

Physical education, attitudes towards disability and bullying

Educación Física, Actitudes hacia la Discapacidad y Bullying

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RESUMEN

El bullying se describe como el maltrato repetido y deliberado a un joven de la edad de la víctima, pero incapaz de defenderse. La victimización puede tomar tres formas diferentes: relacional, física y verbal. Este tipo de acciones se manifiestan por personas que sienten superioridad sobre sus víctimas; por lo tanto, la actitud hacia la discapacidad es importante. Además, las clases de educación física pueden ser el lugar ideal para un aula inclusiva. Así, el objetivo es analizar la relación entre el Bullying (Cuestionario EBIPQ) y las actitudes hacia la discapacidad (Escala EAADEF) en Educación Física con respecto al género, nivel educativo y ambiente escolar en una muestra de 1.155 estudiantes de secundaria de Extremadura. (España), teniendo en cuenta que las clases de Educación Física son el escenario ideal para combatir el acoso escolar a través de la educación. Los resultados mostraron que la asociación entre EBIPQ y EAADEF es directa, media y significativa. Además, los estudiantes de secundaria y las mujeres mostraron correlaciones más fuertes. En cuanto a la ubicación de la escuela, los resultados mostraron que la asociación entre EBIPQ y EAADEF es directa, media y significativa. Además, los estudiantes de secundaria y las mujeres mostraron correlaciones más

fuertes. En cuanto a la ubicación de la escuela, los resultados de los alumnos rurales y urbanos fueron bastante comparables, pero los alumnos rurales obtuvieron mejores resultados. Sería interesante crear medidas preventivas contra el bullying, así como educar a las personas sobre cómo regular sus emociones y ser inclusivos. No se debe pasar por alto que toda la comunidad educativa, así como la familia, debe implicarse para conseguir un aula inclusiva y no violenta.

Palabras clave: EBIPQ; EAADEF; educación; adolescentes; escuela.

ABSTRACT

Bullying is described as the repeated and deliberate mistreatment of a youngster who is the victim's age but is incapable of defending themselves. Victimization can take three different forms: relational, physical, and verbal. These types of actions are manifested by people who feel superiority over their victims; therefore, the attitude towards disability is important. Furthermore, physical education classes can be the ideal place for inclusive classroom. Thus, the aim is to analyse the relationship between Bullying (EBIPQ Questionnaire) and attitudes towards disability (EAADEF Scale) in Physical Education with respect to gender, educational level and school environment in a sample of 1155 high school students in Extremadura (Spain), taking into account that Physical Education classes are the ideal setting to combat bullying through education. The results showed association between EBIPQ and EAADEF is direct, medium and significant. In addition, secondary school students and females showed stronger correlations. About location school, the results of rural and urban pupils were quite comparable, but rural pupils performed better. It would be interesting to create preventive measures against bullying, as well as to educate people on how to regulate their emotions and be inclusive. It should not be overlooked that the whole educational community, as well as the family, must be involved in order to achieve an inclusive and non-violent classroom.

Keywords: EBIPQ; EAADEF; education; adolescents; school

RESUMO

O bullying é descrito como os maus-tratos repetidos e deliberados a um jovem da idade da vítima, mas incapaz de se defender. A vitimização pode assumir três formas diferentes: relacional, física e verbal. Este tipo de ações são manifestadas por pessoas que sentem superioridade sobre as suas vítimas; Portanto, a atitude em relação à deficiência é importante. Além disso, as aulas de educação física podem ser o local ideal para uma sala de aula inclusiva. Assim, o objetivo é analisar a relação entre o Bullying (Questionário EBIPQ) e as atitudes face à deficiência (Escala EAADEF) na Educação Física no que diz respeito ao género, nível educacional e ambiente escolar numa amostra de 1.155 alunos do ensino secundário da Extremadura. (Espanha), tendo em conta que as aulas de Educação Física são o cenário ideal para combater o bullying através da educação. Os resultados mostraram que a associação entre EBIPQ e EAADEF é direta, média e significativa. Além disso, estudantes do ensino médio e mulheres apresentaram correlações mais fortes. Em termos de localização da escola, os resultados dos estudantes rurais e urbanos foram bastante comparáveis, mas os estudantes rurais tiveram melhor desempenho. Seria interessante criar medidas preventivas contra o bullying, bem como educar as pessoas sobre como regular as suas emoções e ser inclusivas. Não se deve esquecer que toda a comunidade educativa, bem como a família, deve estar envolvida para alcançar uma sala de aula inclusiva e não violenta.

Palavras-chave: EBIPQ; EAADEF; Educação; adolescentes; escola

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INTRODUCTION

In the past, conflicts that went beyond everyday activities, such as teasing, hazing and confrontations, were the main causes of bullying cases (Fuentes Vera, 2022). Dr. Olweus (Crespo Diaz, 2019) launched a sizable program in 1970 that is regarded as the world's first comprehensive scientific investigation of bullying issues. He carried out the first intervention research ever in 1980, recording numerous instances of favorable outcomes and significantly lessening this tragedy. He invented a method that decreased bullying among pupils in schools across the globe, including Japan, England, and the USA. He is considered a global pioneer on

this topic, in addition he worked with various governments to pass laws and launch a vigorous anti-bullying campaign. However, more than 50 years have passed, and this problem has not stopped growing. Today, there are theoretical and methodological presumptions to determine whether bullying is a form of classroom violence, since bullying is a changing phenomenon that over almost 50 years of research has undergone some variations related to educational, pedagogical and even technological transformations (Fuentes Vera, 2022).

The establishment of the Sustainable Development Goals (SDGs) and their targets is intended to make society increasingly aware of the importance of equality and inclusion in the world. This also applies to the school environment, as a school that moves towards inclusion is a learning community that approaches its development and improvement from a holistic and integrated approach.

According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO) (UNESCO, 2019), any type of school violence is a violation of a child's or adolescent's right to an education, to good health, and to wellbeing. Bullying is defined as the repeated and intentional mistreatment of a child who is the same age as the victim but lacks the same capacity for self-defense (Chocarro de Luis & Garaigordobil Landazabal, 2019). According to Tang et al. (Tang et al., 2020), bullying affects 35.3% of teenagers between the ages of 12 and 15 while other prior research (Moyano, Ayllón, Antoñanzas, & Cano, 2019) found that 46% of reported incidents of school violence in Spain involve children between the ages of 11 and 13. Recent increases in physical and verbal violence have reduced peer support for victims and their approach out of fear of retaliation (Jocobi Zúñiga, Cruz Pérez, Ocaña Zúñiga, & García Lara, 2019). In addition, the findings suggest that having experienced bullying in the past, either as a victim or an aggressor, and using the Internet often are risk factors for cyberbullying (Marín-Cortés, Hoyos de los Ríos, & Sierra Pérez, 2019). Bullying is a multifaceted issue that involves parental, educational, social, cultural, and cognitive issues. These issues can coexist and lead to violence in various ways (Serna Huesca, 2020). There are three types of victimization, according to Cava and Buelga (Cava & Buelga, 2018): relational, which includes social exclusion from the group, the spreading of rumors, and threats to end friendships; physical, which entails pushing and hitting that a student experiences from peers; and verbal, the shouting, teasing and insults received. Today's bullying is more severe, has sexual connotations also, and presents greater risks because of the rise in societal harshness and media-driven desensitization to violence (Crespo Diaz, 2019).

On the other side, in both students with and without disabilities, verbal harassment seems to be the most prevalent form of aggressiveness and direct and indirect physical assaults are less frequent (González Contreras, Pérez-Jorge, Rodríguez-Jiménez, & Bernadette-Lupson, 2021). However, according to a recent research (Ashburner et al., 2019), students with disabilities or special educational needs (SEN) are more likely than their classmates without disabilities to be involved in bullying dynamics. It should be noted that these children can take on any of the three bullying-related roles—bully, victim, or spectator (Rodríguez-Hidalgo, Alcívar, & Herrera-López, 2019), but compared to their non-disabled classmates, children with SEN experienced bullying on average 22.7% more frequently (González Contreras et al., 2021). According to the World Health Organization (WHO) 16% of the global population have some form of disability (WHO, 2023). “A person with a disability is a person who, due to an impairment of a bodily structure or function (physical, sensory or intellectual), has limitations when it comes to activities that would be normal” (Iñiguez Santiago, Ferriz, Martínez Galindo, Cebrián Sánchez, & Reina Vaillo, 2017). In this sense, according to the majority of authors, bullies are most likely to target kids who have emotional disabilities such as anxiety and obsessive-compulsive disorders, bipolar disorder, schizophrenia, and depression (Malecki, Demaray, Smith, & Emmons, 2020). When compared to their peers who are not disabled, children with

“other health problems,” hearing loss, visual impairment, and modest intellectual disability come in second, third, and fourth, respectively (Bear, Mantz, Glutting, Yang, & Boyer, 2015). In keeping with earlier studies showing a higher risk of victimization in relation to “observable” disability (Houchins, Oakes, & Johnson, 2016). In addition, according to the most recent studies in various scientific fields its discovered higher self-reported victimization by students with autism spectrum disorder (ASD) (Malecki *et al.*, 2020).

Related to all of the above, the stress and strain brought on by this circumstance has an impact on education by making students more afraid to attend class, lowering their participation and engagement in extracurricular activities, making it difficult for them to focus in class, causing them to perform poorly in their academic courses (Fry *et al.*, 2018) and they also more likely to drop out formal education after finishing secondary school (UNESCO, 2019). Additionally, bullying victims experience more frequent sleep disorders, enuresis, abdominal pain, headaches and sadness (Alonso Montejo, Zamorano González, & Ledesma Albarrán, 2019). Bullying also has links to suicide, self-harm, low self-esteem, and bullying (Tang *et al.*, 2020), anxiety symptoms are present in 67.2 % of victims, followed by depression and dread in 68.8 % and 58.6 % of cases, self-harm in 2.4 % of cases (Perez de Viñaspre, Díaz, & Toledano, 2018), suicidal ideation in 16.5 % of cases, suicide planning in 16.5 % of cases, and suicide attempts in 16.4% of cases (Tang *et al.*, 2020). Suicide has climbed by 60 % globally over the past forty-five years (Wasserman, Carli, Iosue, Javed, & Herrman, 2021), making it one of the top three causes of kids and teenagers (WHO, 2021b, 2021a). On the other side, the study of inter- and intrapersonal skills, or more accurately, emotional and social competences, is made possible by the specific subject of physical education (PE), whose goal is to encourage an active and healthy lifestyle (Aguilar Herrero, *et al.*, 2021; Greco, *et al.*, 2019; Rojo-Ramos, *et al.*, 2024; Borges-Primelles & Primelles-Justino, 2022) The classes are actually the optimum environment for social interactions that affect the climate of the classroom as a whole, according to scientific research (Alcántara Cruz & Ruiz Ariza, 2022). Therefore, as some authors have noted, creating an environment of respect and companionship in PE classes, where prosocial behavior is also encouraged, is a crucial component in the prevention of bullying (Hand, 2016).

In order to ascertain the relationship between bullying and students with impairments, two instru-ments will be utilized in this context. The European Bullying Intervention Project Questionnaire (EBIPQ) is the first tool employed (Ortega-Ruiz, Del Rey, & Casas, 2016). It has 14 items pertain to deeds like beating, berating, threatening, stealing, cursing, excluding, or spreading rumors. The Spanish version of The Attitudes towards Students with Disabilities in Physical Education Scale (EAADEF) (Iñiguez Santiago *et al.*, 2017) is the second tool, and it is a valid and trustworthy method for assessing attitudes toward disabled students in PE in Spain. This new scale is a concise and user-friendly tool that: 1) would aid researchers in determining the factors that influence attitudes toward including students with disabilities in PE; and 2) would give PE instructors a way to assess the use of an inclusive approach. (Tapia-Ortiz *et al.*, 2022) Therefore, knowing that there are contradictory studies as to what age bullying occurs more (Chan Coob & Márquez Marín, 2021a; Moreno-Arrebola, Castañeda Vázquez, González Valero, Viciano Garófano, & Zurita Ortega, 2020a) , differences in terms of sex (Chan Coob & Márquez Marín, 2021a), it seems that aggression in women is more verbal and in men more physical (Garaigordobil, Martínez-Valderrey, & Aliri, 2014a) and that there is no consensus as to whether or not the school environment can affect this type of attitude towards disability (Parra & Rojas, 2012; Rojo-Ramos, Vega-Muñoz, Contreras-Barraza, & Barrios-Fernandez, 2022), the main objective of this study is to determine the association between bullying-associated behaviors and attitudes towards disability in the context of PE, also exploring how the socio-demographic characteristics of the students influence these relationships to improve sustainability.

MATERIALS AND METHODS

Participants

One thousand one hundred and fifty-five secondary school students from both public and private educational institutions in Extremadura made up the sample. For recruiting, a convenience sampling method was applied. The participant's sociodemographic information is shown in Table 1.

Table 1. Characterization of the sample (N = 1155).

Variables	Public	N	%
Center Type	Private	869	75.2
	CSE	286	24.8
Educational Stage	Baccalaureate	877	75.9
	Male	278	24.1
Gender	Female	564	48.8
	Rural	591	51.2
Center Environment	Urban	368	31.9
		787	68.1

Note: CSE: Compulsory Secondary Education; N: number, %: percentage.

Instruments

In order to acquire sociodemographic data about the participating sample, a preliminary question-naire was first developed that addressed questions about the students' type of school, educational stage, gender, and school environment.

The European Bullying Intervention Project Questionnaire (EBIPQ) in Spanish was then used (Ortega-Ruiz *et al.*, 2016). It has 14 items spread across two main dimensions, seven of which (Dimension 1) indicate victimization-related characteristics and seven of which (Dimension 2) relate to aggression. The actions, which pertain to both dimensions, include beating, insulting, threatening, stealing, swearing, excluding, or spreading rumors. Each question has a Likert scale format with a score between 0 and 4, where 0 means "Never" and 4 means "Always," with a time range of the two months prior (Ortega-Ruiz *et al.*, 2016). This instrument also shows good reliability values using Cronbach's alpha 0,766 (Ato & Alvarado, 2019).

Lastly, students' attitudes about disability during PE sessions were evaluated using the Attitude to-wards Students with Disabilities in Physical Education Scale (EAADEF) (Iñiguez Santiago *et al.*, 2017). The EAADEF is a four-question, Spanish-validated test that uses a Likert-type scale with values ranging from one (strongly disagree) to five (strongly agree). Each item is followed by the phrase "During PE and concerning students with disabilities...". Higher scores suggested a more positive mindset because the items were inverted. Additionally, the unifactorial structure was confirmed by the psychometric properties of the EAADEF questionnaire, which also displays good reliability values using Cronbach's alpha (>0.79) (Iñiguez Santiago *et al.*, 2017).

Procedure

It was possible to establish which institutions offer PE courses for Secondary Education through Baccalaureate (from 12 to 18 years of age) by gaining access to the Department of Education and Employment's database. The PE teachers employed at these centers were

emailed to inquire about the possibility of organizing a researcher visit so they could give the questionnaire to the pupils who had their parents' informed consent. They were asked to use the same channel to reply to the questions as well. The email included descriptions of the study's goals, the parents' informed consent, and the instrument models employed. If the teachers agreed to work together, they were required to reply to the email by arranging for a researcher to come to the school and, after obtaining parental permission, interview the pupils about bullying. The students were given first access to the questionnaire through a tablet, and each item was thoroughly explained to them one at a time so they wouldn't be confused when responding. After collecting all of the questionnaires, the researchers processed, cleaned, and anonymized the data in order to get it ready for a second researcher's subsequent, blind analysis.

The Biosafety and Bioethics Committee of the University of Extremadura in Spain (Registration Code 71/2022) approved a protocol that follows the principles of the Declaration of Helsinki.

Statistical Analysis

The data was processed using IBM SPSS statistical software for MAC, version 23 (Chicago, IL, USA). First, the assumption of normality in the data distribution of the continuous variables was investigated using the Kolmogorov-Smirnov test. It was discovered that this presumption was false, hence nonpara-metric statistical tests were chosen. The U-Mann Whitney statistical test was used to examine any potential variations between educational stage, gender, and school environment in the dimensions of the EBIPQ as well as in the score of both the items and the total EAADEF. Similar to that, the association between them was examined using Spearman's Rho test. The thresholds suggested by Mondragón-Barrera (Mondragón Barrera, 2014) were used to interpret the correlation coefficients: 0.01 to 0.10 (low correlation), 0.11 to 0.50 (medium correlation), 0.51 to 0.75 (considerable correlation), 0.76 to 0.90 (very high correlation), and 0.91 to 1.00 (perfect correlation). Finally, Cronbach's alpha was utilized to evaluate each instrument's dependability. The values provided by Nunnally Bernstein (Nunnally & Bernstein, 1994) were used as a guide to interpret the reliability test results: 0.70 (poor), 0.71 to 0.90 (good), and >0.91 (excellent).

RESULTS

Table 2 displays the results of the EBIPQ scores in both dimensions for the categories that make up the variables examined. Both CSE and Baccalaureate children displayed identical victimization behavior ratings during the educational period; however, substantial variations were discovered for aggression, with Baccalaureate students displaying greater values. Similarly, the two EBIPQ's dimensions appear to be influenced by gender, with varying results. Males indicated more violence tendencies, whilst females were more associated to victimization tendencies. Finally, victimization behaviors were not different in the school setting; nevertheless, children from urban areas were deemed to be more hostile.

Table 2. Descriptive results of the EBIPQ according to educational stage, gender and center environment.

	Educational Stage	Gender	Center Environment
Item	CSE	Male	Female
Me (IQR)	Baccalaureate	Me (IQR)	Female
Me (IQR)	p	Male	p
Me (IQR)	Female	1.71 (0.8)	1.86 (0.7)
Me (IQR)	p	Rural	1.43 (0.6)
Me (IQR)	Urban		
Me (IQR)	p		
1) Victimization	1.86 (0.9)	1.86 (0.9)	0.80
2) Aggression	1.43 (0.6)	1.50 (0.7)	<0.01**

is obtained is based on a Likert scale (0–4): 0 is “Never” and 4 “Always”.

In a similar manner, the descriptive results of the various items and the overall EAADEF score are provided, along with the distinctions made between the various educational stages, genders, and school settings (Table 3). Since the responses collected are relatively comparable for both the items and the overall scores, it does not appear that educational level is an indicator that influences attitudes about disability. Significant gender disparities were seen in each item as well as the overall questionnaire score, with female students displaying more positive views about disabilities. Finally, there were no differences found in the center’s environment along the items, but there were differences in the overall score, with kids from rural areas scoring higher.

Table 3. EBIPQ scores and their differences according to the different categories.

Item	Educational Stage			Gender			Center Environment		
	CSE Me (IQR)	Baccalaureate Me (IQR)	p	Male Me (IQR)	Female Me (IQR)	p	Rural Me (IQR)	Urban Me (IQR)	p
1. I prefer not to associate with people with disabilities	1 (1)	1 (1)	0.24	1 (0)	1 (1)	<0.01**	1 (1)	1 (1)	0.29
2. I would avoid doing class work with a person with a disability	1 (1)	1 (1)	0.56	1 (0)	1 (1)	<0.01**	1 (1)	1 (1)	0.27
3. I would avoid a person with a disability for my team.	1 (1)	1 (1)	0.40	1 (0)	1 (1)	<0.01**	1 (1)	1 (1)	0.07
4. I would not propose a person with a disability as captain of my team.	1 (1)	1 (1)	0.46	1 (1)	1 (2)	<0.01**	1 (1)	1 (1)	0.06
EAADEF	4 (4)	4 (3)	0.16	4 (2)	5 (5)	<0.01**	4 (3)	5 (4)	0.04*

Note: Me = median value; IQR = interquartile range. Differences are significant at ** $p < 0.01$; * $p < 0.05$. Each score obtained is based on a Likert scale (1–5): 1 is “Strongly disagree” and 5 “Strongly agree”.

In addition, the associations between the dimensions of the EBIPQ and attitudes towards students with disabilities can be observed in Table 4. At the general level, victimization behaviors were directly, low and significantly related, while aggression behaviors showed a medium, direct and significant coefficient. Regarding the educational stage, CSE students expressed a medium, direct and significant association between EAADEF and the victimization dimension. On the other hand, no different values were obtained depending on the educational stage for the second dimension, since both showed mean, direct and significant associations with the same coefficient. Likewise, gender showed higher correlations in both dimensions for females, both being direct, medium and significant, while male students showed these

correlations for aggression behaviors but no significance for victimization behaviors. Finally, for the school environment, significance was found in all categories. Regarding victimization, rural environments show a higher coefficient when related to the EAADEF, being average and direct. On the contrary, aggression behaviors generate greater associations in urban settings with attitudes towards disability.

Table 4. Correlations between EBIPQ dimensions and EAADEF score, according to educational stage, gender and center environment.

	Educational Stage		Gender		Center Environment			
	CSE Me (IQR)	Baccalaureate Me (IQR)	p Male Me (IQR)	p Female Me (IQR)	p Me (IQR)	Rural Me (IQR)	Urban p	
Item								
I prefer not to associate with people with disabilities	1 (1)	1 (1)	1 (1)	1 (1)	0.24 1 (1)	1 (0) 0.29	1 (1)	<0.01** 1 (1)
I would avoid doing class work with a person with a disability	1 (1)	1 (1)	1 (1)	1 (1)	0.56 1 (1)	1 (0) 0.27	1 (1)	<0.01** 1 (1)
I would avoid a person with a disability for my team.	1 (1)	1 (1)	1 (1)	1 (1)	0.40 1 (1)	1 (0) 0.07	1 (1)	<0.01** 1 (1)
I would not propose a person with a disability as captain of my team.	1 (1)	1 (1)			0.46 1 (1)	1 (1) 0.06	1 (2)	<0.01** 1 (1)
EAADEF	4 (4)				0.16 5 (4)	4 (2) 0.04*	5 (5)	<0.01** 4 (3)

Note: Differences are significant at ** $p < 0.01$; * $p < 0.05$.

We also explored the possible correlations between the items and the final score of the EAADEF and the results obtained in the EBIPQ (Table 5). Overall, the associations found can be defined as significant, average and direct. In references to the educational stage, CSE students show greater associations in the first and third items, as well as in the final score, compared to their Baccalaureate peers. On the other hand, Baccalaureate students show higher coefficients in the second and fourth items. As for gender, female students show higher associations in most items and in the final score, except in the third question. Finally, the environment of the center shows disparate results, while the students belonging to rural environments show higher associations in the first, second and third items, those from urban environments exceed them in the fourth item.

Table 5. Correlations between EAADEF items and final score with EBIPQ punctuation, according to the analyzed sociodemographic variables.

		Educational Stage	Gender	Center Environment			
Item							
1. I prefer not to associate with people with disabilities							
2. I would avoid doing class work with a person with a disability							
Me (IQR)	Urban						
Me (IQR)							
1. I prefer not to associate with people with disabilities	0.13 (<0.01)**	0.14 (<0.01)**	0.09 (0.16)	0.12 (<0.01)**	0.16 (<0.01)**	0.15 (<0.01)**	0.12 (<0.01)**
2. I would avoid doing class work with a person with a disability	0.13 (<0.01)**	0.12 (<0.01)**	0.16 (<0.01)**	0.12 (<0.01)**	0.16 (<0.01)**	0.13 (<0.01)**	0.12 (<0.01)**
3. I would avoid a person with a disability for my team.	0.15 (<0.01)**	0.16 (<0.01)**	0.15 (<0.01)**	0.17 (<0.01)**	0.16 (<0.01)**	0.19 (<0.01)**	0.13 (<0.01)**
4. I would not propose a person with a disability as captain of my team.	0.15 (<0.01)**	0.14 (<0.01)**	0.17 (<0.01)**	0.12 (<0.01)**	0.19 (<0.01)**	0.11 (<0.01)**	0.16 (<0.01)**
EAADEF	0.16 (<0.01)**	0.17 (<0.01)**	0.13 (0.03)*	0.14 (<0.01)**	0.22 (<0.01)**	0.16 (<0.01)**	0.16 (<0.01)**

Note: Differences are significant at ** $p < 0.01$; * $p < 0.05$.

Furthermore, the victimization and abuser dimensions Cronbach's alpha values were 0.854 and 0.856, respectively, so they are defined as satisfactory. Additionally, the EAADEF result (Cronbach's Alpha = 0.910) could be regarded as excellent.

Discussion

The main objective of this study was to determine the association between bullying behaviors and attitudes towards students with disabilities. For this purpose, the EBIPQ and the EAADEF were used as measurement instruments, analyzing the possible differences found according to educational stage, gender and school environment, in the region of Extremadura (Spain).

First, in terms of educational stage, the scores obtained in the first dimension of the EBIPQ show similar values for both the CSE and the Baccalaureate. However, according to Moreno-Arrebola (Moreno-Arrebola, Castañeda Vázquez, González Valero, Viciano Garófano, & Zurita Ortega, 2020b), bullying victimization is at its highest during secondary school, declining after this educational stage, but this could be due to a higher frequency, not more instances of bullying (Chan Coob & Márquez Marín, 2021b) or the emergence of cyberbullying, which is harassment carried out through new technology (Garmendia Larrañaga, Jiménez Iglesias, & Larrañaga Aizpuru, 2019). In addition, in this project it is discovered that Baccalaureate students exhibit greater values in the second dimension. In this regard, Campuzano González et al. (Campuzano González, Libien Jiménez, & Olmos González, 2020) also point out that the most bullying incidents occur is 17 years old, but other research shows that all sorts of violence have higher averages in secondary education (Chan Coob & Márquez Marín, 2021b). Additionally, as has also been demonstrated in a research (Moreno-Arrebola et al., 2020b), women are more likely to be victims of bullying while men are more likely to perpetrate it. In this regard, however, it may be noted that females experience verbal and social hostility more frequently than males (Chocarro de Luis & Garaigordobil Landazabal, 2019), but males frequently more experience physical aggressiveness (Garaigordobil, Martínez-Valderrey, & Aliri, 2014b). In the case of boys, the 15–16 age group has the highest frequency of victimization, whereas in the case of girls, the older age group (17–18 years) has the highest prevalence (Simón Saiz et al., 2019). Therefore, there are significant differences in bullying victimization for both males and females, as pointed out by Guijarro Orozco et al. (Guijarro Orozco & Larzabal Fernández, 2021). León-Moreno et al. (León-Moreno, Martínez-Ferrer, Musitu Ochoa, & Moreno Ruiz, 2019) point out that social pressure pushes males to aggressive acts in order to obtain a specific status among their peers, which supports the claim that men exhibit more aggressive behaviors than women do. Finally, the school setting in the EBIPQ did not show differences for victimization behaviors, contrary to an investigation by Rodríguez Álvarez et al. (Rodríguez Álvarez, Navarro, & Yubero Jiménez, 2022) that found in rural schools reported a higher prevalence of bullying victims, and as obtained in the present study, the most aggressive students, particularly those who engaged in verbal bullying and exclusion, belonged to urban settings.

Second, according to the results shown by the EAADEF, it appears that attitudes toward disability are unaffected by a student's educational stage; however, previous research highlighted that younger students exhibit less favorable attitudes than those in higher training cycles, suggesting that older students generally have more positive attitudes toward disability (Suriá Martínez, 2011). On the other hand, Abellán et al. (Abellán, Sáez-Gallego, & Reina, 2018) have demonstrated that those who have interacted with persons with disabilities, particularly if that interaction involved a family member, have more positive attitudes regarding disability. Therefore, this kind of element could have contributed to our findings. In terms of sex, significant differences were seen across all categories and the overall questionnaire score, with female students displaying better attitudes toward disabilities, as recently discovered in a number of scientific domains (Chavarría Ortiz, García Parejo, de la Fuente Martín, Heredia Carroza, & Pérez Lorenzo, 2022; Torres Paz, Chong Ortiz, Granados Barreto, & Torres Lozada, 2023). It was discovered in a prior study (Garoa Muro et al., 2020) that boys related to colleagues with disabilities more than girls did, though neither gender thought having a student with a disability in the class was advantageous for them. Additionally, further prior studies have revealed that women are more inclined than males to reject people with disabilities (Sáez-Gallego, Abellán,

Ferriz, & Reina, 2020; Tolano Fierros, Toledo Domínguez, & Ródenas Cuenca, 2020). Finally, in the case of the center's environment, no differences were obtained across the items, but there were differences in the total score, with better scores being obtained by those students who belonged to rural areas. In this regard, in contrast to more than ten years earlier, when there were no differences in the classroom environment (Parra & Rojas, 2012), a recent study found that, students from rural centers have better attitudes than those from urban centers (Rojo-Ramos et al., 2022), possibly influenced by traditionally predominant aspects such as greater social support from the environment (Solís, Pedrosa, & Mateos-Fernández, 2019). In addition, this could be due to the fact that high schools in urban areas tend to be more competitive and performance-oriented, which could lead to less favorable attitudes towards inclusion (Hutzler, Meier, Reuker, & Zitomer, 2019).

Third, with respect to the associations between the dimensions of the EBIPQ and the EAADEF at the general level, the victimization behaviors were related in a direct, low and significant way, while the aggression behaviors showed a medium, direct and significant coefficient. Even in the final scores of both surveys, secondary education is the period during which most victimization takes place (Swearer, Wang, Maag, Siebecker, & Frerichs, 2012). For students with SEN, bullying and victimization peak between the ages of 14 and 16 (Rodríguez-Hidalgo et al., 2019). Due to their increased vulnerability, they also have a tendency to lessen their defensive responses when it comes to primary schooling (Malecki et al., 2020). According to Rodríguez-Hidalgo et al. (Rodríguez-Hidalgo et al., 2019), 20.4% were both aggressors and victims, 6.3% were aggressors, and 19.6% were victims. The proportion of disabled students who experience bullying while also participating in it is particularly alarming. But typically, SEN students behave more aggressively and intimidatingly, which may be because they don't understand social cues well. According to the authors, it is reactive bullying—a coping mechanism for repeated victimization (González Contreras et al., 2021). Additionally, these students exhibit this behavior more frequently (Malecki et al., 2020). This explains why different values for the second dimension could not be found. Regarding gender, females manifested higher correlations in both dimensions, even in the final scores of both questionnaires. As was already established, this might be because women are less accepting of persons with impairments than men are (Chavarría Ortiz et al., 2022; Torres Paz et al., 2023), while having greater empathy for them (Sáez-Gallego et al., 2020; Tolano Fierros et al., 2020). However, because the male student body are more hostile, only showed these correlations for aggressive behaviors (León-Moreno et al., 2019). Finally, in terms of the center setting, aggression behaviors produce higher associations in urban settings with attitudes toward disability, whereas rural settings show a higher coefficient on victimization when related to the EAADEF (Rojo-Ramos et al., 2022). The correlations between the final scores of the two questionnaires, however, are comparable in both contexts. In summary, students with disabilities engage in bullying dynamics more than their non-disabled peers. In addition, the social stigma that surrounds this group creates a climate of prejudice and susceptibility that hinders inclusion in educational institutions (Malecki et al., 2020). It should also be noted that there are less research on bullying and kids with disabilities than there are on students who are normotypical (Tipton-Fisler, Rodriguez, Zeedyk, & Blacher, 2018).

4.1. Practical Implications

This study will outline the prevalence of bullying among students with disabilities in PE classrooms in an effort to reduce bullying. In order to accomplish inclusive education (González Montesino & Espada Mateos, 2020), policies should take into account the needs of the group of people with disabilities, place a strong emphasis on appropriate behavior, and provide a warm, safe environment where all students can feel valued and appreciated, as well as using the best teaching methods and models. (Calero-Morales et al, 2023) Additionally, PE classes are the ideal setting for bullying prevention through education (Alcántara Cruz & Ruiz Ariza,

2022) because they foster stronger relationships, increased interaction between students with and without disabilities, and active and effective participation from all students (Fernández Cabrera, Jiménez Jiménez, Navarro Adelantado, & Sánchez López, 2019).

4.2. Limitations and future lines of research

Like other research, this one has a lot of restrictions. First, given that the sample was limited to Baccalaureate and CSE students from Extremadura, there are a number of factors that could have influenced the findings, including the responses provided in response to the instruments tested and the answers provided to the sociodemographic questions. It is important to be cautious when reporting the results because non-probability convenience sampling was employed to select the participants. It should be mentioned that although it has been an officially known term for more than 50 years, nowadays it prevails and has even intensified, sometimes even other types of harassment and reaching very serious situations. As a result, among the potential directions for future research are the expansion of the sample to the national level and across all educational levels, the understanding of the motivations of those who abuse their victims, the understanding of the reasons why those who witness abuse do not act, and even the understanding of why students who were once victims become abusers. Therefore, it is indispensable to reach an agreement with other researchers from various communities in order to gather all the required data. Since education starts at home, it is also essential to involve all educational agents. By doing so, bullying and other forms of abuse can be completely eradicated, and all students can be fully included in the educational process.

5. Conclusions

This study has demonstrated the correlation between the EBIPQ and the EAADEF. The associations found between bullying and disability aptitude are significant, medium and direct. Secondary school students show stronger associations, as well as the female gender. In terms of school environment, both rural and urban students obtained very similar findings; however, rural students obtained higher scores. These findings show that it is necessary to adhere to research on bullying, to carry out more interventions to prevent and eradicate it, to achieve a good classroom climate by including all students and providing them with the necessary tools to get to know their peers without prejudice. In addition, it is essential to have the support of the whole educational community and family members to move towards inclusion in an integrated learning approach, which minimises school bullying.

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CONFLICTO DE INTERESES

El o los autores declaran que la presente investigación y su redacción no responde a ningún conflicto de interés y que es un artículo inédito.

CONTRIBUCIÓN DE LOS AUTORES

Carmen Galán Arroyo: Investigación y aplicación del experimento.

Santiago Gómez Paniagua, Carlos Mañana Iglesias y Jorge Rojo Ramos: Redacción y estilo científico