

ARTICLE/ARTÍCULO

Teacher Training and Discriminatory Bullying. Analysis of a Reality

La formación docente y el bullying discriminatorio.
Análisis de una realidad

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ABSTRACT

Discriminatory bullying in students with special educational needs (SEN) poses a societal challenge impacting not only school coexistence but also the lives of those affected and their surroundings. Research on bullying in initial teacher training reveals a limited level of knowledge among university students. Consequently, this study aims to scrutinise the extent of training related to the conceptualisation, organisation, legislation, detection, prevention and intervention of bullying in students with SEN. Simultaneously, the research assesses the importance that prospective teachers attribute to these aspects. A quantitative study is designed to examine the training of students pursuing degrees in Early Childhood and Primary Education in Andalusia. Data is collected through a questionnaire and analysed using SPSS-V26.0. The findings indicate that the level of initial training is modest across all evaluated dimensions, excluding conceptualisation. The detection of bullying in students with SEN is a lesser-known aspect among the respondents.

KEYWORDS: bullying; special educational needs; teacher training; discrimination.

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RESUMEN

El *bullying* discriminatorio en alumnado con necesidades educativas especiales (NEE) supone un problema social que afecta no solo a la convivencia escolar, sino a la vida de las personas que lo padecen y a su entorno. Las investigaciones sobre *bullying* en la formación inicial docente revelan un bajo nivel de conocimiento del alumnado universitario. Por tanto, el objetivo de esta investigación es analizar el grado de formación en relación a la conceptualización, organización, legislación, detección, prevención e intervención del *bullying* en alumnado con NEE; a su vez, se evalúa el grado de importancia que concede el futuro profesorado a estos contenidos. Se diseña un estudio cuantitativo para analizar la formación de estudiantes de Grados de Infantil y Primaria en Andalucía. Los datos se obtienen mediante cuestionario y se analizan con SPSS-V26.0. Se concluye que el grado de formación inicial es poco en todas las dimensiones evaluadas, excepto en la conceptualización. La detección de acoso escolar en alumnado con NEE es un aspecto menos conocido por los encuestados.

PALABRAS CLAVE: acoso escolar; necesidades educativas especiales; formación docente; discriminación.

1. Introduction

Discriminatory or social stigma-based bullying represents a significant contemporary issue, affecting the coexistence of students in educational institutions. This phenomenon results in power imbalances directed towards more vulnerable social groups (Downes and Cefai, 2019). Characteristics associated with disability or a deficit in certain abilities are perceived as deviations from the norm within peer groups. Consequently, these characteristics become a pretext for engaging in interpersonal violence against students with *special educational needs* (SEN) (Rose and Espelage, 2012).

In Spain, the incidence of bullying has reached alarming levels in recent years, with Andalusia having the highest enrolment of students with SEN in its classrooms and the highest number of reported bullying cases at the national level. More than 30% of bullying incidents reported in Andalusia involved students with SEN (Lobato, 2019).

The repercussions of discriminatory bullying are more detrimental than those of traditional bullying (Salmon et al., 2018), impacting cognitive and social-emotional development and persisting throughout the victim's life if there is no proper intervention (Earnshaw et al., 2018).

This social issue is evident, with there being a clear need to implement public policies for both prevention and intervention. Given this foundational concern, we raise the question that motivates this study: Do teachers possess the necessary tools to address this problem?

Studies on the topic assert that university students lack the required training to confront bullying, as they are unfamiliar with the phenomenon and its primary educational and organisational aspects. However, despite the limited level of training, research indicates that prospective teachers attribute significant importance to content related to bullying in their initial teacher training (Álvarez García et al., 2010; Bauman and Del Rio, 2005; Benítez et al., 2006; García et al., 2006).

2. Theoretical Framework

The introduction of the concept of students with special educational needs dates back to the enactment of the Organic Act 1/1990 of 3 October, which established the General Organisation of the Educational System (LOGSE, for its initials in Spanish). At this time, it was suggested that the focus on these students should be guided by the principles of normalisation and school integration (Fernández, 2011).

In 2006, the Organic Education Act was enacted, dedicating Chapter I to aspects related to students with specific needs for educational support, encompassing those with SEN. From this juncture, the concept of inclusion gained prominence, representing a significant stride towards the normalisation of these students.

UNESCO (2005) defines the term “inclusion” as:

“The process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education. It involves changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children” (p. 13).

The concept of inclusion, coupled with effective practices for these students, has gained momentum in the educational system. Echeita and Ainscow (2011) underscore the increasing interest in the concept of inclusive education, noting that actions are currently under way to deliver effective educational responses to the entire student body, transcending their physical, personal and/or social characteristics.

Familiarity with alternative methodologies and educational innovation within the classroom is essential for achieving genuine inclusion of students with SEN. This not only benefits these students but also contributes to the ability to foster empathy and cultivate emotional intelligence among other students, on the one hand, and all those involved in the classroom and school environment, on the other (Bascón et al., 2019).

Studies show that the inclusion of students with special educational needs in regular classrooms is pivotal, yet educational needs go beyond purely academic adaptations. It involves addressing these needs in all facets of the educational journey, mirroring the approach taken with other students.

In the Autonomous Community of Andalusia, the Instruction of 8 March 2017, from the General Directorate of Participation and Equity, updating the protocol for detecting and identifying students with specific needs for educational support (SNES) and organising the educational response in Andalusia, defines students with SEN as those requiring particular support and educational attention distinct from regular education due to various degrees and types of abilities. These abilities can be physical, psychological, cognitive, sensory or severe behavioural disorders.

When examining data from the educational system and current challenges within classrooms and educational institutions, bullying emerges as one of the most significant problems faced by teachers. Studies not only reveal the existence of this practice among children and adolescents but also underscore the critical role of teachers in addressing this social issue.

The Ministry of Education and Culture, with data updated as of 25 September 2020, discloses a total of 5,500 reported cases of bullying in the period from 2012 to 2017 in Spain. In the last year alone, this number is higher, reaching 1,054 incidents of school bullying. Additionally, in 2017, Andalusia stands out as the autonomous community with the highest number of recorded bullying cases. In detail, there are 33 cases in the age group of 6 to 8 years and 76 cases between 9 and 11 years, totalling 109 cases in the Primary Education stage. Although any student can be a victim of bullying, certain groups face a higher risk. The probability of students with SEN experiencing bullying is 2 to 4 times higher than that of the rest of the student body (Hernández, 2017; Rose et al., 2015). The second cycle of Primary Education observes a higher proportion of bullying in students with SEN, constituting 37% of reported cases.

Andalusia has a substantial number of students with disabilities enrolled in the 2016–2017 academic year. The average for students with SEN who have experienced bullying surpasses the national average (Lobato, 2019). Despite the significance of the issue, it currently remains a less-explored area of study (Falla et al., 2021).

2.1. Conceptualisation of Discriminatory or Social Stigma-Based Bullying

Since the seventies, numerous studies have been conducted to analyse and comprehend school bullying. The pioneer in these investigations, Dan Olweus (1993), defines bullying as any negative and recurring action over time directed by a student or group of students towards another in a power-imbalanced relationship, with the intent of causing harm through physical, verbal or socially excluding aggression.

This phenomenon of interpersonal violence, impacting both the school and social environment, possesses three fundamental characteristics for classification as bullying: repetition over time, power imbalance and the intention to cause harm (Olweus, 1993; Ortega, 2010; Volk et al., 2014).

Concerning the first characteristic, repetition, it is important to note that the aggressor conceals their aggressive behaviour from adults to evade negative consequences. The victim, driven by fear or shame, also maintains silence about the aggression. Other students refrain from disclosing the situation due to a subjective social norm, suggesting that occurrences within the peer network should not be reported to adults. Consequently, the failure to report the situation accentuates the perpetuation of bullying. This process is known as *the law of silence* (Martín-Criado and Casas, 2019; Ortiz et al., 2017).

The second characteristic of school bullying is the power imbalance. This concept is a crucial aspect of discriminatory bullying. Individuals subjected to aggression over an extended period encounter difficulty in self-defence, thereby fostering a power imbalance. This process is termed *victimisation*. Consequently, the victim perceives themselves as socially and/or psychologically weaker and may even attribute blame to themselves, exacerbating their sense of helplessness (Ortega and Mora-Merchán, 2008; Ortiz et al., 2017; Volk et al., 2014).

Lastly, bullying is characterised by a clear intention to do harm. The aggressor aims to harm the victim, and/or the victim perceives the action as premeditated to cause harm (Ortiz et al., 2017; Volk et al., 2014). At this point, discriminatory bullying can be defined as aggressive behaviour, repeated over time, with a clear intention, akin to traditional bullying. However, concerning the power imbalance, it is significantly intensified in discriminatory bullying, perpetuating the dominance-submission schema (Martín-Criado and Casas, 2019). This is justified by a social position of superiority on the part of the aggressor based on stigma and discrimination. Consequently, the victim is placed in a socially inferior position simply by presenting personal characteristics typical of students with SEN (Downes and Cefai, 2019; Earnshaw et al., 2018; Salmon et al., 2018).

It should be noted that individuals who experience the phenomenon of violence and discrimination are more likely to belong to stigmatised social groups (Rodríguez-Hidalgo et al., 2021). However, some students who do not have SEN also experience discriminatory bullying but are targeted based on prejudice towards disability (Rodríguez-Hidalgo et al., 2019). The study by Rose and Espelage (2012) contends that characteristics associated with disability or deficits in certain abilities are perceived as deviations from the norm within peer groups. Consequently, these differences become a pretext for engaging in aggressive behaviour.

Psychological repercussions that have a lasting impact on an individual's development are among the most critical factors when addressing and analysing bullying. In the case of discriminatory bullying, its consequences could be deemed more severe than those of traditional bullying (Salmon et al., 2018). The effects of this type of bullying have a more prolonged duration, often extending throughout an individual's entire life (Earnshaw et al., 2018).

Discriminatory victimisation negatively correlates with the principles of inclusion, as it impedes the presence, participation and progress or learning of the students who experience it (Ashburner et al., 2019). Furthermore, the effects can be so harmful that they impact emotional balance and psychological well-being (Chiu et al., 2018; Paul et al., 2018; Pérez-Garín et al., 2018), and may even contribute to suicidal thoughts in students subjected to discriminatory victimisation (King et al., 2018).

2.2. Importance of Initial Teacher Training

In certain cases, student victimisation stems from teachers attributing lower social competence to students with SEN. When teachers victimise students, it increases the probability of aggression in peer relationships (Villalobos-Parada et al., 2014), thereby significantly hindering the inclusion process. For various reasons, initial teacher training is deemed crucial for preventing, detecting and intervening in potential bullying situations involving students with SEN.

Studies on initial teacher training in the United Kingdom concerning bullying indicate that, despite university students recognising it as a relevant topic, they are not adequately equipped to address it (Nicolaidis et al., 2002).

Similarly, in the United States, aspiring teaching students have a limited understanding of the term bullying. Moreover, there is a deficiency in training, leading to ineffective intervention. Nonetheless, there persists an interest in acquiring knowledge about bullying during their initial training. Prospective teachers in the United States express higher confidence in dealing with the families of both victims and aggressors. Likewise, students exhibit a keen interest in intervention training, with no significant differences based on gender (Bauman and Del Rio, 2005).

Another study conducted in the United States on initial teacher training in bullying prevention shows similar results. It is observed that future teachers, mostly women, attach great importance to bullying prevention. Despite this, a substantial number of students do not feel prepared and lack confidence in their ability to educate on violence-prevention strategies. In fact, the study highlights that the majority of university students have not received training on prevention during their university years (Kandakai and King, 2002).

The study by Álvarez-García et al. (2010) with students from the University of Oviedo reveals that the level of knowledge about school bullying is quite low, particularly regarding the legal and organisational framework of the bullying phenomenon. Similarly, there is a limited level of training regarding resources for prevention, intervention and instruments for assessing coexistence to detect bullying, with the latter being the content with the least degree of knowledge. Additionally, university students express dissatisfaction with the initial teacher training they receive.

A study conducted in Huelva examined initial teacher training in the Primary Teaching Degree and programme for prospective teachers for Compulsory Secondary Education (ESO, for its initials in Spanish). The results reveal, on the one hand, a lack of knowledge about the conceptualisation of bullying among university students, and, on the other hand, future teachers consider it a highly relevant topic, thus advocating for specialised training for bullying prevention and intervention (García et al., 2006).

The study by Benítez et al. (2006), conducted in Granada, emphasises that prospective teachers, both men and women, highly value content related to commu-

nication with students and families. Similarly, the content receiving the highest ratings is that which provides a response to situations of violence that have already occurred, i.e., in the realm of intervention. Students in the Early Childhood Education stage attribute greater importance to prevention-related content. Despite the significance placed on this content by students, the study data reflects a very low level of knowledge regarding bullying.

The same research group conducted a new study, distributing pre-service teachers in Early Childhood, Primary and Secondary Education into experimental and control groups. The results reveal a significant improvement in the experimental group that received training on bullying. Therefore, it is concluded that the inclusion of specific content on school violence in the curriculum for future teachers is necessary (Benítez et al., 2009).

Given this data, various authors argue that specific training has a positive impact. Therefore, specific content on bullying should be included in the university curriculum to achieve quality education (Benítez et al., 2009; Sahin, 2010).

3. Objectives and Hypotheses

This study represents an exploratory investigation with two objectives. Firstly, to analyse the level of knowledge among students in the initial teacher training programmes for Early Childhood and Primary Education degrees at Andalusian universities, in relation to the conceptualisation, organisation and legislation, prevention, detection and intervention related to bullying in students with SEN in the Autonomous Community of Andalusia. Secondly, to assess the importance that students in Early Childhood and Primary Education degree programmes attribute to their initial training regarding content on school bullying in students identified with SEN.

Given these two overarching objectives, the following working hypotheses are proposed:

H1: The level of knowledge of prospective teachers concerning the conceptualisation of bullying is correlated with the extent of training on organisational and legislative aspects of bullying and students with SEN, with both areas demonstrating a low level of knowledge.

H2: The level of training on the conceptualisation of bullying in students with SEN influences the knowledge level regarding detection, prevention and intervention, and this influence occurs in a specific direction.

H3: Students in the Early Childhood and Primary Education degree programmes possess an equal understanding of strategies and methodologies for preventing bullying in students with SEN.

H4: The knowledge of intervention procedures for bullying in students with SEN is equal among men and women.

H5: Women place greater importance on initial teacher training on bullying content in students with SEN than men.

H6: Students in the Early Childhood Education degree place greater importance on training for the prevention of bullying in students with SEN than those in the Primary Education degree.

H7: Prospective teachers place greater importance on intervention content than prevention content regarding social stigma-based bullying in students with SEN.

4. Methodology

4.1. Design

The study follows a quantitative paradigm with a prospective cross-sectional research design, collecting data at a specific point in time in an exploratory and descriptive manner. Consequently, no interventions are conducted on the sample; the reality is depicted without alterations concerning two variables, with no control over either (Pinto, 2018). It also adopts an *ex post facto* approach (Kerlinger and Lee, 1999), where information is gathered in its natural context without manipulating the study variables. Data collection is performed through a survey.

Regarding the sample, after reviewing the teaching guides, students enrolled in the second year or beyond were selected, as they have already covered content related to coexistence and bullying. Faculty from various Andalusian universities were contacted via email, requesting the participation of their students. The sample constitutes a non-probabilistic incidental convenience sample (Otzen and Manterola, 2017) of 604 students, starting from the second year of the degree in Early Childhood or Primary Education, or those who have completed their studies in one of these two degrees in the last five years in Andalusia.

The analysis of the obtained information describes the characteristics of the sample based on socio-demographic variables. The participants' average age is 22.94 years, with a minimum age of 18 years and a maximum of 57 years.

Concerning gender distribution, the number of women (82.10%) in the sample is more than four times higher than that of men (17.90%). It is noteworthy that the sample is part of an Education Sciences degree, where the number of enrolled women is typically higher than that of men (Ministry of Science, Innovation and Universities, 2019).

The data representation reveals an equitable distribution between students in the Primary Education degree (55.5%) and in the Early Childhood Education degree (44.5%). Additionally, students' enrolment corresponds to the second year (28.3%), third year (33.8%), fourth year (21.2%) and those who completed their studies in the last five years (16.7%). Concerning the type of university centres in the sample, it is divided among public centres (67.7%) and affiliated centres (32.3%). Furthermore, the province of the participants' universities is ranked in descending order as follows: Córdoba (36.9%), Seville (17.1%), Granada (16.6%), Málaga (12.7%), Jaén (5.6%), Cádiz (2.6%) and Almería (1.5%).

For data collection, a questionnaire is administered, encompassing socio-demographic, criterion and explanatory variables. Socio-demographic variables include gender, age, degree, enrolment year, type of centre and province of the university. Regarding explanatory variables, attention is given to the conceptualisation of bullying; organisation and legislation of bullying and students with SEN; detection of bullying and students with SEN; prevention of bullying in students with SEN; intervention for bullying in students with SEN; and, finally, the importance attributed to bullying and SEN content. The criterion variable indicates the extent of training on bullying in students with special educational needs.

To measure the criterion variable, three already validated instruments on school coexistence and bullying are adapted to SEN, as there is no specific instrument that evaluates this phenomenon in students with SEN. The reference instruments employed are the Questionnaire on Peer Abuse in Schools developed by Nicolaides et al. (2002), translated and adapted by Benítez et al. (2006), the Questionnaire on Bullying Training for ESO Teachers (Sobrino et al., 2015) and the Test on Resources for School Coexistence (Álvarez-García et al., 2010). The resulting instrument has been designated as the Questionnaire on Initial Teacher Training in Bullying and Special Educational Needs. It is crucial to note the recorded reliability measurement for our instrument, indicated by a Cronbach's Alpha of $\alpha = 0.95$.

In addressing the study's objectives, the analysis will scrutinise the level of knowledge in the initial teacher training programmes for the degrees in Early Childhood and Primary Education at Andalusian universities. This examination will specifically delve into the dimensions of conceptualisation, organisation and legislation, prevention, detection and intervention concerning bullying in students with SEN. Furthermore, the study will assess the significance attributed by students in the Early Childhood and Primary Education degrees to their initial training regarding content on bullying in students with SEN.

Regarding its structure, the questionnaire is divided into six dimensions based on explanatory variables, comprising a total of 53 items with a 5-level Likert scale response. The questionnaire was administered online through Google Forms at the conclusion of the academic year. IBM SPSS Statistics V26.0 software was used.

5. Results

Andalusia has the highest enrolment of students with disabilities, as indicated by data from the 2016–2017 academic year. In this period, Andalusia also recorded the highest number of cases of students with SEN who have experienced bullying. In light of the above, and considering the results obtained from our research, they seem to align with findings from other studies; however, some variations exist.

The following are the results. Firstly, regarding the conceptualisation of bullying, the least familiar content is the law of silence in bullying, followed by what the dominance-submission schema implies. In contrast, the role of the victim is the most familiar, with an average score of 4.14. Secondly, the data show that the role of the aggressor is the second most familiar (4.00), and in third place, with an average of 4.07, students with SEN are more likely to be victims of bullying.

Table 1

Conceptualisation of Bullying

	Mean	Dev.
1. I am familiar with the role of the aggressor in bullying	4.00	1.09
2. I am familiar with the role of the victim in bullying	4.14	1.03
3. I am familiar with the role of the defender in bullying	3.80	1.07
4. I am familiar with the role of the collaborator in bullying	3.70	1.23
5. I am familiar with the role of the neutral bystander in bullying	3.88	1.16
6. I am familiar with the role of the victimised aggressor in bullying	3.46	1.35
7. I am familiar with the types of direct and indirect physical violence	3.77	1.20
8. I am familiar with the types of direct and indirect social violence	4.02	1.05
9. I am familiar with the types of direct and indirect verbal violence	3.59	1.23
10. I am familiar with the types of physical and verbal sexual harassment	3.80	1.21
11. I know and understand what the law of silence implies in bullying	3.00	1.50
12. I know and understand what the dominance-submission schema implies in bullying	3.23	1.36
13. I am familiar with the different coping strategies students use against bullying	3.37	1.20
14. I am familiar with cyberbullying and its types	3.13	1.23
15. Students with SEN are more likely to be victims of bullying	4.07	0.95

Source: own research using the data obtained. Rating scale from 1 to 5.

Concerning the extent of training related to the organisation and legislation of bullying and students with SEN (Table 2), the least familiar topics are the Coexistence Committee and the Instructions of 8 March 2017. In contrast, the Coexistence Plan is somewhat more familiar, with average scores of 2.54 and 3.21, respectively.

Table 2
Organisation and Legislation of Bullying and SEN

	Mean	Dev.
16. I know what the Coexistence Plan is and what it should contain	3.21	1.24
17. I know what the Mediation Protocol in conflict resolution is and what it should contain	2.96	1.20
18. I know what the Action Protocol is and what it should contain	3.10	1.20
19. I know what the "School: Space of Peace" project is and what it should contain	3.01	1.24
21. I know the roles of Educational Inspection in the case of school violence	2.65	1.22
22. I know groups in the community working on school violence prevention	2.66	1.24
23. I know the roles of the Coexistence Committee	2.54	1.23
24. I know the Instructions of 8 March 2017, protocol for detecting and identifying students with specific needs for educational support and organising the educational response	2.59	1.34

Source: own research using the data obtained. Rating scale from 1 to 5.

Table 3 highlights that there is a lesser familiarity with questionnaires assessing school violence and social climate. Conversely, slightly higher scores are obtained for the detection of possible behavioural disorders and cases of bullying in students with SEN. We conclude that the latter are more widely known.

Table 3
Bullying and SEN Detection

	Mean	Dev.
25. I am familiar with questionnaires assessing school violence and social climate	2.52	1.23
26. I am familiar with procedures for recording observed behaviours in the classroom	2.99	1.22
27. I know how to detect possible behavioural disorders	3.29	1.03
28. I know how to detect possible cases of bullying in students with SEN	3.28	1.11

Source: own research using the data obtained. Rating scale from 1 to 5.

Table 4 demonstrates knowledge about inclusive methodologies such as cooperative learning, which receives the highest score when analysing bullying prevention. In second place (3.49), students are familiar with inclusive strategies such as interactive groups. These data highlight the importance of implementing educational innovation actions in the classroom, focusing on the genuine inclusion of students. Inclusive methodologies create a collaborative environment that benefits all those coexisting within the classroom.

Table 4
Prevention of Bullying in Students with SEN

	Mean	Dev.
29. I am familiar with actions developed in the classroom group to prevent bullying in students with SEN	3.05	1.14
30. I am familiar with and can implement techniques based on Conflict Resolution Education	3.28	1.13
31. I am familiar with inclusive methodologies such as Cooperative Learning	3.88	1.08
32. I am familiar with inclusive methodologies such as Universal Design for Learning	2.83	1.27
33. I am familiar with inclusive strategies such as Interactive Groups	3.49	1.24
34. I am familiar with inclusive strategies such as Dialogic Talks	3.15	1.36
35. I am familiar with inclusive strategies such as Shared Teaching	2.97	1.31

Source: own research using the data obtained. Rating scale from 1 to 5.

Regarding the explanatory variable intervention, it is noteworthy that respondents possess knowledge to support the victim without blaming them, with an average response of 3.23 (Table 5).

Table 5
Intervention in Bullying of Students with SEN

	Mean	Dev.
36. I have knowledge to act in a case of bullying in students with SEN	2.90	1.17
37. I have knowledge to support victims with SEN without blaming them	3.23	1.19
38. I have knowledge to talk to aggressors with SEN without blaming them	2.87	1.18
39. I have knowledge to make aggressors with SEN stop bullying	2.73	1.16
40. I have knowledge to help bystanders take a more active role in supporting victims with SEN	3.08	1.18
41. I have knowledge to work with the family of victims with SEN	2.79	1.23
42. I have knowledge to work with the family of aggressors with SEN	2.70	1.23

Source: own research using the data obtained. Rating scale from 1 to 5.

Finally, Table 6 illustrates that discussing teachers' activities to prevent and intervene in bullying in students with SEN is the lowest rated content, presenting an average of 4.67. Conversely, how to communicate with victims with SEN is the most highly rated item.

Table 6
Relevance Attributed to Bullying and SEN Content

	Mean	Dev.
43. How to discover the existence of bullying in students with SEN	4.74	0.67
44. How to talk to students about bullying	4.71	0.68
45. How to talk to victims with SEN	4.75	0.68
46. How to talk to aggressors with SEN	4.74	0.67
47. How to talk to bystanders	4.70	0.65
48. How to improve school coexistence to prevent bullying in students with SEN	4.73	0.65
49. How to improve the physical environment of the school to prevent bullying in students with SEN	4.69	0.67
50. Discussing teachers' activities to prevent and intervene in bullying in students with SEN	4.67	0.68
51. Discussing students' activities to prevent and intervene in bullying in students with SEN	4.68	0.66
52. How to work with the family of victims with SEN	4.72	0.66
53. How to work with the family of aggressors with SEN	4.73	0.70

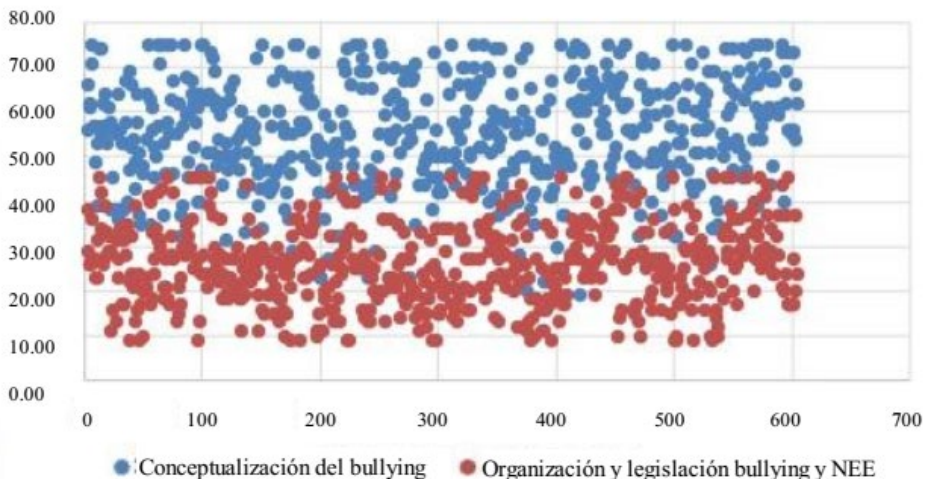
Source: own research using the data obtained. Rating scale from 1 to 5.

5.1. Analysis of the Level of Initial Teacher Training on Bullying and SEN

In relation to the first hypothesis, we conclude that it is partially affirmed. Based on the data, the response frequencies for both dimensions and all their items are studied. If we observe Figure 1, we see that for the dimension of conceptualisation of bullying, the response frequencies concentrate on higher scores, coinciding with the upper end of the Likert scale. That is, students are quite or very knowledgeable about the phenomenon of peer violence. However, for the dimension of organisation and legislation of bullying and students with SEN, the response frequencies concentrate on lower scores, coinciding with the lower end of the Likert scale. That is, future teachers have little to no knowledge or only some knowledge about the organisational and legislative content.

Figure 1

Scatter Plot of the Dimensions of Conceptualisation of Bullying and Organisation and Legislation of Bullying and Students with SEN



Source: own research using the data obtained.

In examining the extent of training related to the conceptualisation of bullying in students with SEN and its impact on knowledge about detection, prevention and intervention (hypothesis 2), we conducted a multiple linear regression involving the dependent variable “Conceptualisation of bullying” and the predictor variables “Detection”, “Prevention” and “Intervention” of bullying in students with SEN.

Following an ANOVA on the multiple linear regression of these dimensions, a $p = 0.00$ was obtained. Therefore, it is established that the regression is significant, as its $p < 0.05$ renders it statistically meaningful. Additionally, an adjusted R_2 was obtained, with $R_2 > 0.20$. Specifically, $R_2 = 0.30$, explaining 30% of the variance. Examining Table 7 reveals that the dimension of “Intervention in bullying in students with SEN” does not significantly contribute to the model. In contrast, the other dimensions do, with $p < 0.05$, where $p = 0.29$. Consequently, this dimension should be excluded. Moreover, the coefficients obtained for B and β indicate that the detection dimension makes a more substantial contribution to the model, followed by prevention.

Table 7

Coefficients of the Model in Multiple Linear Regression in Prevention, Intervention and Detection

Model	Unstandardised coefficients		Standardised coefficients	t	Sig.	Collinearity statistics	
	B	Dev. Error	Beta			Tolerance	VIF
(Constant)	31.06	1.58		19.66	0.00		
Prevention	0.31	0.08	0.16	3.56	0.00	0.51	1.93
Intervention	0.08	0.08	0.05	1.04	0.29	0.45	2.19
Detection	1.24	0.16	0.38	7.48	0.00	0.43	2.29

Source: own research using the data obtained in the study.

After excluding the intervention dimension, independent values are considered, yielding a Durbin-Watson score of 1.79. This value should be below 3. Additionally, as detailed in Table 8, collinearity in the study is optimal, being below 10, with VIF = 1.73. Consequently, this implies a linear relationship between the dependent variable “Conceptualisation of bullying” and the predictor variables, “Prevention” and “Detection” of bullying in students with SEN. Similarly, tolerance confirms that there is no issue with collinearity, as the value exceeds 0.10, with Tolerance = 0.57. It is concluded that an average student obtains a score of 31.10 points regarding the level of knowledge related to the conceptualisation of bullying.

For each unit of the “Detection” dimension that increases or decreases, their knowledge level about conceptualisation will increase or decrease by 1.33. Additionally, for each unit increased or decreased in “Prevention”, their knowledge level about conceptualisation will increase or decrease by 0.34 points. Therefore, hypothesis 2 is partially affirmed. The results reveal that the level of knowledge concerning the detection and prevention of bullying in students with SEN slightly influences the extent of training related to the conceptualisation of bullying in students with SEN, with prevention training being the least influential. Nevertheless, the level of knowledge regarding bullying intervention in boys and girls with SEN does not impact the conceptualisation of the phenomenon.

Table 8

Coefficients of the Model in Multiple Linear Regression in Prevention and Detection

Model	Unstandardised coefficients		Standardised coefficients	t	Sig.	Collinearity statistics	
	B	Dev. Error	Beta			Tolerance	VIF
(Constant)	31.10	1.57		19.69	0.00		
Prevention	0.34	0.08	0.18	4.11	0.00	0.57	1.73
Detection	1.33	0.14	0.41	9.20	0.00	0.57	1.73

Source: own research using the data obtained.

Regarding hypothesis 3, to assess whether the means are significant in students of the degrees in Early Childhood and Primary Education concerning the dimension of “Prevention of bullying in students with SEN”, a t-statistic is employed. In this case, it is noted that $p = 0.74$. Consequently, with $p > 0.05$, there are no significant differences between the two studied groups. Therefore, the hypothesis is corroborated. However, it is important to note, as shown in Table 1, that the level of knowledge concerning prevention ranges between little and some.

As for hypothesis 4, the extent of training on the “Intervention in bullying in students with SEN” based on gender, a t-statistic is used for the mean comparison. Since $p > 0.05$, with $p = 0.73$, it can be inferred that there are no significant differences in the level of knowledge about intervention in bullying in students with SEN between men and women.

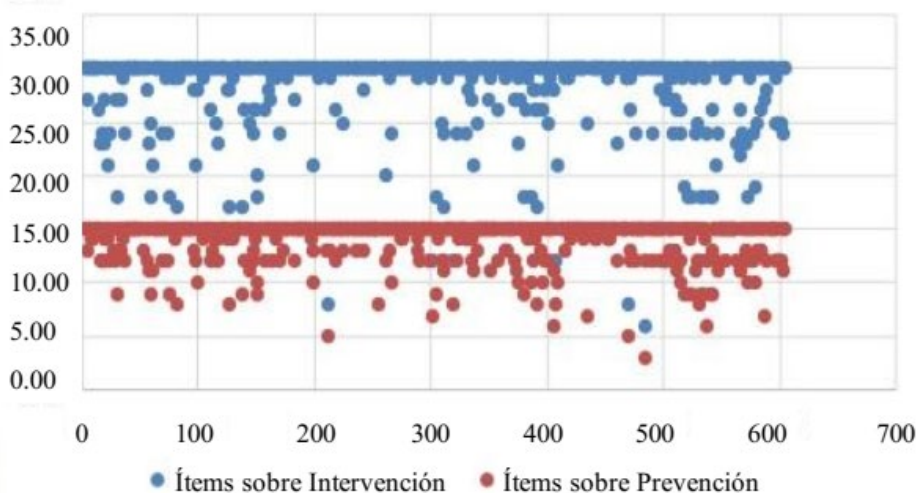
Hypothesis 5 is accepted, confirming that women place greater importance on initial teacher training regarding content on bullying and students with SEN. The t-statistic is then applied to estimate means on the relevance attributed to bullying and students with SEN content by gender, resulting in $p = 0.00$. Therefore, as $p < 0.05$, it is assumed that there are differences by gender regarding the importance given to content on bullying and students with SEN in their own initial teacher training. Furthermore, to identify who assigns greater importance to training on the bullying phenomenon in students with SEN, mean values are analysed. Men score slightly lower ($\bar{X} = 49.82$) than women ($\bar{X} = 52.30$).

Similarly, the t-statistic is used to estimate means between the degree groups, degree in Early Childhood Education and degree in Primary Education, and the set of prevention items in the dimension of the relevance attributed to content on bullying and students with SEN. With $p = 0.00$, as $p < 0.05$, the existence of significant differences in the importance given to bullying prevention in SEN according to the degree is assumed. Consequently, the mean results conclude that students of the degree in Early Childhood Education ($\bar{X} = 14.34$) place greater importance on prevention content than students of the degree in Primary Education ($\bar{X} = 13.78$). Hypothesis 6 is accepted.

Finally, regarding hypothesis 7, it can be affirmed that greater importance is given to intervention content than to prevention content. Therefore, the hypothesis is confirmed, as in both degrees, higher importance is assigned to intervention than to the prevention of bullying in students with SEN. As shown in Figure 2, it is concluded that there is a high level of relationship intensity between the importance assigned by future teachers to content on intervention and prevention of bullying in students with SEN.

Figure 2

Scatter Plot of Intervention and Prevention Items in the Dimension of the Relevance Attributed to Content on Bullying and Students with SEN



Source: own research using the data obtained.

6. Discussion and Conclusions

This work aimed to address two objectives. Concerning the first objective, the data confirm a high level of knowledge regarding the conceptualisation of the phenomenon. However, a significantly lower level of training is corroborated regarding other content areas. Additionally, it is verified that the extent of knowledge about the detection of bullying in students with SEN is the most limited, as asserted in previous studies (Álvarez-García et al., 2010).

This study reveals that the extent of training regarding the conceptualisation of bullying is very high, which differs from the results reported in the aforementioned studies. Those studies claim that students aspiring to become teachers are not fa-

miliar with the phenomenon of school bullying (Álvarez-García et al., 2010; Bauman and Del Río, 2005; Benítez et al., 2006; García et al., 2007; Kandakai and King, 2002; Nicolaides et al., 2002).

The results indicate that students in the Andalusian degree programmes in Early Childhood and Primary Education lack sufficient knowledge about the organisation of the school and legislation regarding bullying in students with SEN. In line with the article by Álvarez-García et al. (2010), prospective teachers are found to have little to no knowledge of legislation, the professional bodies involved and projects at the school related to coexistence, bullying and students with SEN. The analysis concludes that the results of this study are slightly higher than those reported by the previous authors. This could be attributed to the increased emphasis on the phenomenon of interpersonal violence in recent years, with a greater number of research studies on school bullying (Zych et al., 2015).

With reference to the second objective, it is confirmed that significant value is attributed to initial teacher training. However, the study data reflect very limited knowledge regarding organisation and legislation, detection, prevention and intervention in bullying in students with SEN.

Similarly, the results detail that students in the Andalusian degree programmes in Early Childhood and Primary Education lack sufficient knowledge about the organisation of the school and legislation related to bullying in students with SEN. In line with the article by Álvarez-García et al. (2010), prospective teachers are found to have little to no knowledge of legislation, the professional bodies involved and projects at the school related to coexistence, bullying and students with SEN. It is worth noting that in this research, the results are slightly higher than those presented by previous authors. This may be attributed to the increased emphasis on the issue in recent years (Zych et al., 2015).

According to Álvarez-García et al. (2010), acquiring knowledge about the conceptualisation of the phenomenon of interpersonal violence enables and enhances skills for bullying detection, prevention and intervention. In contrast, the results of this study indicate that there is no significant relationship between the level of knowledge about conceptualisation and intervention in bullying in students with SEN.

Regarding hypothesis 3, it is confirmed, although the level of knowledge about prevention ranges from little to some. In line with Kandakai and King (2002), there are similarities in the results. On the one hand, the conclusion is that the extent of training in prevention is very limited. On the other hand, there are no significant differences between the two degrees regarding the knowledge level about the training in bullying prevention for students with SEN.

Considering hypothesis 4, a study (Nicolaides et al., 2002) concludes that bullying intervention procedures are known at the same level in men and women. Specifically, an evaluation is conducted to assess the existence of gender differences in the level of knowledge about intervention in students with SEN. Thus, means are contrasted, and it is concluded that there are no significant differences, indicating a similar level of training in both men and women.

Hypothesis 5 is accepted, and consistent with existing literature, a study has revealed significant gender differences, with women assigning greater relevance to bullying content in their initial teacher training (Benítez et al., 2006). In contrast, several studies suggest that there are no significant gender differences in the importance attributed to bullying content in initial teacher training (Bauman and Del Río, 2005; Nicolaides et al., 2002).

The literature posits that women generally possess a greater capacity for empathy than men (Grau et al., 2017; Lucas-Molina et al., 2017; Luna-Bernal and Gante-Casas, 2017; Vizoso-Gómez, 2019). Some authors attribute this gender difference to the transmission of socialisation processes through societal roles; historically, men have faced greater challenges in expressing their emotions and concerns for others than women (Sampaio et al., 2011).

The same methodology was applied to validate hypothesis 6. This finding aligns with the study conducted by Benítez et al. (2006), indicating that students in the Early Childhood Education stage assign greater importance to content related to bullying prevention.

Hypothesis 7 is confirmed. This result is consistent with the data obtained by Benítez et al. (2006), stating that the content receiving the highest ratings is that which provides a response to situations of violence that have already occurred. In other words, prospective teachers perceive the intervention aspect of the bullying phenomenon in students with SEN as more crucial.

In conclusion, this study reveals that the level of initial teacher training is relatively low in all evaluated dimensions, except in conceptualisation, with detection in students with SEN being the least familiar content. Therefore, the direction that public policies should take on this issue becomes evident.

7. Bibliography

- Agencia de datos & Europa Press (September 25, 2020). *Acoso escolar, datos, cifras y estadísticas*. Epdata. Recovered on February 2, 2021 from <https://bit.ly/3488cpr>
- Álvarez-García, D., Rodríguez, C., González-Castro, P., Núñez, J. C. & Álvarez, L. (2010). La formación inicial de los futuros maestros en recursos para la convivencia escolar y el manejo del aula. *European Journal of Education and Psychology*, 3(2), 187-198. <https://doi.org/10.30552/ejep.v3i2.56>
- Ashburner, J., Sagers, B., Campbell, M. A., Dillon-Wallace, J. A., Hwang, Y.-S., Carrington, S. & Bobir, N. (2019). How are students on the autism spectrum affected by bullying? Perspectives of students and parents. *Journal of Research in Special Educational Needs*, 19(1), 27-44. <https://doi.org/10.1111/1471-3802.12421>
- Bascón Jiménez, M., Navarro Herrera, C. & Jiménez Aguilar, J. E. (2019). *El caso Pelayo: una experiencia de inclusión Educativa*. Madrid: Dykinson. <https://doi.org/10.2307/j.ctv2sojcd109>
- Bauman, S. & Del Río, A. (2005). Knowledge and beliefs about bullying in schools comparing pre-service teachers in the United States and the United Kingdom. *School Psychology International*, 26(4), 428-442. <https://doi.org/10.1177/0143034305059019>
- Benítez, J. L., Berbén, A. G. & Fernández, M. (2006). El maltrato entre alumnos: conocimientos, percepciones y actitudes de los futuros docentes. *Revista de Investigación Educativa*, 24(2), 329-352.
- Benítez, J. L., García, A. & Fernández, M. (2009). Impact of a course on peer abuse in the teacher's initial curriculum. *Electronic Journal of Research in Educational Psychology*, 7(1).
- Booth, T. & Ainscow, M. (2000). *Index for Inclusion. Developing learning and participation in schools*. Centre for Studies on Inclusive Education.
- Chiu, L., Kao, S., Tou, S. W. & Lin, F. G. (2018). Effects of heterogeneous risk factors on psychological distress in adolescents with autism and victimization experiences in Taiwan. *Disability and Rehabilitation*, 40(1), 42-51. <https://doi.org/10.1080/09638288.2016.1242173>
- Downes, P. & Cefai, C. (2019). Strategic clarity on different prevention levels of school bullying and violence: Rethinking peer defenders and selected prevention. *Journal of school violence*, 18(4), 510-521. <https://doi.org/10.1080/15388220.2019.1566915>
- Earnshaw, V. A., Reisner, S. L., Menino, D. D., Poteat, V. P., Bogart, L. M., Barnes, T. N. & Schuster, M. A. (2018). Stigma-based bullying interventions: A systematic review. *Developmental Review*, 48, 178-200. <https://doi.org/10.1016/j.dr.2018.02.001>
- Falla, D., Sanchez, S. & Casas, J. A. (2021). What Do We Know about Bullying in Schoolchildren with Disabilities? A Systematic Review of Recent Work. *Sustainability*, 13(1), Article 416. <https://doi.org/10.3390/su13010416>

- García, A., Benítez J. & Fernández M. (2007). La autoeficacia y las demandas de formación del profesorado en activo vs. en formación para afrontar el bullying. In J. Gázquez, M. Pérez, A. Cangas, & N. Yuste (Eds.). *Mejora de la convivencia y programas encaminados a la prevención e intervención del acoso escolar* (pp. 119-126). Grupo Editorial Universitario.
- Grau, A., Toran, P., Zamora, A., Quesada, M., Carrion, C., Vilert, E. & Cordon, F. (2017). Empathy assessment in medical students. *Educación Médica*, 18(2), 114-120. <https://doi.org/10.1016/j.edumed.2016.04.001>
- Hernández, J. M. (2017). *Acoso escolar y Trastorno del Espectro del Autismo (TEA): guía de actuación para profesorado y familias*. Confederación Autismo España.
- Instrucciones de 8 de marzo de 2017, de la Dirección General de Participación y Equidad, por las que se actualiza el protocolo de detección, identificación del alumnado con necesidades específicas de apoyo educativo y organización de la respuesta educativa.
- Kandakai, T. L. & King, K. A. (2002). Preservice teachers' perceived confidence in teaching school violence prevention. *American Journal of Health Behavior*, 26(5), 342-353. <https://doi.org/10.5993/ajhb.26.5.3>
- Lobato, S. (2019). *Acoso y ciberacoso escolar en alumnado con discapacidad*. Fundación ONCE Comité Español de Representantes de Personas con Discapacidad (CERMI). <http://hdl.handle.net/11181/5749>
- Lucas-Molina, B., Pérez-Albéniz, A., Ortuño-Sierra, J. & Fonseca-Pedrero, E. (2017). Dimensionalidad e invarianza de la medida del Interpersonal Reactivity Index (IRI) en función del género. *Psicothema*, 29(4), 590-595.
- Luna-Bernal, A. & De Gante-Casas, A. (2017). Empatía y gestión de conflictos en estudiantes de secundaria y bachillerato. *Revista de educación y desarrollo*, 40, 27-37.
- Martín-Criado, J. M. & Casas, J. A. (2019). Evaluación del efecto programa «ayuda entre iguales de Córdoba» sobre el fomento de la competencia social y la reducción del bullying. *Aula Abierta*, 48(2), 221-228. <https://doi.org/10.17811/rifie.48.2.2019.221-228>
- Ministerio de Ciencia, Innovación y Universidades (2019). *Presencia de mujeres en la Educación Superior española*. [flyer] Secretaría General Técnica del Ministerio de Ciencia Innovación y Universidades. <https://cpage.mpr.gob.es/producto/folletos-de-transparencia-y-gobierno-abiertodel-ministerio-de-ciencia-innovacion-y-universidades-4/>
- Moore, H., Astor, R. A. & Benbenishty, R. (2019). A statewide study of school-based victimization, discriminatory bullying, and weapon victimization by student homelessness status. *Social Work Research*, 43(3), 181-194. <https://doi.org/10.1093/swr/svz010>
- Nicolaides, S., Toda, Y. & Smith, P. K. (2002). Knowledge and attitudes about school bullying in trainee teachers. *British Journal of Educational Psychology*, 72, 105-118. <https://doi.org/10.1348/000709902158793>

- Ortega, R. (2010). *Agresividad injustificada y bullying*. Madrid: Alianza Editorial.
- Ortega, R. & Mora-Merchán, J. A. (2008). Las redes de iguales y el fenómeno del acoso escolar: explorando el esquema dominio-sumisión. *Infancia y aprendizaje*, 31(4), 515-528. <https://doi.org/10.1174/021037008786140922>
- Ortiz, O. G., Ruiz, R. O. & Rodríguez-Hidalgo, A. J. (2017). Detectar y prevenir el acoso escolar: escuela y familia trabajando juntas. In O. Gómez-Ortiz, R. Ortega-Ruiz & A. J. Rodríguez-Hidalgo (Eds.). *Acoso escolar, ciberacoso y discriminación: educar en diversidad y convivencia* (pp. 29-42). Madrid: Los Libros de la Catarata.
- Otzen, T. & Manterola, C. (2017). Técnicas de Muestreo sobre una Población a Estudio. *International Journal of Morphology*, 35(1), 227-232. <http://dx.doi.org/10.4067/S0717-95022017000100037>
- Paul, A., Gallot, C., Lelouche, C., Bouvard, M. P. & Amestoy, A. (2018). Victimization in a French population of children and youths with autism spectrum disorder: A case control study. *Child and Adolescent Psychiatry and Mental Health*, 12(1), 1- 13. <https://doi.org/10.1186/s13034-018-0256-x>
- Pérez-Garín, D., Recio, P., Magallares, A., Molero, F. & García-Ael, C. (2018). Perceived discrimination and emotional reactions in people with different types of disabilities: A qualitative approach. *The Spanish Journal of Psychology*, 21, E12. <https://doi.org/10.1017/sjp.2018.13>
- Pinto, J. E. M. (2018). *Metodología de la investigación social: Paradigmas: cuantitativo, sociocrítico, cualitativo, complementario*. Bogotá: Ediciones de la U.
- Rodríguez-Hidalgo, A. J., Alcívar, A. & Herrera-López, M. (2019). Traditional bullying and discriminatory bullying around special educational needs: psychometric properties of two instruments to measure it. *International Journal of Environmental Research and Public Health*, 16(1), 142. <https://doi.org/10.3390/ijerph16010142>
- Rodríguez-Hidalgo, A. J., Ortega-Ruiz, R. & Monks, C. P. (2015). Peer-victimisation in multi-cultural contexts: A structural model of the effects on self-esteem and emotions. *Psicología Educativa*, 21(1), 3-9. <https://doi.org/10.1016/j.pse.2015.02.002>
- Rodríguez-Hidalgo, A. J., Pincay, A. A., Payán, A. M., Herrera-López, M. & Ortega Ruiz, R. (2021). Los predictores psicosociales del bullying discriminatorio debido al estigma ligado a las Necesidades Educativas Especiales (NEE) y la discapacidad. *Psicología Educativa*, 27(2), 187-197. <https://doi.org/10.5093/psed2020a22>
- Rose, C. A., Stormont, M., Wang, Z., Simpson, C. G., Preat, J. L. & Green, A. L. (2015). Bullying and Students with Disabilities: Examination of Disability Status and Educational Placement. *School Psychology Review*, 44(4), 425-444. <https://doi.org/10.17105/spr-15-0080.1>
- Rose, C. A. & Espelage, D. L. (2012). Risk and protective factors associated with the bullying involvement of students with emotional and behavioral disorders. *Behavioral Disorders*, 37(3), 133-148. <https://doi.org/10.1177/019874291203700302>

- Sahin, M. (2010). Teachers' Perceptions of Bullying in High Schools: A Turkish Study. *Social Behavior and Personality*, 38(1), 127-142. <https://doi.org/10.2224/sbp.2010.38.1.127>
- Salmon, S., Turner, S., Taillieu, T., Fortier, J. & Afifi, T. O. (2018). Bullying victimization experiences among middle and high school adolescents: Traditional bullying, discriminatory harassment, and cybervictimization. *Journal of Adolescence*, 63, 29-40. <https://doi.org/10.1016/j.adolescence.2017.12.005>
- Sampaio, L. R., Guimarães, P. R. B., dos Santos Camino, C. P., Formiga, N. S. y Menezes, I. G. (2011). Estudos sobre a dimensionalidade da empatia: tradução e adaptação do Interpersonal Reactivity Index (IRI). *Psico*, 42(1).
- Sobrino, M. S., Carbonell, M. D. L. D. P. & Ramos-Santana, G. (2015). Formación del profesorado de educación secundaria obligatoria sobre el bullying. *Revista Española de Orientación y Psicopedagogía*, 22(1), 58-68. <http://dx.doi.org/10.5565/rev/educar.716>
- UNESCO (2005). *Guidelines for inclusion: Ensuring Access to Education for All*. UNESCO.
- Villalobos-Parada, B., López, V., Bilbao, M., Carrasco Aguilar, C., Ascorra, P., Morales, M., Álvarez, J. P., Ayala, A., Olavarría, D. & Ortiz, S. (2015). Victimización del personal de la escuela hacia estudiantes referidos a proyectos de integración escolar. *Psicología, Sociedad y Educación*, 7(2), 133-152. <http://dx.doi.org/10.25115/psye.v7i2.529>
- Vizoso-Gómez, C. M. (2019). Empatía en futuros maestros: diferencias por género. *Revista INFAD de Psicología. International Journal of Developmental and Educational Psychology*, 5(1), 541-546. <https://doi.org/10.17060/ijodaep.2019.n1.v5.1636>
- Volk, A. A., Dane, A. V. & Marini, Z. A. (2014). What is bullying? A theoretical redefinition. *Developmental Review*, 34(4), 327-343. <https://doi.org/10.1016/j.dr.2014.09.001>
- Zych, I., Ortega-Ruiz, R. & Del Rey, R. (2015). Scientific research on bullying and cyberbullying: Where have we been and where are we going. *Aggression and Violent Behavior*, 24, 188-198. <https://doi.org/10.1016/j.avb.2015.05.015>

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