participation in these professions.

Sometimes the benefits described by these authors of differentiated education are not shared by others and can even be misinterpreted due to the role of women in the history of education, Ibáñez (2017) states that addressing feminism that the old wound produced by past times of social inferiority can lead to not accepting any argumentation about the advantages of segregated education.

Contrary to Ibáñez's previous argument, González (2010) argues that the opponents of separate education argue that separating the genders does not prepare for real life where both sexes coexist. Previously, and along the same lines, García (1995) considers that separating the sexes does not prepare students to live together in a society aimed at gender non-discrimination.

As can be seen, the role of the individual in society for which education prepares generates a great deal of debate. With a large number of detractors and defenders, Calvo (2008), academic president in Spain of the European Association of Centres for Differentiated Education, responds to this by arguing that the differentiated school trains for non-discrimination in the same way as in coeducation, since boys and girls live together outside school in other socio-cultural environments.

This again contrasts with the position of those, such as Baron (2005), who respond with the argument that the lack of coexistence with people of the opposite gender in school prevents them from a complete learning process for their future life in society. In conclusion, it can be pointed out that this type of education, although it predates co-education, is still in force today, although only in private schools. For its advocates, this type of education is seen as a personalised education based on gender diversity as each gender has different needs, they are not educated in the same way.

## *2.2. Co-education*

As in the previous point, this section details what co-education consists of, what its past and current situation is, as well as the positions defended by its fundamental authors. In 2011, there were 20,752 co-educational schools in Spain, or 96.9 % of the total, compared to 150 separate schools. In schools that provide co-education, it is argued that this type of education enables the necessary interpersonal skills to be acquired and does not undervalue the female gender compared to the male.

Salomone (2007), referring to the creation of the co-education model, states that it comes as a model to alleviate inequalities and combat stereotypes that have been carried over from antiquity. Even in classical Greece, writings have been found

that refer to a separate education of the sexes based on the differences between the sexes. In the same way, the same author refers to opponents of differentiated education as equal treatment seekers who argue that boys-only or girls-only programmes violate the principle that people in a similar situation should be treated similarly. Continuing with Fagoaga (1985), she traces much of this thinking back to feminism in the 1970s, a period when women's advocates were upset by negative stereotypes and inequalities stemming from an enduring ideology of separate spheres dating back at least to classical Greece. Therefore, advocates of the co-ed model argue that it is not scientifically proven that gender differences influence learning as differentiated schooling claims.

Co-education is education that is given jointly to boys and girls in the same spaces and times. It is based on the principle of neutrality and, therefore, does not take gender differences into account. It treats all pupils equally. But even so, there are some differences that still exist. This is why a new movement is emerging within the mixed school called coeducation. Subirats and Tomé (2017) criticise co-educational schools, stating that they avoid gender inequality but that, unfortunately, they tend to reproduce sexist values and knowledge, providing formal equality in all aspects but not real equality. In mixed schools, values, knowledge, and skills traditionally considered masculine predominate and are generalised for both men and women. The adaptation of girls to the male norm is confused with equal opportunities.

Today co-education is an intentional intervention that aims to promote the development of boys and girls based on the reality of two different sexes. It respects a real equality of opportunity, based on the recognition of gender differences, in order to seek equivalence between the two. This process aims to highlight the value of both genders and not to limit them rigidly.

Just as Browne (2002) stands out as a defender of differentiated education, Subirats (2007) stands out as a relevant figure in co-education education, defining the co-education that is required as a pedagogical model that seeks the personal and complete development of both genders under conditions of equality.

However, there are authors such as Ballarín (2011) who, far from seeing co-education as an innovative current that prevents inequality between the two genders, see this theory as a step backwards, since new segregating tendencies are gaining ground in co-education, based on the need for girls to cultivate their own space outside the influence of boys. This does not mean that co-education does not still appear as a desirable goal, but these are certainly temporary strategies until women become more confident and learn to stand up.

As we have seen, co-education puts men and women on an equal footing, giving them equal opportunities at the same time and facilitating gender-related skills. Although this is defended by supporters of co-education, there is a group within this type of education that advocates coeducation, as they continue to believe that in co-education there are still inequalities in which the female gender is subordinated to the male gender.

### *2.3. Cultural, genetic, and educational gender differences in Early Childhood Education.*

Although it is true that there are gender differences, there is not much consensus as to what they are. Therefore, in this section we refer to different authors who point out what differences can be found between boys and girls in Early Childhood Education.

Navarro et al. (2010) point out that in the field of Differential and Developmental Psychology, many studies have been carried out with the aim of describing the differences found between both genders when it comes to acquiring certain learning and developing cognitive skills. This is totally related to the field of study of this work.

Within the educational differences, it has been demonstrated that both genders diverge in three aspects: aspects related to genetic and hormonal differences (Geary, 1998; Halpern and LaMay, 2000; Kimura, 1999); aspects related to the development of spatial and arithmetic competences and skills of the Piagetian type (Benbow, 1988; Novell and Hedges, 1998); and the third, in more social and educational aspects (Baron-Cohen, 2003; Browne, 2002; Fayol, 2015). Regarding the third aspect, during the present research it has been found that in the study group, no boy wears pink gowns, no girl wears blue gowns and out of the 21 pupils only 4 (2 boys and 2 girls) wear a green gown. Besides, there is another pupil who also wears orange which can be considered a neutral colour.

In research on educational differences, Carr and Jessup (1997) show that during the first year of schooling, boys and girls use different strategies for problem solving although no differences in the level of performance have been found. Another study by Navarro et al. (2010) indicates that in some aspects, such as mathematical skills between boys and girls in the age range from 4 to 8 years, there seems to be sufficient evidence to accept the existence of significant differences.

Proponents of segregated schooling argue that biological and gender differences condition learning. Boys acquire language skills more slowly and mature later. Therefore, a brief theoretical review of the biological and cultural aspects that influence the differences between the two genders will be carried out (Walter, 1996).

From the cultural point of view, according to Turner (1988), it has been shown that the identification of the child with his father not only allows him to identify with the parent of the same sex, but also gives him the opportunity to internalise the paternal image as an ideal to be emulated, with relative rules and regulations of the father that the child incorporates into his way of behaving.

In this research, pupils were asked to play freely in the corner of their choice, and it was repeatedly found that no boys went to the kitchen corner and no girls to the building corner to play freely. This is thought to be due to the parental identification roles that children perform. Mead (1935) in his comparative study, and contrary to what was thought at the time, introduced the revolutionary idea

that, because the human species is enormously malleable, sexual roles and behaviours vary according to socio-cultural contexts.

Continuing with cultural factors, one evidence of the role of socialisation that has to do with gender differences refers to pride and shame in boys and girls. This difference may also be due to cultural factors, because as Baron (2003) states, it has been found that mothers tend to provide more positive feedback to boys' success, while they tend to undervalue girls' success by reacting more negatively to their failures. From an affective and psychomotor point of view, education and spontaneous experiences also develop inhibitions, conforming to instinctive needs and to the demands of social life with its prohibitions and limitations (López et al., 2015).

From the point of view of gender differences, it has been shown that men are more prone to sensation seeking, disinhibition, susceptibility to boredom and adventure seeking than women, and therefore possess less shame. Culturally we influence the identity of boys and girls even without knowing it, since when we are informed of the birth of a baby we ask whether it is a boy or a girl, automatically setting in motion expectations, attributions and stereotypes that even become a self-fulfilling prophecy, so that without knowing it we are asking both genders to behave differently.

From a biological point of view, the differences that exist between the two genders are due to the sexual chromosomal difference. Gillian (1982) carried out a study on gender differences in sport in which the following biological differences between men and women are described: due to oestrogen and testosterone at puberty, the bodies change, and women stop growing earlier and accumulate more fat.

#### *2.4 Empathy and aggressiveness*

Next, we are going to focus on the two differences we want to study in pupils: empathy and aggressiveness. Different studies have shown that between the ages of two and three, girls score higher in empathy in different tests than boys, as well as showing more prosocial behaviour towards their mothers when they show sadness (López et al., 1998). Hence, empathy is one of the differences that we want to test in this research, and if it exists, we seek to extend it to the opposite gender.

Goleman (1999) published how in a test called PONS (Profile of Nonverbal Sensitivity) developed by Rosenthal and Hall (1976), women showed a greater capacity than men to detect the feelings of another person. This type of research allowed Rosenthal and Hall to determine that women perform better than men 80% of the time in the test for detecting the emotion that the person was really experiencing, a necessary condition for empathy.

In relation to the above, Baron (2005) hypothesises that there are two main attributes, one being the capacity for empathy (an attribute that would characterise the female brain) and the capacity for systematisation (an attribute that would

characterise the male brain). Both attributes are found in the population in a very diverse way, and so there are people in whom sex and brain type coincide, for example, women and empathy.

Girls, when faced with an act of aggression, anticipate experiencing more guilt and make a more negative self-evaluation. The relationship between aggression and reparation is found in two-year-old girls but not in boys (López et al 2015). According to them, there are gender differences in aggressive acts, as these are more tolerated in boys than in girls. This may lead to the fact that, as they have less tolerance, girls perform less aggressive acts.

According to the results obtained in some studies, it seems that men are more aggressive than women (Ramírez et al., 2011). Although the most general conclusions reached are that women are attributed a more subtle aggression, and men are attributed a more direct, more physical type of aggression, as reflected in an article on the possible relationship that may exist between gender and aggression by Crick et al. (1999).

Thus, considering this theoretical framework, the reader is reminded that the main objective of this research is to analyse which gender differences can be enhanced in a mixed classroom in which boys and girls of 4 and 5 years old learn together. The following section will detail the methodology used to test whether the three gender differences (empathy, shame, and aggressiveness) described in this theoretical framework are correct.

### 3. METHODOLOGY

#### *3.1. Interview with experts*

To find out what the fundamental gender differences are in an infant education classroom, their advantages and disadvantages, a qualitative methodology was chosen, specifically a semi-structured interview. In this case, we interviewed a total of 4 Infant Education teachers who carry out their daily work in 2<sup>nd</sup> year groups. Of these 4 teachers, 3 are women and 1 is a man, and all four of them teach children in the second year. The 3 women have been working for an average of 8 years with pupils in the 2<sup>nd</sup> cycle of infant education, while the man has only been teaching for one year, having previously taught other groups of different ages.

In order to fulfil the first of the objectives and to find out the role that certain gender differences play in the 2<sup>nd</sup> year infant education classroom, these experts were asked a script of 10 questions. The duration of the interviews was approximately 20 minutes and in all cases the experts collaborated disinterestedly.



### *3.2 Emotional intelligence test and story cards*

To address the second objective, that is, to study the relationship between gender and empathy, 2 instruments were used. Firstly, the emotional intelligence and empathy questionnaire, and secondly, a pair of story cards.

Within the DCCN 2010 battery extracted from the 4<sup>th</sup> edition of the book Pedagogy 3000, 15 quantitative tests and a series of 5 qualitative tests can be found. Specifically, the participants in this research were given the Emotional Intelligence and Empathy Test which allows us to determine the percentage of emotional intelligence and empathy that the children have. We have opted for dichotomous response options where the child can answer yes or no and one of the items has been eliminated, resulting in a total of 10 items with 2 response options each. In addition, this test was given to the students as an interview on an individual basis and not as a group.

### *3.3 Participants*

To address the third objective, to study the relationship between sex and aggressiveness, we observed the behaviour of the pre-school children during breaks and in the psychomotor skills classes using Garcia's (1995) procedure of focused observation on one subject. Here, at each break time or during free play in the psychomotor class, a pupil was observed for 5 minutes 8 days in a row (and every 4 days) until 40 minutes of observation have been completed. To observe the 21 pupils in the 2<sup>nd</sup> year infant class, we used 20 breaks (of 30 minutes) and 4 sessions of psychomotricity (of 2 hours).

The register used for the observation recorded the aggressive and pro-social behaviours of the pupil following the developments of López et al. (1998). This inventory evaluates empathic behaviours by observing consolation, defence, help, and donation, while at the same time, it also measures aggressive behaviours through the observation of attack, threat of attack, appropriation, breaking or knocking down objects or games, and mockery. Following the procedure of these authors, the following guidelines will be used to collect the register data:

Adult-induced behaviours are excluded.

All behaviours that are separated by more than 10 seconds are recorded (If a behaviour is repeated or if several behaviours belonging to a category occur in a row, it is recorded as a single behaviour, provided that less than 10 seconds elapse between the occurrence of one behaviour and the other).

### 3.4 Instruments

This research began with a review of the literature on the topic of interest and then, for each objective, a series of instruments were used. Specifically, to carry out the first objective, an interview with experts was used; to carry out the second objective, a questionnaire and two sheets were given to the students; for the third objective, non-participant observation was used; and finally, for the fourth objective, the set of data and techniques previously used in the research were considered to reflect on the topic of interest.

**Table 1.**  
*Relation of objectives and techniques*

OBJECTIVE		INSTRUMENTS
Objective 1	Identify what gender differences are present in the 2nd grade infant classroom	Interview with experts
Objective 2	Study the relationship between gender and empathy and see if, as anticipated, girls are more empathetic than boys	Emotional intelligence and empathy test. Worksheet
Objective 3	To study the relationship between aggression and gender. The intention is to see if, as anticipated, girls are less aggressive than boys	Questionnaire by López et al. (1998)
Objective 4	As a result of the above points, reflect on how one gender can benefit from the opposite gender's own differences in empathy and aggressiveness through co-education	Personal reflection based on: 1. Interview with experts 2. Non-participant observation Test results

Note. Own elaboration

## 4. DISCUSSION OF RESULTS

### 4.1 Interviewing experts

According to the people interviewed, the most relevant gender differences found in this cycle are, first of all, that girls are more co-ordinators than boys, more organisers. In other words, they plan the game a lot and play games in which language

prevails. On the other hand, boys are less reflective and more impulsive. Boys are more involved in conflicts but forget them earlier. Another relevant difference is seen when both genders have to choose a game, as when they have free time the games differ a lot. Boys play more lively games (football, games symbolising fights...), while girls play calmer and more care-giving games (kitchenettes, doctors or mummies and daddies).

Regarding the advantages that such differences may bring, there are divergent answers, with one person (male) answering that in his opinion the differences do not provide any advantage. The rest of the subjects included as an advantage the mutual enrichment that can occur between the two genders. Another expert was of the opinion that both genders offer different role models to the other gender, and everyone learns from everyone else. In addition, it seems that both genders, when they interact, play games that they would not play with only their own gender.

Gender differences can create disadvantages due to excessive role dissimilarity in terms of abilities to do certain tasks. In addition, the difference in interests and play can lead to conflicts, although this is the first step in learning how to solve them, so the disadvantage can be positive. Another disadvantage may be the frustration that a child who is interested in or likes attitudes or objects supposedly attributed to the other gender may experience.

All four experts interviewed believe that boys can learn from girls. They can learn from the girls' good work, as girls tend to be more responsible and meticulous in their work. Contact with girls helps boys to enrich their games: they incorporate language, they put the game into a story... this is very well observed in the corner of symbolic play. The last subject, the male subject, is of the opinion that everyone can learn from everyone, both boys and girls and vice versa, regardless of gender and without significant differences in what they learn.

As to what girls can learn from boys, the only male subject said that they learn regardless of gender. Other responses were that girls can learn from boys how to resolve conflicts, as boys, once they have resolved a conflict, forget about it, and continue playing. Girls can also learn from the little bitterness that boys have once they have resolved a conflict.

In the classroom, differences are worked out by forcing them to sit in a circle (boy-girl). Likewise, all the children have to go through all the corners: kitchenette, blocks.... Gender differences are worked on, recognising and accepting them as just another difference. Each one has their own characteristics, both physical and behavioural. The important thing is to learn to live together with respect. They also work on representing the roles of the opposite gender, making them see that pink, long hair or earrings do not necessarily belong to the female gender.

All four experts are of the opinion that pupils attribute different aspects to different genders. Boys tend to choose construction and fighting games. Girls, on the other hand, tend to choose symbolic games while girls are attributed pink, tiaras, make-up and princesses, boys blue, yellow and football. One expert, referring to

the above, says that in the first years of school this is not so noticeable but that these differences increase with age, and points out that he does not know why this is so, whether it is a developmental aspect or due to the influence of society.

Finally, and answering the last question, their personal opinion on gender differences is that it is just as negative to limit a person's possibilities because of their gender as it is to deny existing differences. One cannot generalise, and each person should be treated and respected for their individual qualities regardless of gender. Another view is that there is an inherent gender bias in life (boys more impulsive and girls more playful) but that does not mean that there are many people who deviate from that norm, and they should not be made to feel bad about it. It is important to work on differences as something positive from a young age. Another subject is of the opinion that often, unconsciously, teachers show these differences to children. The last opinion (that of the male gender) refers to the fact that gender differences are traits that are inherited from the culture that is so reluctant to change and so given to the dominance of men over women.

It is curious because the three women interviewed have more or less the same opinion, recognising the differences and seeing positive aspects in these differences. However, the male subject is the one with the most divergent opinions, seeing only negative things and inequalities in these differences. As a small note, the only male subject is the one who disagrees the most about inequalities, and sees them as something negative that needs to be worked on, although the three women accept them.

#### *4.2. Empathy and gender*

As mentioned in the methodology section, 2 tests were used to measure the degree of empathy: two sets of cards and the emotional intelligence and empathy test by Paymal and Delago (2008). In this way, the second objective was carried out, which consisted of studying the relationship between gender and empathy and seeing whether girls are more empathetic than boys. The questionnaires were answered individually by the students themselves, to prevent them from copying each other, and the test was carried out as an individual interview with the students.

As the sample was a 2<sup>nd</sup> year infant education classroom, in some cases it was necessary to modify the test questions so that the pupils could answer them. Both tests were administered to a sample of 21 pupils, of whom 12 were girls and 9 were boys, from a public infant and primary school.

##### Story Cards 1

During this activity, both genders were asked to tell this first story, in which they see a boy who is going fishing, and decide whether he fishes or falls in. Then,

regardless of the ending they have decided, they should say whether they think the boy is happy or sad. As mentioned above, a total of 21 pupils took part, of whom 9 were boys (43%) and 12 girls (57%).

In the boys' group (n=9), a total of 5 pupils (55.6%) answered that John is happy fishing, 2 (22.2%) that John falls down and is sad and the remaining 2 (22.2%) that John falls down and is happy. In the group of girls (n=12) a total of 5 students (41.66%) answered that John fishes happily, some other 5 (41.66%) that John falls and is sad and the remaining 2 (16.6%) that John falls and is happy.

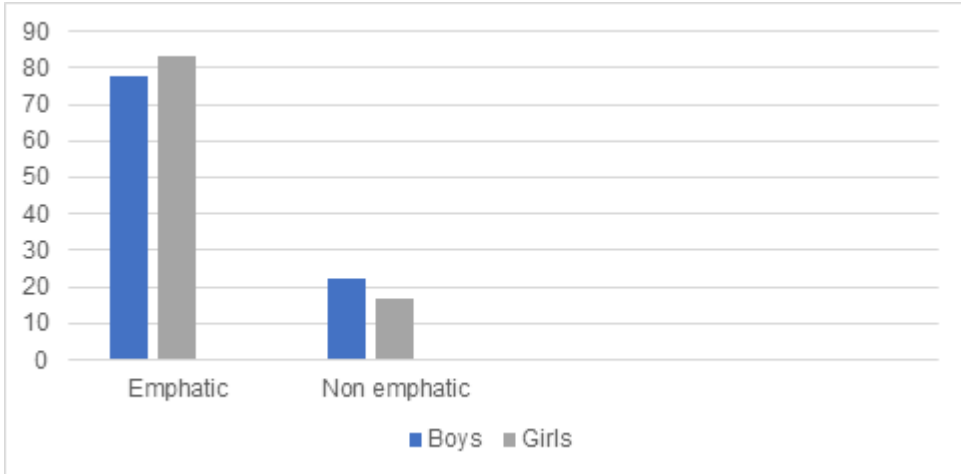
The options of fishing + being happy and falling + being sad have been considered empathetic responses, since through these answers it can be seen if the student associates a cause to the feeling. Thus, 77.8% of the boys and 83.3% of the girls gave empathetic answers. On the other hand, 22.2% of the boys and 16.6% of the girls gave no emphatic answers.

**Table 2.**  
*First sheet results*

	Emphatic answer	Emphatic answer	No Emphatic answer	No Emphatic answer
Story 1	John fishes (happy)	John falls down (sad)	John falls down (happy)	John fishes (sad)
Boys	55,6% (5)	22,2 % (2)	22,2 % (2)	0 % (0)
Girls	41,66 (5)	41,66 % (5)	16,6% (2)	0 % (0)

Note. Own elaboration

**Figure 1.**  
*Percentage of pupils giving responses to the first story by gender*



Note. Own elaboration

## Story Cards 2

During this second set of cards, both genders were asked to decide in this story in which they see a boy eating a snack that his mother has prepared for him, whether the boy thanks his mother for the snack or goes off to play. Then, whatever ending they decided, they should say whether they thought the mother was happy or sad.

In the group of boys (n=9), a total of 4 pupils (44.5%) thanked mum because she had prepared a snack for them, and the other 5 (55.55%) did not thank her and went to play, arguing that mum was happy because they were playing. In the group of girls (n=12), 8 girls (66.8%) believe that mummy is happy because they have thanked her. 2 (16.6%) think that she will be sad because they have gone to play and have not thanked her, 1 (8.3%) sad because they have thanked her and 1 (8.33%) happy because they play.

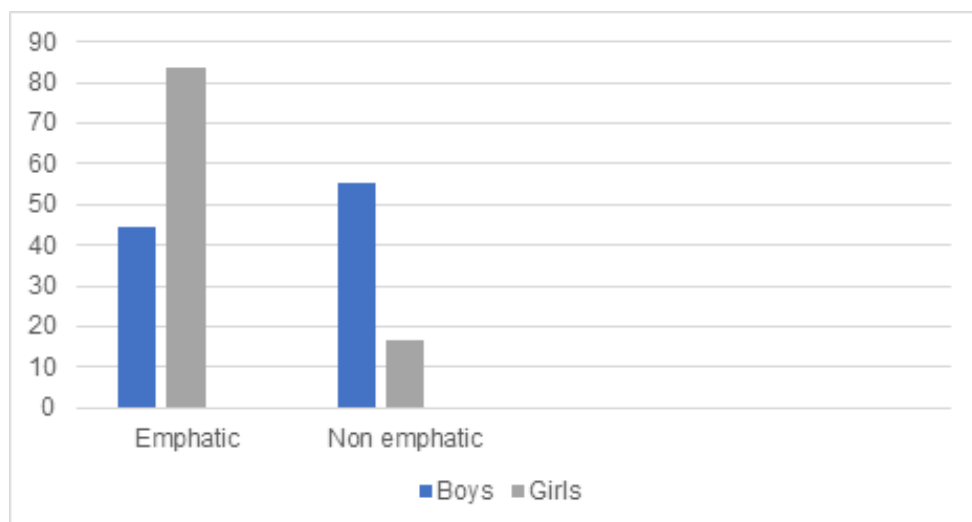
The options of saying thank you + happy mum and not saying thank you + sad mum were considered empathic responses, since through these responses we can see if the pupil associates a cause to the feeling. That is, whether they can recognise that positive aspects such as saying thank you make mum happy. Negative aspects such as going off to play show that they do not put themselves in the other person's place. Thus, 44.5% of the boys and 83.4% of the girls had empathic responses. On the other hand, 55.5% of the boys and 16.6% of the girls gave no empathic answers.

**Table 3.**  
*Second sheet results*

	Emphatic answer	Emphatic answer	No Emphatic answer	No Emphatic answer
Story 2	I say thank you (happy)	I play (sad)	I play (happy)	I say thank you (sad)
Boys	44,5% (4)	0% (0)	55,55 % (5)	0 % (0)
Girls	66,8 (8)	16,6 % (2)	8,33% (1)	8,33% (1)

Note. Own elaboration

**Figure 2.**  
*Percentage of pupils giving responses to the second story by gender*



Note. Own elaboration

### Emotional intelligence and empathy test

The second instrument used is the emotional intelligence and empathy test (Paymal, 2008) that allows determining the percentage of emotional intelligence and empathy that the different genders have. This instrument has been passed as a structured interview with dichotomous answers so that students must answer “yes”

or “no”. The maximum score they can obtain in this test is 10 points (maximum empathy) and the minimum score 0 points. The test has 10 items, with 1 point for a “yes” answer and 0 (minimum empathy) for a “no” answer.

By gender, the following results were obtained: Girls scored an average of 7.08 points out of a maximum of 10 and boys scored 4.33 out of the same maximum. The joint average for both genders was 5.70 points out of 10 as we can see in the following table.

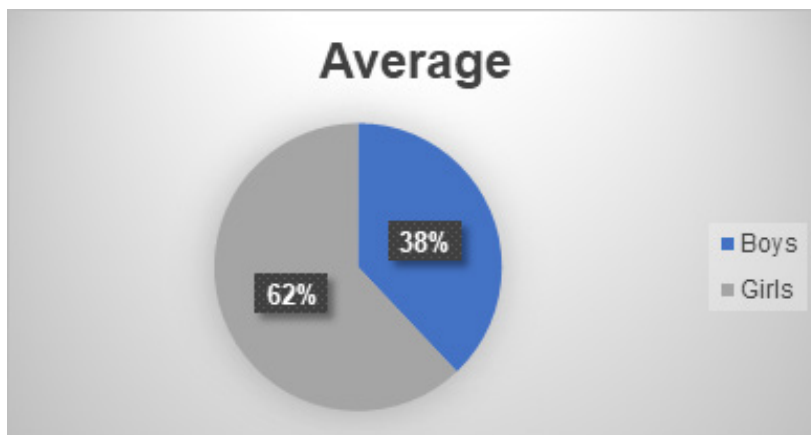
**Table 4.**  
*Emotional intelligence and empathy test results*

Girls	Boys
n1=6	n1=6
n2=6	n2=6
n3=8	n3=2
n4=10	n4=2
n5=3	n5=5
n6=5	n6=8
n7=8	n7=3
n8=10	n8=3
n9=7	n9=4
n10=6	
n11=8	
n12=8	
AVERAGE= 7.08	AVERAGE = 4,33

Note. Own elaboration



**Figure 3.**  
*Average score by each group*



Note. Own elaboration

Therefore, there is a difference in the score of both genders of 2.75 points. To find out whether this difference in the mean scores of this variable is significant, a difference of means for independent samples was performed by means of the student's t-test for two independent samples. Here the contrast statistic yielded a value of  $T = 3.74$ , with 19 degrees of freedom, which was less than .05 and therefore significant, so it is concluded that there are differences in the empathy variable, with girls being more empathetic than boys.

#### *4.3. Aggressiveness and gender*

To fulfil the third objective, to find out about the relationship between gender and aggressiveness, the behaviour of the 21 students (12 girls and 9 boys) was observed using the pro-social and aggressive behaviour questionnaire of López et al. (1998). At each time during recess or during free play in the psychomotor class, for 5 minutes 8 days in a row (and every 4 days), completing 40 minutes of observation per pupil.

The assessment of aggressiveness is measured through the behaviours of attack, threat of attack, appropriation, breaking or knocking down objects and teasing. In boys ( $n=9$ ) a total of 52 aggressive behaviours were observed, so the average occurrence of these aggressive behaviours was 5.7 behaviours per child, while in girls ( $n=12$ ) a total of 42 aggressive behaviours were observed, so the average is 3.5 aggressive behaviours per pupil. Therefore, in both genders, the incidence of aggressive behaviour was low, although in boys it was higher.

**Table 5.**  
*Results aggressive behaviour in girls*

Child	Attack	Attack threat	Appropriation or breach	Mockery
Girl 1	0	3	0	0
Girl 2	0	0	0	0
Girl 3	1	3	0	0
Girl 4	1	0	0	0
Girl 5	1	3	4	3
Girl 6	0	3	2	1
Girl 7	0	3	0	3
Girl 8	0	3	3	0
Girl 9	0	3	2	1
Girl 10	0	0	0	0
Girl 11	0	0	0	0
Girl 12	0	0	0	0
<b>TOTAL AGGRESSIVE BEHAVIOURS: 42</b>			<b>AVERAGE: 3.5</b>	

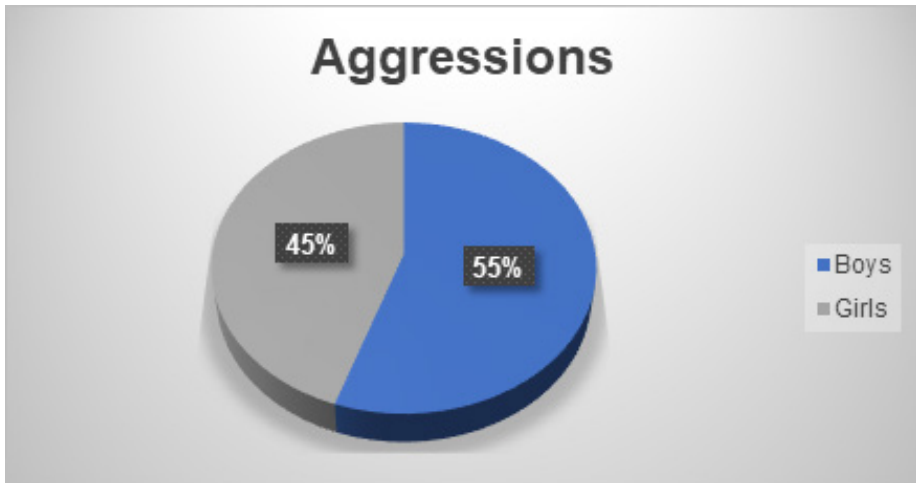
Note. Own elaboration

**Table 6.**  
*Results aggressive behaviour in boys*

Child	Attack	Attack threat	Appropriation or breach	Mockery
Boy 1	0	0	5	0
Boy 2	0	0	0	0
Boy 3	0	3	0	0
Boy 4	0	0	3	0
Boy 5	1	3	3	1
Boy 6	0	3	1	2
Boy 7	3	3	5	0
Boy 8	0	5	3	5
Boy 9	0	3	0	0
<b>TOTAL AGGRESSIVE BEHAVIOURS: 52</b>			<b>AVERAGE: 5.7</b>	

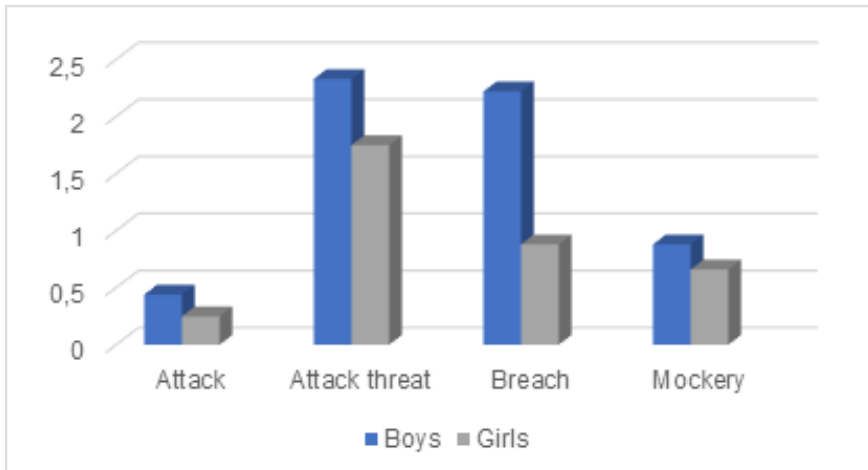
Note. Own elaboration

**Figure 4.**  
*Average number of aggressive behaviours observed in boys and girls*



Note. Own elaboration

**Figure 5.**  
*Mean score for each type of aggressive behaviour as a function of gender*



Note. Own elaboration

Therefore, there is a difference in the score of both genders of 2.27. It can be concluded that the mean number of aggressive behaviours is higher in boys. Of the four aggressive behaviours studied in the questionnaire, boys have a higher score,

the average for each behaviour being: attack=0.44, threat=2.33, appropriation=2.22 and teasing=0.88. Compared to the girls' averages for each aggressive behaviour: attack= 0.25, threat= 1.75, appropriation= 0.88 and teasing=0.66.

It can be stated that boys are more aggressive than girls. The most frequent aggressive behaviour in both genders is threatening, with an average frequency of occurrence of 2.33 times per boy during the observation period and 1.75 times per girl. At the opposite extreme is aggressive attacking behaviour for both the boys' and girls' groups.

Based on the results obtained, girls were more empathetic than boys, scoring higher than boys in both types of tests (story cards and test), and the difference between the mean scores of girls and boys was significant. Also, boys were found to be more aggressive than girls in the observed group. This may be because, as some theorists point out (Galen and Underwood, 1997), boys have a more direct aggressiveness and girls a more subtle aggressiveness. The observation questionnaire is more focused on direct aggressive behaviours, so it is more logical that boys have a higher score.

A positive action can be the use of appropriate language or the revision of teaching materials. For example, it is possible to reject didactic material that reproduces sexist elements and that assigns values such as empathy, understanding and submission to women and aggressive behaviour to men. Another proposal could be to try to use balanced material that can be used by boys and girls alike, thus reducing some of the differences in behaviour and role-taking that are created with some games or toys.

It is also important to avoid aggressive actions by boys and girls alike, avoiding the direct aggression typical of boys and the subtle aggression more common in girls. It is important not to ridicule children and to allow them to talk about their feelings, and to allow them to cry, by understanding their feelings, they will be able to recognise the feelings of others, which are small steps that can allow differences to be something positive, being able to enhance them from one gender to the other.

## 5. CONCLUSIONS

The first objective of this research was to identify what gender differences are present in the 2<sup>nd</sup> year Infant Education classroom, what advantages these differences may have and what their disadvantages are. To carry out this objective, we interviewed experts on the subject and based on the results we can conclude that there are gender differences in these classrooms. The experts interviewed affirm that there are differences in the way each gender plays, in the way they resolve conflicts and in the way they organise play and use language. Also, all four subjects say that the different roles adopted by the genders depend on culture, and they add that it is becoming more and more socially acceptable for one gender to manifest or exercise roles that are of the opposite gender.

Researching this topic is a challenge for the future, because nowadays too little attention is paid to gender differences, which are seen as negative because they create inequalities. Therefore, the aim of this research is to raise awareness that differences can be worked on and can be turned into something positive.

The second objective is to study the relationship between gender and empathy and to see if girls are more empathetic than boys. For this purpose, two different instruments were used: on the one hand, story cards and, on the other hand, an empathy questionnaire. The results obtained through the cards show that girls are more empathetic than boys and similar results are obtained in the empathy test used, where they have a higher mean score for the empathy variable than boys, this difference being significant ( $T= 3.74$   $p<.005$ ). Thus, in both instruments the girls obtained a higher score, so that the first of the hypotheses formulated can be maintained. Girls may be more empathetic for various reasons, although it may well be because they are culturally expected to play the role of mother in which they offer attention and care.

To carry out the third objective, to find out if there is any type of relationship between the sex of children of pre-school and aggressiveness, the behaviour of the 21 pupils (12 girls and 9 boys) was observed using the questionnaire of pro-social and aggressive behaviour by López et al. (1998). At each break time or during free play in the psychomotor skills class, for 5 minutes 8 days in a row (and every 4 days), completing 40 minutes of observation per pupil. Specifically, the assessment of aggressiveness is measured through the behaviours of attack, threat of attack, appropriation, breaking or knocking down objects and teasing. In boys, the average occurrence of these aggressive behaviours was higher than in the group of girls, thus maintaining the second of the hypotheses put forward in this study.

The results show that the most common aggressive behaviour among girls and boys is that of threatening. The behaviour of teasing has a lower incidence in both genders. This may be because threatening is an aggressive behaviour that is not so frowned upon because sometimes the attack is not carried out. It may be the one that appears the least, because it normally has negative consequences for the subject, such as punishment or negative reinforcement.

From the results obtained, a first approximation can be made as to how one gender can positively empower the opposite gender, thus opening up an interesting and broad field of study. Thus, for example, knowing that women are more empathetic than boys, it is possible to work on boys' empathy through contact with girls, being able to increase their empathy. This research has shown that boys have a higher degree of aggressive behaviour, and this can be worked on at school through positive reinforcement, allowing this behaviour to decrease.

When we talk about gender differences, we talk about the inequalities they create and always with a negative connotation. It is true that gender differences exist and in many aspects they create inequalities, but taking into account personalised education, inequality does not always have to be negative and by using the right

strategies it can become something positive and enriching, as education can be transformed into coeducation, and differences can be transformed into something constructive and enriching for both genders, which is why it should be considered as a challenge for the future within education.

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