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Is cyberbullying a group process? Online and offline bystanders of cyberbullying act as defenders, reinforcers and outsiders

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ABSTRACT

Studies on bullying as a group process are crucial to understand the nature and dynamics of face-to-face bullying, but little is known about different types of bystanders in cyberbullying. This cross-national study was conducted in Colombia and Spain to describe different groups of bystanders in cyberbullying and to design and validate the Cyberbullying Bystanders Scale. This study used a sample of 996 Colombian and Spanish young adults who filled in an online survey focused on different behaviors while witnessing cyberbullying. Exploratory and confirmatory factor analyses were performed, together with construct validity and invariance analyses to validate the questionnaire and describe different cyberbullying bystander groups. The questionnaire showed excellent psychometric properties. Different groups of cyber-bystanders were described including online and offline defenders of cybervictims, reinforcers of cyberbullying, and outsiders. Findings from this study can be used for policy and practice against cyberbullying.

1. Introduction

Research on bullying as a group process has been crucial to understand the nature and dynamics of face-to-face bullying. In the late 1990s, different roles of bullying bystanders were described. It was found that some children reinforce the bully, other children defend the victim, and that there is a group of outsiders who do not react to the bullying situations (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). It was discovered that achieving a high social status in the peer group is an important motivation for the perpetrators (Salmivalli, 2010). Working with the peer group is an important component of antibullying programs (Farrington & Ttofi, 2009), and encouraging the bystanders to defend the victims has been one of the pillars of major antibullying interventions (Kärnä et al., 2013). Although research on different groups of bystanders in bullying has been very fruitful, little is known about different groups of bystanders in a new form of bullying called cyberbullying. This study was conducted to fill these gaps in knowledge by describing different groups and

behaviors of young people who witness cyberbullying.

1.1. Cyberbullying as an emerging type of antisocial behavior

Cyberbullying is a type of bullying that can happen 24 h a day, seven days a week given that interpersonal interactions are nowadays frequently carried out offline and online (Betancourt, Cerón & Ramírez, 2013). The Internet has become one of the most important contexts of communication (García-Maldonado, Joffre-Velázquez, Martínez-Salazar, & Llanes-Castillo, 2011), with different options such as instant messages, applications and social networking sites. Thus, research that promotes safety on the Internet is urgently needed.

Around 55% of the world population uses the Internet (Internet World Stats, 2018). In Colombia, university students spend an average of 4.56 h a day on the Internet (Puertas-Cortez & Carbonell, 2013). In Spain, more than 98% of the young people aged 16 to 24 are Internet users (Instituto Nacional de Estadistica, 2018). Enrollment in a university involves social changes that might influence the use of

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electronic devices (Redondo, Rangel, Luzardo, & Inglés, 2016). At the same time, parental supervision decreases during the university years, which might increase the risk of involvement in cyberbullying (Walrave & Heirman, 2011). Although the number of studies about cyberbullying increased greatly in the past decade (Zych, Del Rey, & Ortega, 2015), the number of studies focused on cyberbullying in university students is still low.

Cyberbullying is defined as bullying perpetrated through electronic devices, including repeated and intentional aggressive behaviors perpetrated by individuals or groups using electronic devices, and harm on victims who cannot defend themselves easily (Smith et al., 2008). There are some peculiar characteristics of cyberbullying, including possible anonymity, repetition that might occur without further intervention from the perpetration and lack of importance of the physical strength (Nocentini et al., 2010).

Cyberbullying is present and prevalent around the world (Sorrentino, Baldry, Farrington, & Blaya, 2019), including Latin America in general (Herrera-López, Romera, & Ortega-Ruiz, 2018), Colombia (Herrera-López, Casas, Romera, Ortega-Ruiz, & Del Rey, 2017; Herrera-López, Romera, & Ortega-Ruiz, 2017), and Spain (Zych, Ortega-Ruiz, & Marín-López, 2016). According to Chaux (2013), cyberbullying is on the rise and it is important to conduct more research about cyberbullying in understudied populations such as university students in Colombia.

Although bullying and cyberbullying can be present in different settings such as schools and workplaces (Monks et al., 2009), most of the research studies in this field focus on educational settings. Meta-analyses found that school factors such as school safety and positive school climate are protective against both, cybervictimization and cyberperpetration (Zych, Farrington, & Ttofi, 2019). Most of the interventions against cyberbullying are conducted in educational settings (Gaffney, Farrington, Espelage, & Ttofi, 2019). Although a recent review about cyberbullying in higher education found that it is an important problem among the university students (Watts, Wagner, Velasquez, & Behrens, 2017), the number of studies focused on cyberbullying in higher education is low. Thus, studies about cyberbullying in the universities are urgently needed.

1.2. Bystanders of cyberbullying

It is known that bystanders play a crucial role in bullying, but little is known about bystanders in cyberbullying. A study with 806 students enrolled in 10 universities in Colombia showed that more than 79% of university students reported being bystanders of cyberbullying (Sarmiento & Leguizamón, 2016). Some studies suggest that there might be a complex variety of bystanders in cyberbullying (Leung, Wong, & Farver, 2018; Song & Oh, 2018). Some people can be passive bystanders who know about cyberbullying, but do not take any action. Defenders of the victims intervene to stop cyberbullying and reinforcers of the cyberbully might promote even more cyberbullying. All these groups of bystanders can potentially exist in face-to-face interactions (e.g., talking to or sitting next to a person who is involved in cyberbullying) and online (e.g., interacting on a social networking site). Several studies suggested these different forms of cyber-bystanding (Bastiaensens et al., 2014; DeSmet et al., 2012; Rowe, 2018; Smith, 2012), but research on this topic is still in its early stages. Thus, it is still necessary to describe different forms of cyber-bystanding and design, and validate questionnaires to measure these different forms of cyber-bystanding.

Research shows that it is crucial to involve bystanders in defending the victims of cyberbullying (Leung et al., 2018; Song & Oh, 2018). A recent systematic review focused on defending showed that both, online and offline defenders are mostly girls, with high moral competency and high empathy, liked by their peers and with desirable interpersonal relationships (Lambe, Della Cioppa, Hong, & Craig, 2019). Some psychological factors were found to be related to defending in

cyberbullying, such as low fear, high empathy and self-efficacy (Barlińska, Szuster, & Winiewski, 2018; Kazerooni, Hardman, Bazarova, & Whitlock, 2018; Olenik-Shemesh, Heiman, & Eden, 2017; Zych, Baldry, Farrington, & Llorent, 2019). Programs against cyberbullying are being conducted around the world (Gaffney et al., 2019), and if different types of cyber-bystanding are described and understood, they could potentially include a comprehensive intervention focused on defending the cybervictim.

There are many instruments designed to measure cybervictimization and cyberperpetration. Some of these instruments have good psychometric properties (see a review by Berne et al., 2013), although the results regarding cyberbullying prevalence rates vary greatly depending on a way in which cyberbullying is measured (Zych et al., 2016). Thus, it is important to advance knowledge regarding cyberbullying measurement instruments in general. Moreover, it is particularly important to design and validate specific instruments to measure different types of cyber-bystanding. This could advance knowledge about the complex nature and dynamics of cyberbullying. Validated instruments are crucial for research and evidence-based practice to prevent and intervene in antisocial behaviors offline and online. Thus, the current study reports on a design and validation of a questionnaire focused on different types of cyber-bystanding in Colombian and Spanish university students. Different types of cyber-bystanding are measured and reported in both countries. Comparing Spain and Colombia is particularly interesting because it is possible to study cyberbullying in two different cultures and geographic areas, but also in two Spanish-speaking countries.

2. Methods

2.1. Participants

This study used a convenience sample of 997 participants enrolled in 12 different universities in two cities of Colombia (Bogotá and Pasto) and one university in Spain (Córdoba). Students were enrolled in 23 different academic programs. Regarding participants' nationalities, 11.9% were Spanish (n = 119) and 88.1% were Colombian (n = 878). Among the participants, 28.2% were males and 71.8% were females with ages ranging from 16 to 35 years ($M = 20.25$; $SD = 1.84$). Given that most of the participants were enrolled in social science courses, the unequal gender distribution of the sample reflected the distribution of the population in these courses.

2.2. Instruments

Bystanding of cyberbullying was measured with the Cyberbullying Bystander Scale (CBS) which final version included 40 items distributed in six factors. These factors were: Passive outsider online (5 items), Defender of the cybervictim online (6 items), Reinforcer of the cyberbully online (7 items), Passive face-to-face outsider (5 items), Face-to-face defender of the cybervictim (9 items), and Face-to-face reinforcer of the cyberbully (8 items). The questionnaire was responded on a five-point Likert scale ranging from 1 (never) to 5 (very frequently). The English translation of the items is included in Table 1 and the original version in Spanish is included as supplementary material. This questionnaire showed excellent psychometric properties in Colombia and in Spain (see results).

2.3. Procedure

Questionnaires were designed by the authors of this study based on a literature review (e.g., studies about different types of bystanders in bullying by Salmivalli et al., 1996) and expertise in the field. Then, a pilot study was conducted. In the first part of the pilot study, items were evaluated by 10 experts in the field. Experts were researchers who published at least one article about cyberbullying in a high impact

Table 1
Means, standard deviation, skewness, kurtosis and factor loadings in the Cyberbullying Bystander Scale.

	M	*SD*	*Loadings*	*Skewness*	*Kurtosis*
Passive outsider online					
1. When I browse the internet and/or social networks, I see how some people make fun of others, but I do not do anything to avoid it	3.17	1.20	.71	-.12	-.88
2. When I interact in social networks, I see people who attack others who cannot defend themselves, but I do not get involved	2.75	1.23	.73	.22	-.96
3. I see on the internet and/or social networks how some people upload photos or videos that harm others, but I do not say anything to defend them	2.76	1.21	.73	.19	-.96
4. I read on the internet hurtful messages from some people against others, but I do not say anything to defend them	2.91	1.21	.76	.08	-.98
5. When I see that someone is attacking a person on the internet (insulting, mocking or hurting them), I choose not to do or say anything	3.20	1.19	.72	-.22	-.86
Defender of the cybervictim online					
6. When I am on social media and I see some people harass others who cannot defend themselves, I tell them not to do this	2.54	1.13	.73	.34	-.72
7. When I see on the internet that some people upload photos or videos that are offensive to others, I tell them that this is wrong	2.42	1.17	.70	.49	-.63
8. If I read hurtful messages on the internet, of a person towards another weaker person, I write to the person who wrote the message so that it stops	2.10	1.10	.76	.76	-.22
9. When I see on the internet that some people post offensive messages about others who cannot defend themselves, I write to them that this is wrong	2.18	1.10	.74	.69	-.29
10. I tend to defend people attacked or insulted in social networks or on the internet	2.44	1.10	.69	.52	-.40
11. When I see someone upload photos or videos that are offensive to others, I write to them to ask them not do it more or to remove it	2.17	1.14	.50	.80	-.18
Reinforcer of the cyberbully online					
12. I share hurtful posts (photos, videos or messages) that were uploaded by others	1.39	.86	.62	2.41	5.28
13. When I browse the internet, I click "like" publications such as photos, videos, messages and hurtful rumors about others who cannot defend themselves	1.42	.82	.73	2.22	4.86
14. When I browse the internet, I support with comments the hurtful publications such as photos, videos, messages and rumors towards others who cannot defend themselves	1.24	.61	.65	3.00	9.90
15. When interacting in social networks on the internet, I see people who harass others and let them know that I find it funny	1.27	.69	.67	3.06	10.16
16. I am interested and enjoy being part of groups in social networks that publish hurtful photos, gossip and insults about others	1.28	.74	.77	3.22	11.14
17. I follow profiles of people who post hurtful photos, gossip and insults about others and I make them see that I like them	1.42	.87	.71	2.26	4.70
18. I like to encourage or support people who post hurtful photos, gossip and insults about others.	1.21	.64	.70	3.57	14.18
Passive face-to-face outsider					
19. My classmates show me in person how they make fun of others online, but I do not tell them anything	1.91	1.03	.67	1.05	.44
20. My classmates show me in person how they post photos, videos, insults or hurtful messages to others on the internet, but I do not tell them anything.	1.76	.98	.77	1.33	1.20
21. My classmates show me in person how they spread gossip or rumors about others online, but I prefer not to tell them anything	1.71	.93	.76	1.37	1.54
22. In my group of friends, there are some people who attack weaker others through the internet and they show it to me in person, but I do not care and I do not tell them anything	1.53	.90	.63	1.86	3.04
23. My classmates show me in person hurtful messages against each other on the internet, but I do nothing to stop it.	1.91	1.04	.64	1.02	.29
Face-to-face defender of the cybervictim					
24. When I learn that someone makes fun of another person on the internet, I tell them in person not to do it	2.43	1.15	.78	.41	-.72
25. When I see or find out that someone publishes photos or images to humiliate others on the internet, I tell them in person not to do it	2.36	1.17	.84	.52	-.64
26. If I know that someone publishes gossip or rumors on others on the internet, I tell them in person to stop	2.37	1.15	.83	.47	-.69
27. If someone assaults others who are weaker in social networks, I speak to them face-to-face and defend the victim	2.19	1.08	.78	.65	-.34
28. I report in person acts of violence or harassment in social networks	2.15	1.29	.55	.90	-.36
29. If a classmate makes fun or insults somebody online, I tell them in person that this is wrong, and I ask them to change what they are doing	2.45	1.17	.74	.41	-.81
30. When someone shows me that they have attacked others on the internet, I express my disagreement and report it to the authorities	2.12	1.18	.57	.81	-.34
31. When I hear conversations about how somebody attacks someone on the internet, I tell them to stop doing it	2.38	1.14	.76	.55	-.55
32. I defend in person the victims of teasing and harassment on the internet	2.39	1.19	.69	.51	-.67
Face-to-face reinforcer of the cyberbully					
33. If someone makes fun of other people on the internet, I ask them to show me personally the things they publish to have fun	1.35	.76	.65	2.50	6.28
34. If someone insults other people on the internet, I ask them to show me personally the things they publish to let them know that I like it	1.28	.70	.65	2.86	8.43
35. I like to encourage my classmates (giving them ideas, laughing with them) to "like" or comment hurtful posts on others in social networks	1.36	.78	.80	2.47	5.96
36. If a classmate tells me that he/she published gossip or rumors about other people on the internet, I ask him/her to show me them in person to have fun too	1.33	.73	.75	2.42	5.54
37. If a classmate tells me that he/she posted offensive photos about other people on the internet, I ask him/her to show it to me to have fun too	1.29	.71	.77	2.73	7.34
38. If a classmate tells me that he/she hacked the profile of other people on the internet, I ask him/her to show it to me in person to have fun	1.26	.67	.61	3.02	9.61
39. I enjoy participating in face-to-face conversations where people talk about teasing or aggressions against others on the internet	1.36	.79	.71	2.59	6.71
40. I support in person those who make fun or publish offensive photos of others on the internet, because I think it is funny	1.20	.59	.76	3.49	13.33

journal. Most of them published several articles and were Assistant Professors, Associate Professors and Full Professors whose main research line focuses on bullying and cyberbullying. The experts evaluated the questionnaire based on three criteria: clarity (the item is easily understood, syntaxis and semantics are adequate), coherence (the item is logically and clearly related to the construct that is measured) and relevance (the item is important and necessary). These criteria were evaluated on a 4-point Likert scale ranging from 1 (not accomplished) to 4 (highly accomplished). Then, a second part of the pilot study was conducted in which 94 university students from Colombia replied to the questionnaire and evaluated if it was understandable.

This was an ex post facto cross-sectional instrumental study (Montero & León, 2007). Educational institutions were contacted and letters with information about the objectives and rationale of the study were handed in. Institutional permissions were obtained, and informed

consents were signed by the participants. Universities were visited, and students were asked to fill in the questionnaires. It was explained that the questionnaires were anonymous, confidential and voluntary. Students filled in the questionnaires in around 15 min.

2.4. Data analyses

The normality of the data was analyzed with "R" software (R Development Core Team, 2008) with the MVN library (Kormaz, Goksuluk, & Zararsiz, 2015). Mardia coefficients were calculated to test the multivariate normality of the data.

Psychometric properties of the CBS were first checked through construct validity by cross-validation that makes it possible to optimize the generalization of the model by using sub-samples (Delgado-Rico, Carretero-Dios, & Ruch, 2012). With this purpose, sample was randomly split in two and then the 50% of the sample was used for an exploratory factor analysis (EFA) and the other 50% was used for the confirmatory factor analysis (CFA). The EFA was performed through the Factor 9.2 software (Lorenzo-Seva & Ferrando, 2006) using the parallel factor analysis with promin rotation. KMO- Kaiser-Meyer-Olkin test (above 0.60 was considered adequate), Bartlett sphericity test ($p \leq .001$), commonalities, total explained variance, saturation and factor loadings were also calculated. Items with factor loadings lower than 0.30 and saturations lower than 0.40 were eliminated (Worthington & Whittaker, 2006).

In CFA, items with factor loadings above 0.30 and errors below 0.80 were kept (Flora & Curran, 2004). The CFA was performed with the EQS 6.2 software (Bentler & Wu, 2012). This was done with the maximum likelihood (ML) estimation method with robust correction (Bryant & Satorra, 2012) and polychoric correlation matrix (Morata-Ramírez & Holgado-Tello, 2013), recommended for ordinal data without normal distribution. Several indices were used to assess the model fit including Satorra-Bentler chi-square χ^2_{S-B} (Satorra & Bentler, 2001), chi-square divided by the degrees of freedom (≤ 3 optimum, 3 to 6 acceptable), and other indices such as CFI (≥ 0.95), NNFI (≥ 0.95), RMSEA (≤ 0.08), SRMR (≤ 0.05 optimum, ≤ 0.08 acceptable) (Hu & Bentler, 1999), and AIC (the lowest value).

To check if the model was generalizable between Colombian and Spanish samples, the invariance analysis was conducted. This analysis tests the same factor structure in two samples and identifies delta values (Δ) in at least one adjustment index (CFI and NNFI) that are expected to be below or equal to 0.01, indicating a robust factor structure (Dimitrov, 2010).

For the reliability analysis, McDonald's omega was used (ω) (Elosua-Oliden & Zumbo, 2008), with a recommended value above 0.60 for ordinal data without normal distribution. This was calculated with the Factor 9.2 software (Lorenzo-Seva & Ferrando, 2006). Also, composite reliability (CR) that shows the general reliability of the items, with an expected value above 0.70 was calculated (Hair, Black, Babin, Anderson, & Tatham, 2005). The relations among different factors of the scale were tested through Spearman correlation coefficient (rho) appropriate for ordinal data, with a significance value of 0.05.

Table 3
Spearman correlations among different scales of the Cyberbullying Bystander Scale.

	M	SD	Skewness	Kurtosis	POO	DCO	RCO	PFFO	FFDCV
POO	2.96	.96	.16	-.61	–				
DCO	2.31	.91	.55	-.32	-.19**	–			
RCO	1.32	.57	2.70	8.33	.22**	.06**	–		
PFFO	1.76	.78	1.20	1.40	.40**	-.05**	.42**	–	
FFDCV	2.32	.91	.49	-.42	-.10**	.64**	.04**	-.01**	–
FFRCB	1.30	.56	2.51	6.68	.25**	.04**	.60**	.45**	-.05**

Note: ** = $p < .01$, POO = Passive outsider online, DCO = Defender of the cybervictim online, RCO = Reinforcer of the cyberbully online; PFFO = Passive face-to-face outsider, FFDCV = Face-to-face defender of the cybervictim, FFRCB = Face-to-face reinforcer of the cyberbully.

3. Results

3.1. The pilot study

Items were evaluated by 10 experts in the field who scored the quality of each item (from 1 to 4) and suggested changes. All the items with scores below 4 were revised and suggestions of the experts were included to improve their quality, writing and understanding in Colombia and Spain.

A pilot study was conducted with 94 university students in Colombia who filled in the first version of the questionnaire with 50 items. The Kaiser-Meyer-Olkin (KMO) showed adequate values for a factor analysis (KMO = 0.73) with significant relations among variables (Bartlett test coefficient = 1225, $p < .01$). There were 10 items with factor loadings below 0.30 that were eliminated, and the final version included 40 items.

3.2. Different types of bystanders

An exploratory factor analysis showed six different factors that grouped items focused on different types of cyber-bystanding. *Passive outsider online* (5 items) focused on witnessing acts of cyberbullying online but not reacting to these acts. *Defender of the cybervictim online* (6 items) focused on witnessing acts of cyberbullying and standing out for the victim through the electronic devices whereas *Reinforcer of the cyberbully online* (7 items) focused on witnessing cyberbullying and reinforcing the cyberbully online. *Passive face-to-face outsider* (5 items) included items on witnessing acts of cyberbullying in person (e.g., being showed them in person) and not reacting to these acts. *Face-to-face defender of the cybervictim* (9 items) included witnessing acts of cyberbullying in person and defending the victims and *Face-to-face reinforcer of the cyberbully* (8 items) reinforces cyberbullying in face-to-face situations (e.g., while talking to the cyberbully). These items are shown in Table 1. The highest mean values were found in *Passive outsider online* and the lowest mean values were found in *Reinforcer of the cyberbully online* and *Face-to-face reinforcer of the cyberbully*. *Defending of the cybervictim* (online and face-to-face) was close to "rarely" (see Table 3).

Regarding the EFA, KMO coefficients showed adequate properties for a factor analysis (0.93). The response patterns did not show normal distribution with Mardia test showing skewness of 344.00 ($p < .001$) and kurtosis of 2527.11 ($p < .001$). The questionnaire showed an
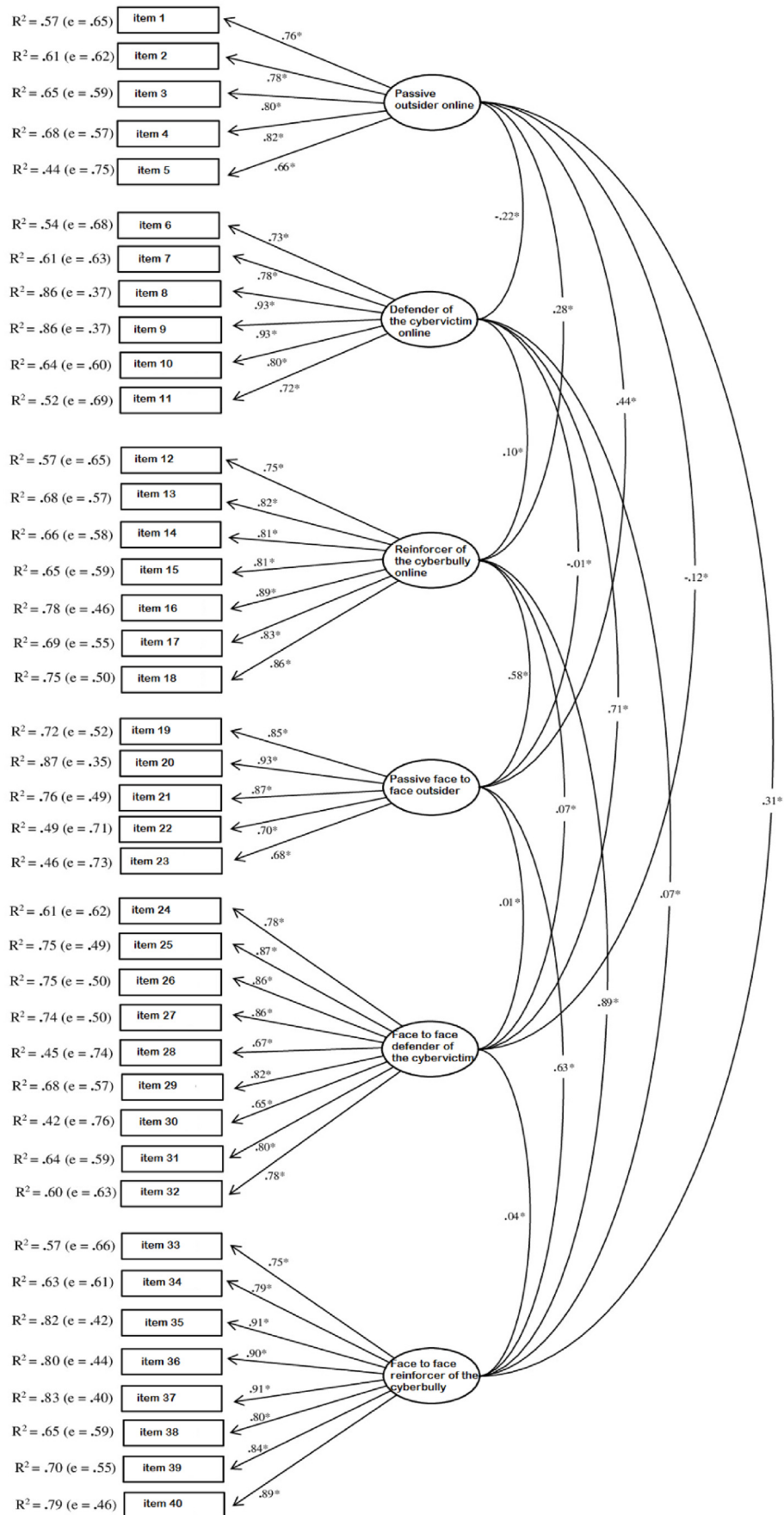
Table 2
Invariance between Colombia and Spain.

Model	χ^2_{S-B}	df	p	NNFI	CFI	RMSEA	SRMR	AIC	ΔNNFI	ΔCFI
Base	1655.29	725	.000	.98	.98	.03	.05	205.29	–	–
Model 1	1600.85	725	.000	.98	.98	.03	.05	150.85	.00	.00
Model 2	1057.90	725	.000	.97	.97	.06	.07	392.09	.01	.01

Note: Mod 1 = Colombia; Mod 2 = Spain.

Fig. 1. Confirmatory factor analysis of the cyberbullying bystander scale.

Table 4
Cronbach's alphas, (α), McDonald's Omega (ω) and composite reliability (CR).

	POO	DCO	RCO	PFFO	FFDCV	FFRCB	Total
α	.79	.89	.87	.85	.92	.90	.88
ω	.85	.90	.88	.86	.92	.90	.74
CR	.86	.93	.91	.78	.93	.92	–

Note: POO = Passive outsider online, DCO = Defender of the cybervictim online, RCO = Reinforcer of the cyberbully online; PFFO = Passive face-to-face outsider, FFDCV = Face-to-face defender of the cybervictim, FFRCB = Face-to-face reinforcer of the cyberbully.

excellent reliability. Also the CFA showed excellent properties with $\chi^2_{S-B} = 1655.29$; $\chi^2_{S-B}/(725) = 2.28$; $p < .001$; NNFI = 0.98; CFI = 0.98; RMSEA = 0.036 (95% CI [0.035, 0.037]); SRMR = 0.05; AIC = 205.29 (see Fig. 1).

The multigroup analysis showed delta (Δ) values below the cut-off point. Thus, the invariance in the factor structure between Colombia and Spain was assumed. This shows that the scale is robust in both samples (see Table 2).

Correlation coefficients among the factors (see Table 3) showed strong relations between face-to-face and online defending of the cybervictim ($rho = 0.64$; $p < .01$). Also, strong relations were found between face-to-face and online reinforcing of the cyberbully ($rho = 0.60$; $p < .01$). Moderate relations were found between face-to-face outsider and face-to-face reinforcer of the cyberbully ($rho = 0.45$; $p < .01$) and between face-to-face and online and face-to-face outsider ($rho = 0.40$; $p < .01$). The CBS showed excellent reliability values (see Table 4).

4. Discussion

Although research on cyberbullying advanced greatly during the past decades (Zych, Ortega-Ruiz, & Del Rey, 2015), there are still pressing gaps in knowledge that need to be addressed. Encouraging bystanders to help the victims of face-to-face bullying has been one of the important anti-bullying strategies (Salmivalli, 2010), but very little is known about the bystanders of cyberbullying. The impact of cyberbullying on young adults was found to be strong (Sam, Bruce, Agyemang, Amponsah, & Arkorful, 2018), but more research about cyberbullying in the university samples is urgently needed (Myers & Cowie, 2017). Thus, the current study was conducted to fill these gaps in knowledge by describing different types of cyber-bystanders in a broad sample of university students in Colombia and Spain.

In this study, the Cyberbullying Bystander Scale was designed and validated. This questionnaire was found to have excellent psychometric properties. It was found that some students are passive outsiders of cyberbullying online and passive outsiders of cyberbullying in face-to-face situations. Being an outsider was the most common type of cyberbystanding. Although reinforcing the cyberbully online and in face-to-face situations was not very common, it should be emphasized that participants rarely defended the victim. Given that defending the victim is an important component of antibullying programs (Farrington & Ttofi, 2009), our findings suggest that it would be important to include this component in the interventions against cyberbullying. Given that high empathy was found to be related to more defending (Nickerson, Aloe, & Werth, 2015; Zych et al., 2019), specific interventions could be designed to promote empathy in online interactions.

The number of cross-national studies focused on cyberbullying is still low (Baldry, Sorrentino, Farrington, & Blaya, 2019). It is even less common to find studies that compared Latin America and Spain. Having compared Colombian and Spanish participants is an important strength of this study. The results can be a basis for social and educational policy and practice focused on decreasing cyberbullying (Martínez-Monteagudo, Delgado, Inglés, & García-Fernández, 2019) in Ibero-American universities.

Behaviors of the bystanders of cyberbullying were rarely studied in the past (Van Hee et al., 2018), so it is difficult to compare the results of the current study with previous research. Song and Oh (2018) found that acting as an outsider was the most common behavior while witnessing cyberbullying, but they did not distinguish online and face-to-face bystanding. Technology seems to increase the number of bystanders (Jenaroa, Flores, & Frías, 2018). Bullying and high emotional use in online interactions are related to high abuse of technology (Nasaescu, Marín-López, Llorent, Ortega-Ruiz, & Zych, 2018). Authors such as Kazerooni et al. (2018) suggest that there might be different ways to understand cyberbullying by the bystanders. Thus, future studies could focus on the emotional response to cyberbullying in bystanders and different characteristics of the bystanders in relation to their response to cyberbullying. The current results are therefore opening new research horizons.

This study has some important strengths such as the use of broad samples in Colombia and Spain, and the use of different strategies to test the psychometric properties of the questionnaire. At the same time, it has some limitations such as the use of self-reports only and the inclusion of a sample of university students only. Participants were selected by convenience, and the sample in Spain is smaller than the sample in Colombia. Most of the participants studied social sciences courses where most students are females. Thus, future studies could confirm our results using representative samples of young adults in different countries. In general, future studies should confirm the current findings with different participants and age groups, including also other countries, different university courses, other-reports and other reliability and validity tests. Future studies could also focus on classifying students into separate groups according to their response patterns regarding cyber-bystanding and discover predictors of each cyber-bystanding role. Longitudinal studies that could focus on test-retest reliability, longitudinal predictors and outcomes of cyber-bystanding roles should be conducted in future.

The current findings have some important implications for policy and practice. Although cyberbullying is rarely studied in the universities, our findings show that students witness cyberbullying and that their most frequent response is ignoring it. Thus, knowledge about cyberbullying should be promoted among university students and prevention programs should be implemented. It is also important to encourage the bystanders to defend the cybervictims. Thus, our study is an important step to the prevention and intervention against cyberbullying in the universities.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.chb.2019.05.037.

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