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# Trainee teachers' perceptions on cyberbullying: Guidelines for educators and families

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**Abstract:** The present work analyzes university students' perceptions on cyberbullying. More specifically, the main objective was to understand the level of concern displayed by young students in teacher training programs regarding cyberbullying; our analysis includes their degree of self-confidence and their commitment when faced with this problem, their self-reported training on the subject, and the measures they consider adequate to approach it in the educational context. Using a survey research design, 408 students from Early Childhood Education, Primary Education Degrees, and the Master's Degree in Secondary Education, and Vocational Training from national public universities participated. The results shed light upon the coexistence of three differentiated profiles of teachers in training when faced with cyberbullying. However, although there is clear evidence of the high level of concern regarding this problem in every case, they placed more importance on raising awareness of the issue with families, prevention, management and training as basic pillars for re-directing the worrisome reality experienced in educational centers. The need to include these contents in the initial training of future education professionals, for overcoming cyberbullying, and the importance of collaborative work between parents and educators are the conclusions of this research study that are in agreement with other studies.

**Keywords:** School coexistence; cyberbullying; education; family; victims; prevention; management; training; perceptions

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## 1. Introduction

Although school bullying as a phenomenon has always existed to a greater or lesser degree in schools, at present it is the shadow of many minors and adolescents, and has affected their health (in their social well-being as well as their psychological, physical and emotional ones), as well as their academic performance, among other basic aspects of life. The consequences with this problem, which can sometimes become prolonged in time, can extend to future stages of their life and development. As pointed out by authors such as Musalem and Castro (2015) for adults, bullying may seem a temporary problem, but the fact is that it is persistent and is related to other problems in the lives of children both in the short and long term.

Cyberbullying is frequently the extension of bullying, so that the victims of bullying are also at risk (Notar et al. 2013). In fact, as pointed out by results from authors such as Kowalski et al. (2014), cyberbullying and bullying overlap each other.

In the calculation of cases of bullying, cyberbullying has a low prevalence (Félix et al. 2017). However, it has progressively increased in every country in the world in the last few decades (Garaigordobil 2011; Finkelhor et al. 2010), at the same time that the interest and worry about this type of behavior has increased, not only socially, but in the scientific community as well.

In this respect, there is evidence that can be underlined, such as that obtained by Giménez et al. (2015), who called attention to the anguish felt by young people when they see themselves as being

bullied in traditional contexts and on the web, and especially if he or she is only cyberbullied. Ortega-Barón et al. (2016), on their part, have evidenced that victims of moderate or severe cyberbullying have an academic self-esteem that is significantly more deteriorated than non-victimized adolescents, and also have a sense of affiliation with their peers that is also significantly lower.

In fact, as stressed by Payne and Hutzell (2017), the victims of any form of school bullying are more prone to behaviors of avoidance of the school environment as compared to students who have not experienced this victimization. Along the same line, Navarro et al. (2012; 2018) underlined, as factors of risk vs protection against cyberbullying, the greater or lesser degree of interpersonal difficulty demonstrated in the social inter-relationships.

Now, just as there is more knowledge on the motives and effects of cyberbullying, many myths have also been extended, fed without arguments in many cases, such as those analyzed by Sabella et al. (2013). Axioms such as that everybody knows what cyberbullying is, that it is a direct cause of suicide; or that to avoid it, the only thing a person needs to do is to turn the computer or mobile phone off.

These myths can result in that parents and tutors, who are less familiarized with information technologies and who have a strong protectionist character, make the wrong decisions, such as the mere removal of the mobile phone, without thinking about other measures that are more effective (Hinduja and Patchin 2009).

Thus, it is important for parents, tutors and education professionals to understand what bullying and cyberbullying really are, and what measures are the most ideal for preventing and intervening in each case. Without forgetting the importance of being aware that the reasons of the negative impact reached by intimidation vary according to the type of bullying, so that the strategies for facing them should be adapted (Slonje et al. 2017).

At the international level, bullying and cyberbullying have been the focus of research that has resulted in worry, as shown in studies such as those by Baek and Bullock (2014), Jimerson et al. (2010), as well as a later one by Cassidy et al. (2013). In the Spanish context, the first research report on this reality saw the light at the start of the 21st century, coordinated by UNICEF and the Ombudsman (Ombudsman-UNICEF 2000), and from this, many works proliferated, which have called attention to a common worry: the prevention and the detection, intervention and management of this problem and its consequences. This is how clear lines of intervention have been defined (Orjuela et al. 2013). In a recent report by the Children's Ombudsman in Andalusia (Parliament of Andalusia 2017), it was highlighted that the teachers, the counselors and the school management teams coincided in that assuming their responsibility, which they will have to do, and in coordination with professionals from the areas of health and sociology, when faced with victims and aggressors, a set of multidisciplinary actions must be conducted. These should take into consideration the situation in a comprehensive manner, which requires training as a basic pillar, and this training should begin with university studies and should be continued by the education administration's own volition.

Training and preparation on the issue of school bullying and cyberbullying is an urgent matter that should be introduced in initial training, which requires a general review of the university's study plans in the Infant Education, Primary Education, Psychology or Pedagogy Degrees, and Post-graduate studies as well.

In initial teacher's training, an important strategy would be the creation of networks between professionals-in-training, families and educators with experience, where they can share or exchange points of view, reflect on measures, analyze shared proposals, etc. (Yilmaz 2010). The creation of training and research networks based on good practices that have cyberbullying as the main focus is another of the challenges that could be fomented in the short and medium term within the university sphere.

This training should move beyond this and should not remain in the initial stages of the teacher's training. In this sense, the Ministry of Education, Culture and Sports, in coordination with the Autonomous Communities, institutions and organizations and a team of expert professionals, promoted, in 2015, the Strategic Plan of School Coexistence, under the auspices of the LOMCE education law. Its main intent, among other matters, was for educational centers to become safe

places free of violence. One of the commitments that the schools must thus assume is to achieve becoming a scenario based on respect. A good environment is urged, only in within which the students can grow and coexist in a safe manner, without shadows, frustrations or sufferings. In this plan, the teacher's training is highlighted as a key element for this objective, so that the teacher's professional development on the issue is incentivized (in collaboration with universities, schools and other agents that comprise the educational community), from the construction of dialogue of knowledge.

As discussed by Boulton et al. (2013), the teachers play a vital role in the fight against intimidation, and the extrapolation of the findings from studies and research, will help them guarantee that they are ready at the optimum level. Taking on detection and prevention tasks is not easy, but conducting the actions with little self-confidence and baggage, will exacerbate the problem.

Another issue that should be taken into account, in agreement with the findings by different studies (Gradinger et al. 2010; Ortega-Barón et al. 2016) is that the victims of bullying show a negative perception of the education professionals, so that they do not consider them able to help them solve the problem in which they are the protagonists. In this sense, it now assumed that from the initial training of teachers and educators in general, the treatment and prevention of bullying and cyberbullying should occupy a prominent place (Patchin and Hinduja 2006; Ryan et al. 2011).

## 2. Research problems

With this study we intend to approach the point of view of the teachers in training on cyberbullying in education centers. We will turn our attention to their perceptions on the relevance of the problem and the adequacy of the response given to it. We will concern ourselves with the evaluation they make of their preparation to act as future professionals, and the place occupied by the problem in their initial training.

Thus, our research questions are the following:

1. Do teachers in training recognize cyberbullying as a current problem in education? Does it worry them?
2. How prepared do the teachers in training feel for identifying and managing cyberbullying situations? Are they willing to intervene?
3. What opinion do teachers in training have on the response given to cyberbullying in education? Are the families sensitized for acting coordinately with the educators?
4. Do they feel that cyberbullying occupied a place in their training programs? Are they interested in cyberbullying as content to be studied?
5. Do the perceptions of teachers in training change depending on their sex, age or degree? Are the perceptions related between themselves?
6. Are there different profiles of teachers in training that are differentiated due to their perceptions on cyberbullying?

## 3. Method

### 3.1 Participants

A total of 408 teachers in training participated in the study by answering a questionnaire on bullying. Of these, 85.8% were women. Of the total, 35.5% were younger than 20 years of age, and 47.5% were aged between 21 and 25. As for their center of study, 45.8% studied at the University of Huelva, and 32.8% studied at the University of Malaga. With respect to this, it should be noted that all the subjects of the study were enrolled in different public universities in Andalusia (Seville, Granada and Cadiz, aside from Huelva and Malaga), except for 9.8%, who studied at the University of Castilla la Mancha. Also, 51% of the subjects were enrolled in the Primary Education Bachelor's Degree, 34.3% in the Child Education Degree, and 14.5% in the Secondary Education Master's Degree.

Lastly, 28.2% of the students were enrolled in the first year of any of the two degrees, 20% were enrolled in their second year, 23% were enrolled in the third year, and 22.1% in their fourth year.

### 3.2 Research instrument

The research study was developed with a survey-type quantitative focus. The collection of data was conducted with a questionnaire that was validated and re-utilized in contexts that were different from the Spanish context. The instrument utilized was the one developed by Li (2008), based on a previous one on the attitudes of teachers towards bullying (Siu 2004), and used in other studies, such as those by Ryan et al. (2011) or Eden et al. (2013).

In this work, a tally of 22 items was maintained, with the response options being Likert-type with 5 response options, with which the ideal nature of each of the items had to be scored. Nevertheless, it is true that in agreement with current norms and instruction guidelines provided by the education-related institutions, some of these items were adjusted to the measures that should be taken into account in Spanish education centers. Thus, for example, the reference to the polls as the data-collection instrument is substituted in one of them for the technique of interviews. Or explicit references to the School Council or the Coexisting Commission are included in different items.

The adaptation and the translation of the English language was reviewed by university professors specialized in the methodology of education research and in the issue that is of concern to us. After its review, the improvements were incorporated, and the instrument was developed in the online poll application "Opina", which the University of Seville provides to their teaching and research personnel. It was directly distributed to Vice-Deans of students and student participation units, who were asked to distribute them to the rest of the student body. The sample was thus non-probabilistic and accidental.

The *Inventory on cyberbullying in education and perceptions of teachers in initial training* used was comprised by a first series of demographic questions (sex, age, degree enrolled and year, university degree if any, and university where one attended), which was used to collect descriptive information of the sample, and a total of 22 items that had to be evaluated by those polled, using a Likert scale with five response options (from 1, or completely disagree, to 5, completely agree), plus the additional response option of Do not know/No response. The Alpha coefficient of reliability for the instrument was .735.

The questionnaire was internally organized into four indices (Eden et al. 2013), thus:

A. *Concern about cyberbullying.* The first three items asked about the impression and degree of concern of the students about the problem. For example: I believe that cyberbullying is a current problem in education, or I am worried about cyberbullying in the area of education.

B. *Confidence and intention to act when faced with cyberbullying.* The perception of the students on their current ability to identify and respond to cases of cyberbullying and the interest in intervening is found through 3 items. Among them: I am able to manage situations of cyberbullying.

C. *Agreement with the measures of action when facing cyberbullying.* The opinion on some actions that are required at the level of the education center and the classroom and the treatment the families and society have to do is approached with 13 items: Among them: I believe that from the centers, the families should be made aware about the importance they play on the prevention of cyberbullying or I see that necessary efforts should be made for the professional development of the teachers, favoring their training on cyberbullying.

D. *Evaluation of the initial training.* Lastly, three items analyze the evaluation that the students make of the attention given to the problem during their initial teacher's training and the need for specialization they perceive. Among them: In the studies I am enrolled in (Children Education Degree, Primary Education Degree or Secondary School Master's, as applicable) I am being prepared for managing situations of cyberbullying.

### 3.3 Data analysis procedure

The data were directly exported from the poll service into an Excel sheet, which was imported to IBM SPSS statistics for further analysis. In SPSS, the data set was filtered, eliminating failed intents to respond, and the type of variable and measurement that were assigned automatically to each of the items was corrected.

After analyzing the responses given to each of the items, based on a basic recount of the frequencies, a one-way analysis of variance (ANOVA) was conducted to detect possible differences according to the different categorical values. These were: sex, age and degree. When homoscedasticity was not found (with Levene's test), the corresponding non-parametric tests were used (Mann-Whitney U test and Kruskal-Wallis H test).

Afterwards, four new variables were created, each one responding to the indices cited, so that they were calculated starting with the responses provided by those polled to the items that comprised each index in particular. In order to determine if these correlated bilaterally with each other, Pearson's correlation coefficient was calculated. Also, the different items in the indices "Concern about cyberbullying", "Confidence and intention to act when faced with cyberbullying", "Evaluation of the initial training" and a selection of them were also correlated with "Agreement with the measures of action when facing cyberbullying". Lastly, a k-means cluster analysis was performed taking into account the four indices.

## 4. Results

### 4.1 Perceptions of the teachers in training

Almost 80% (79.4%) of the teachers in training felt very worried by cyberbullying in the area of education. Significant differences were found between men and women (sig. 0.000). If 82.6% of the women felt worried, only 60.3% of the men did so. Thus, the women had a greater worry.

Of the future teachers, 87.5% agreed that cyberbullying was a current problem in education, although from this group, only 55.9% were completely convinced about it. On their part, 63.2% were very sure and 24.8% were aware that at present, one could find a victim of cyberbullying. The perception of both issues differed with age (sig. 0.046; sig. 0.032). Most of the study subjects from the different age groups were in agreement, except for those who were aged between 36-40 years old. See Table 1. Also, differences were found in the last statement according to the degree studied. Thus, as compared to 55.7% of the students enrolled in the Children Education Degree who were completely in agreement that in the education centers there were students suffering from cyberbullying, 76.3% of those enrolled in the Master's in Secondary Education shared the same opinion.

Table 1. Descriptive data according to age

Item	Younger than 20 years of age		21-25 years of age		26-30 years of age		31-35 years of age		36-40 years of age		41-45 years of age		Older than 46 years of age	
	M(SD)	% <sup>1</sup>	M(SD)	% <sup>1</sup>	M(SD)	% <sup>1</sup>	M(SD)	% <sup>1</sup>	M(SD)	% <sup>1</sup>	M(SD)	% <sup>1</sup>	M(SD)	% <sup>1</sup>
I believe that cyberbullying is a current problem in education	4,36(.8)	53,8	4.44(.83)	55.2	4.68(.57)	73.7	4.58(.52)	58.3	3.73(1.27)	27.3	.8(.447)	80	4(1)	33.3
I believe that there are children/youth who are currently victims of cyberbullying in the educational context	4,57(.81)	63,4	4.51(.76)	62.9	4.84(.5)	73.7	.75(.62)	58.3	4(.78)	27.3	4.8(.447)	80	4.33(1.16)	66.7

<sup>1</sup>% of the maximum value, established in the scale at 5%



The results shed light upon the solid agreement that exists on the ideal nature of the measures to prevent and intervene when faced with cyberbullying ( $M= 4.57$ ). See Table 3. Almost all those polled were in agreement or completely agreed with all the actions that referred to the prevention and management of cyberbullying in the school environment. Among them, we find the action that states that facing cyberbullying occurs because the teacher is knowledgeable about the protocol of action in situations of school bullying (2.7% and 96.6%, respectively). However, it is interesting to note that only 67.6% of the teachers in training were completely convinced (although 24.8% were likewise in agreement) that in the curriculum, the teachers should work on how to make a responsible and safe use of the technologies, or that only 65.9% completely believed (although 30% were likewise in agreement) that the teachers had to organize learning activities to sensitize and train the students on the issue. The interpretation of these three differs with respect to sex (sig. 0.002; sig. 0.011; sig. 0.27). While 97.7% of the women were completely convinced about the first measure, 89.7% of the men were. As compared to the 70% and 68.3% of women who completely believed in the need of the second and third action, respectively, 53.4% and 51.7% of the men found themselves in the same position.

Although it is true that the teachers could not evaluate or were not completely in agreement with two of the measures. These referred to the usefulness of the interviews as tools for collecting information from the students that suffered cyberbullying (2.7% did not answer, and 27.5% were placed in intermediate values of the scale) and the contribution that the Coexisting Commissions provided at the level of centers of sensitization (24.5% did not answer, and 29.9% were found in intermediate values of the scale). With respect to the first, differences were found in relation to the degree enrolled in (sig. 0.18). As observed in Table 2, the students enrolled in the Children Education Degree and the Primary Education Degree were less convinced as compared to those in the Master's in Secondary School Education.

As for the results found for confidence, these revealed that the teachers in training did not openly recognize to be trained for facing cyberbullying. Only 7.4% were very sure in affirming that they were able to identify cases of cyberbullying, and 3.7% mentioned being competent enough to manage this type of situation. A total of 42.6% and 42.9%, respectively, were placed in intermediate places in the scale. The self-perception of the competence to detect situations of cyberbullying differed based on their degree (sig. 0.030). Those enrolled in the Secondary School Teaching Master's program were the least prepared. (See Table 2).

**Table 2.** Descriptive data according to age.

Item	Children Edu. Degree		Primary School Edu. Degree		Secondary Edu. Degree	
	M (SD)	% <sup>1</sup>	M (SD)	%*	M (SD)	%*
I understand that the interviews are useful instruments for the students to express their experiences about cyberbullying.	3.79 (.97)	0.7	3.67 (1.1)	2.4	4.1 (1.05)	1.7
I feel enabled for identifying situations of cyberbullying	3.01 (1.02)	7.1	3.23 (1.06)	4.8	2.85 (1.2)	13.6

<sup>1</sup> % of the minimum value, established in the scale at 1

The average value reached by the index that measured the satisfaction with the training they were receiving on the issue as future teachers, and what they would wish for, is not inherent of the importance of cyberbullying ( $M= 3.23$ ). Of the study subjects, 54.2% and 20.6% of them were not at all or little convinced that they were being prepared to manage situations of cyberbullying in the studies they were undertaking. Almost 20% (16.7%) also sustained that cyberbullying was not the content they gave importance to among the contents they would like to see addressed (or that they would've like to work on) in their degree. Only 7.4% were in agreement with this. The perception they had of cyberbullying within the set of contents they would to delve into, was not the same depending on sex (sig. 0.42). Almost 16% (15.5%) of the men were completely in disagreement in that

this was the topic they would like to address, as compared to 3.7% of the women. Likewise, as compared to 3.4% of the men, 8% of the women were completely in agreement with the affirmation.

**Table 3.** Descriptive statistics of the different indices and correlations

Index	M	SD	Pearson			
			Worry	Confidence	Agreement	Evaluation
Worry	4.57	.54	-			
Confidence	3.56	.74	.125*			
Agreement	4.57	.36	.438**	.142**		
Evaluation	3.23	.69	.119*	.283**	.149**	

\* $p < 0.05$       \*\* $p < 0.01$

#### 4.2 Links between the perceptions of the teachers in training

As observed on Table 3, between concern about cyberbullying and agreement with the measures of action, there was a moderate linear relationship. As cyberbullying was recognized as a current problem that required the school's attention, a greater appreciation was found for the measures of prevention, diagnosis, intervention and monitoring established by a protocol, which could be promoted in the education sphere. The correlations between the other possible index combination pairs were low but significant.

The differences shown by the subjects on the response given to the item that specifically asked them to state if they felt concerned by cyberbullying determined 9.06% of the differences in the intention shown by the subjects for intervening immediately if it was known that cases of cyberbullying were occurring ( $r = 0.0301$ ). And 13.25% of the differences on the wish that cyberbullying would be addressed in depth in their training programs ( $r = 0.364$ ).

The intention to give a response to cyberbullying correlated with practically all of the measures they had to show their agreement (or disagreement) with. The one that was most related with was the one that alluded to the education community becoming involved and committing to the fight against cyberbullying in the centers, although the relationship was moderate ( $r = 0.301$   $p < 0.01$ ).

The correlation of the initiative with the perception of the ability to identify situations of cyberbullying and the ability to manage them was significant but low. See Table 3. The coefficients of determination ( $r^2$ ) were: 0.015 and 0.02, respectively. Their bilateral relationship was also low with the belief that cyberbullying was current problem and with the belief that children and youth were currently suffering cyberbullying in the networks. Now, both abilities ( $r = 0.509$ ) and both beliefs ( $r = 0.467$ ), were related between themselves moderately.



**Table 4.** Correlation of the items related to the indices Concern, Confidence and Evaluation

	I believe that cyberbullying...	I believe that there are children ...	Cyberbullying in the educational ...	I feel enabled for identifying ...	I am able to manage ...	If I knew that cyberbullying was occurring ...	In the lessons I take, I am being prepared ...	I would like to delve into ...	Of all the subjects ...
<i>I believe that cyberbullying is a current problem in education</i>	-								
<i>I believe that there are children and youth who are currently victims of cyberbullying in the educational context</i>	,467**	-							
<i>Cyberbullying in the educational context worries me</i>	,242**	,226**	-						
<i>I feel enabled for identifying situations of cyberbullying</i>	,015	,032	,077	-					
<i>I am able to manage situations of cyberbullying</i>	,020	-,060	,020	,509**	-				
<i>If I knew that cyberbullying was occurring in my center/institution, I would intervene immediately</i>	,171**	,261**	,301**	,121*	,141**	-			
<i>In the lessons I take, I am being prepared for managing situations of cyberbullying</i>	-,048	-,089	-,028	,216**	,273**	-,027	-		
<i>I would like to delve into cyberbullying in the courses I have left in the classes I am enrolled in</i>	,256**	,236**	,364**	,015	-,001	,275**	-,044	-	
<i>Of all the subjects I would like to become a subject of study in my degree (or that I would have like to be addressed, if it was towards the ends of my studies), I would give more importance to cyberbullying</i>	,011	-,051	,208**	,110*	,192**	,167**	,243**	,305**	-

\*p &lt; 0.05

\*\*p &lt; 0.01

### 4.3 Profiles of teachers in training

Three profiles could be differentiated among the teachers in training, which were identified as:

Profile 1. Trained. These represent 27.8% of the future teachers. They are very concerned with cyberbullying, and solidly recognize the ideal nature of the measures to avoid and manage it, they feel trained and willing to act in situations of cyberbullying at school, and they also feel satisfied with their initial training and are in favor of delving more into it.

Profile 2. Competent. These are 45.7% of the subjects. They feel concerned by cyberbullying and recognize the different measures. They see themselves as trained for acting and willing to do so, but are not completely satisfied with their initial training and are not in favor for dealing with it as a content to be studied.

Profile 3. Aware. They comprise a less frequent group (26.5%). This profile responds to those subjects who are concerned and who recognize the different measures for dealing with cyberbullying, but they do not feel trained, or satisfied and are not interested in receiving training.

**Table 5** Descriptive statistics of the indices according to profile

	Index A		Index B		Index C		Index D	
	M	SD	M	SD	M	SD	M	SD
Competent	4.64	.46	3.89	.49	4.57	.33	2.92	.42
Trained	4.58	.5	3.9	.52	4.62	.32	4.06	.43
Aware	4.45	.66	2.64	.46	4.5	.44	2.89	.51

## 5. Discussion and conclusions

Cyberbullying perceptions held by both teachers in initial training and in-service teachers, has been the object of different studies in the last few years (Craig et al. 2011; Ghamrawi et al. 2016; Huang and Chou 2013; Ryan and Kariuki 2011; Eden et al. 2013; among others), which allow for the contrasting of the results obtained.

Current teachers, just as they see bullying as a serious problem (Craig et al. 2011), recognize its negative impact on the students (Ghamrawi et al. 2016). These conclusions are similar to those found in studies on the perceptions of teachers in initial training (Eden et al. 2013; Ryan and Kariuki 2011).

The results obtained confirm the results from preceding studies (Monks et al. 2016; Yilmaz 2010) as for the existence of differences between the women and men polled with respect to their perception of cyberbullying as a real problem that has negative influences on the students, with this perception being greater in women.

Differences were also observed in the age and the degrees studied: the younger students, to a greater degree, saw an increase in current cases in the education context as compared to those who were older. As for the degree studied: the students from the Child Education Degree were the ones who least recognized this problem, as compared to the students who enrolled in the Primary Education Degree and the Official Master's in Secondary Education and Vocational Training and Teaching of Languages, who recognized this the most. This discrepancy could be explained because the subjects noticed the age of those they considered to be their future students, and their proportion of use of technological devices, through which they could live situations of cyberbullying. In fact, the earliest age mentioned by the participants (parents and educators) of the study conducted by Monks et al. (2016) for the emergence of cyberbullying, was five years of age.

Fighting cyberbullying occurs because the schools understand its nature and recognize the actions that must be taken in order to prevent and face it, which result in the providing of training

and education to the students about the responsible use of the technologies, supporting families so that they could also contribute to it, and promoting the professional development of the teachers on the issue (Beale and Hall 2007). The creation of collaborative work between families and educators is needed, to overcome any type of bullying, either using the information technologies or not, inside as well as outside the school.

Nevertheless, previous studies have shown, among other things, the lack of knowledge of the teachers of the possible strategies of prevention of cyberbullying (Ghamrawi et al. 2016) or the insecurity they have when managing incidents (Huang and Chou 2013) and the inability of properly managing situations of cyberbullying (Desmet et al. 2015). By extension, the future teachers in our study, just as the ones from Ryan and Kariuki (2011), have shown a lack of confidence in their abilities to detect and manage cyberbullying. In spite of this, the subjects would try to act upon this problem. We cannot firmly sustain, from our results, that greater abilities mean greater intentions to intervene, or vice-versa. The intention is related, in part, to concern. The remaining factors that could explain it would have to be addressed in future research works.

What can be concluded is on the need to incorporate (or re-enforce) training opportunities on this issue, on the initial training of the teachers. In our context (Álvarez et al. 2010) as well as in others (Ryan et al. 2011; Yilmaz 2010), the teachers in training believed that in their study programs, they were not being prepared for preventing or facing cyberbullying. Thus, in complete agreement with Redmond, Lock and Smart (2018), within the framework of each of the degrees, and intentional design should be undertaken of authentic experiences of learning that favor a more in-depth comprehension of the issue, improving the competences of future teachers as for the treatment and their gain in confidence. And, in words of these authors, in our role as their teachers and trainers, it is our responsibility to bring them closer to educational practices that can reduce cyberbullying.

We have in mind, as pointed out by Ho et al. (2017), that by increasing the knowledge of children and adolescents on the risks of social networks, they can be more prudent in their activities within them, and more conscious of the negative consequences that can be derived from inappropriate behaviors. Or that if they become resilient youth, we can mitigate the damaging effects of a possible intimidation (Hinduja and Patchin 2017). Thus, among other things, the becoming conscious about the consequences of cyberbullying and fomenting empathy towards the people who are affected should be favored at school (Notar et al. 2013). And, specifically from the curriculum, the students should be empowered on the use of information and communication technologies, and their digital competence as well (Cassidy et al. 2013). Returning to an issue evidenced from our results, only about 65% of the teachers were completely convinced that they needed the incorporation into their curriculum of lessons related to how to make responsible and safe use of the technologies or to the implement of learning activities for sensitizing the people about the cause. Therefore, serious work must be done from the universities along this line.

If there is a degree where the re-planning of how cyberbullying has been dealt with, with the greatest urgency, is in the case of the Master's in Secondary Education and Vocational Training and Teaching of Languages. The future teachers who perceived themselves to be less prepared were enrolled in it. As pointed out by Montoro and Ballesteros (2016), in the general competences themselves, within which the design of the Master's training were based on, the fomenting of school co-existence and the resolution of conflicts were considered, but none of them directly referred to bullying, and less if it took place in a virtual context.

We believe that what is more asserted from our part, would be to demand a diagnostic of the learning needs of the teachers in their initial training, and a review of the contents in each of their degrees. It should be known, according to the subjects of the study, that cyberbullying is not one of the issues that are currently addressed, while it is one that the future teachers would especially like to delve into, aside from it being one of the issues that has grown in concern among the researchers, parents and educators (Navarro et al. 2014).

It is precisely the posture they adopt about their initial training, and the self-evaluation they make about their abilities, the determining factors that allow us to differentiate up to three profiles of the teachers in training, although it should be indicated that this study requires a greater deepening

from a more qualitative and global perspective of the objectives; not only focusing on the perceptions that exclusively rely on self-reports, but also through interviews or discussion groups and also encompassing other sectors such as in-service teachers, families and other professionals in the area of health.

#### Author Contributions:

**Funding:** This work is supported by the R+D+I Project entitled *Media competences of citizens in emerging digital media (smartphones and tablets): Innovative practices and educational strategies in multiple contexts*, EDU2015-64015-C3-1-R (MINECO/ FEDER), financed by the European Regional Development Fund (ERDF) and Ministry of Economy and Competitiveness of Spain.

**Acknowledgments:** The authors would like to express their appreciation to their colleagues who made suggestions for modification of the questionnaire and all respondents who participated in the survey.

**Conflicts of Interest:** The authors declare no conflict of interest.

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