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Cyberbullying on Instagram: How Adolescents Perceive Risk in Personal Selfies?

M. Dolores Sánchez-Hernández, M. Carmen Herrera, Laura Villanueva-Moya, & Francisca Expósito

Department of Social Psychology, Mind, Brain, and Behavioral Research Center (CIMCYC), University of Granada, Granada, Spain

Abstract

The nature of social networking sites and the overconfidence and lack of awareness that characterize the adolescent stage favor the assumption of risk behaviors on Instagram (e.g., self-objectified photos, that is, photos showing sexualized body parts such as skin cleavage or the abdomen). Two experimental studies examine the social perceptions of adolescents regarding the risk of suffering from cyberbullying behaviors by posting selfies on Instagram. Study 1 (N = 373 adolescents) revealed that participants perceived more risk when an individual uploaded an objectified selfie (vs. a non-objectified). Participants perceived that the target will be more likely to suffer from cyberbullying behaviors when they: (a) uploaded on Instagram an objectified selfie (vs. a non-objectified) and (b) were female (vs. male). Study 2 (N = 210 adolescents) showed that when a girl (vs. a boy) uploaded an objectified selfie, participants perceived more risk in her behavior and perceived that she would be more likely to suffer from cyberbullying behaviors. Specifically, female adolescents (vs. males) perceived that a girl (vs. a boy) would be a target of cyberbullying behaviors to a greater extent. Finally, participants perceived that uploading an objectified photo was more risky when the target was a girl (vs. a boy), which led to suffering from cyberbullying behaviors to a greater extent. These results can help to further understand the risk to which adolescents are exposed on Instagram, being higher among adolescent girls. Therefore, this work highlights the importance of considering gender differences in the design of cyberbullying prevention programs.

Keywords: Instagram; adolescence; cyberbullying; risk perception; gender differences

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Introduction

Social networking sites (SNSs) have had a global impact on the ways in which people socialize and interact, especially among adolescents and young people, who have integrated internet usage and information and communication technology (ICT) into their daily practices (Tartari, 2015). SNSs are tools that provide new paths to the development of identity and personal growth during adolescence (e.g., Lenhart et al., 2010; Reich et al., 2012), a stage in which social relationships play an essential role (Collins, 1997). Specifically, Instagram is an SNS that has achieved popularity in recent years since allowing individuals to share photos and videos about their lives quickly and easily, thus providing the creation of a more connected world (Oropesa & Sanchez, 2016). According to Statista

(2020a), users between 18 and 34 years old registered the highest percentage of Instagram usage in 2020, during which a 70% increase in the connection time that adolescents spent on the SNS was observed (Statista, 2020b).

SNSs promote numerous physical and psychological benefits for adolescents (Wright & Li, 2011). They allow for meeting the need for intimacy and connection with others, and they also increase adolescents' sense of belonging and acceptance by peers (e.g., Duggan, 2015; Weinstein, 2018). In contrast, previous findings pointed out that SNS usage is associated with several disadvantages, including decreased self-esteem, body image concerns, self-objectification, and a greater likelihood of suffering from and engaging in cyberbullying (e.g., Graff & Czarnomska, 2019; McCrory et al., 2020). Despite researchers' growing interest in examining the counterpart of internet usage, the literature that analyzes the social risk perception of adolescents regarding the risk of suffering from cyberbullying in the adolescent population remains scarce (e.g., Donoso-Vázquez et al., 2018; Scarduzio et al., 2018). Therefore, the present research study proposed expanding the knowledge in this field, examining the social perceptions of adolescents regarding the risk of being a victim of cyberbullying behaviors by posting self-photos (i.e., personal selfies) on Instagram.

Instagram Usage and Self-Objectification

As with other SNSs, Instagram users configure their online identities by carefully selecting the information they upload on their profiles (e.g., Pempek et al., 2009; Salimkhan et al., 2010). Research suggests that Instagram posts tend to show more positive bias (Lup et al., 2015) because people generally emphasize the positive aspects of their lives (Lin & Utz, 2015). In addition, considering the centrality of photos on Instagram, the dynamics of appearance and impression seem to generate a culture of refinement and polishing in relation to the selfies posted on this SNS (e.g., Lup et al., 2015; Tiggemann & Anderberg, 2020). According to the findings of the cross-sectional study by Dumas et al. (2017), emerging adults spend a lot of time editing photos and applying filters to maximize their attractiveness on Instagram, as they are aware that the evaluative feedback (i.e., comments and likes) they receive will depend on it to a large extent (Chua & Chang, 2016). In this way, Instagram has been configured as an SNS on which people are involved in a reciprocal process known as "social surveillance" (Marwick, 2012), whereby users can not only carefully check the content that others post on their profiles but also check their updates from the perspectives of others. These dynamics of social surveillance seem to have a significant impact on users because they conceptualize what is normal, acceptable, or unacceptable in the Instagram community from the content that others posted, and consequently, they adapt their own posts (Marwick, 2012). Such processes could especially be relevant during adolescence because individuals search deeply for approval and acceptance by peers (i.e., social reward; Foulkes & Blakemore, 2016; Harter, 2012).

Taking into account the above-mentioned ideas, the probability that users internalize others' visions of their physical selves and consider themselves to be objects to be evaluated on Instagram—a process known as self-objectification (Fredrickson & Roberts, 1997)—increases as a consequence of the overvaluation of attractiveness and the audience's response (e.g., Bell et al., 2018; Feltman, & Szymanski, 2018). In this respect, Bell et al. (2018) showed through a cross-sectional study that, on the one hand, female adult received significantly greater numbers of likes on their objectified selfies—showing skin (i.e., cleavage or the abdomen)—compared with non-objectified selfies. On the other hand, receiving many likes on personal selfies is related to posting them on Instagram frequently. These findings seem to indicate that the audience's responses to objectified selfies may act as a strong behavioral reinforcement among adolescents (Foulkes & Blakemore, 2016).

Although the concern with appearance has increased among boys in recent times (Blond, 2008), research has consistently demonstrated that female adolescents feel more pressured to adhere to established beauty norms on SNSs (e.g., Chua & Chang, 2016; Manago et al., 2008). They consequently post more personal selfies and spend more time on image management (e.g., Kapidzic & Herring, 2015; Sorokowski et al., 2015). According to objectification theory (Fredrickson & Roberts, 1997), as girls and women are socialized in an objectifying culture via interpersonal relationships and the media, they adopt third-party perspectives of their bodies, prioritizing their appearance and involvement in sexual self-objectified behaviors. Consistent with these assumptions, various research studies have shown that Instagram usage by girls is related to the increased visual surveillance of one's appearance, body image concerns, and self-objectification (e.g., R. Cohen et al., 2018; Hendrickse et al., 2017; Szymanski et al., 2011). In this sense, the consequences of self-objectified behaviors on SNSs seem to be more negative for women (Ruiz et al., 2021), who are judged more based on their bodies and objectification (e.g., Barthel & Aydt, 2016; Calogero, 2012; Nezlak et al., 2015). This, in turn, seems to lead to the deterioration of physical and mental health (e.g., low self-esteem, decreased life satisfaction, disordered eating behavior; Daniels & Zubriggen,

2016; Feltman & Szymanski, 2018). Besides the impact on wellbeing, exposure to the objectified representations on SNSs of both men and women can influence how others perceive them (e.g., Barthel & Aydt, 2016; Daniels & Zurbriggen, 2016; Nezlak et al., 2015). Specifically, in a sample of undergraduates, Nezlak et al. (2015) analyzed participants' ratings of photos of male and female athletes shown in objectified (photos depicting the target dressed in a sexually provocative fashion) and non-objectified (photos depicting the target in an athletic role) ways. In this experimental study, they found that objectified targets were perceived as less competent than non-objectified targets. The effects of objectification were greater for female targets. Similarly, Barthel and Aydt (2016) observed in an experimental study with undergraduate students that objectified female photos on Facebook were rated as less competent (i.e., less skill and capacity to perform a task or solve problems) compared with non-objectified female photos. However, the authors did not find this effect in male photos—male competence scores remained constant regardless of whether the photo was objectified. Nevertheless, although research points out the variety of detrimental effects arising from objectified behaviors on SNSs, mainly for women, little is known about how posting objectified personal selfies could also be a cyberbullying risk factor among adolescents.

Risk Perception and Cyberbullying

Cyberbullying is one of the main negative effects derived from the misuse of ICT (e.g., Buelga et al., 2015; Kowalski et al., 2014). It refers to any form of intentional aggression toward a victim conducted by an individual or group through electronic means, and it tends to repeat itself over time (for a review, see Aboujaoude et al., 2015). Cyberbullying includes intimidating behavior, harassment, and mistreatment, such as sending and spreading offensive or vulgar messages, sending threatening messages, spreading rumors about the victim, social exclusion, violating privacy, or identity theft (e.g., Ortega et al., 2008; Smith et al., 2008). Both international studies and those performed with Spanish samples denote that the existence of cyberbullying has achieved alarming levels among adolescents (e.g., Camerini et al., 2020; Gámez-Guadix et al., 2016; Kırcaburun et al., 2019; O'Neil & Dinh, 2015), with the prevalence ranging from 6–29% (Kowalski et al., 2014). In terms of the space transition theoretical perspective (Jaishankar, 2011), the unique features of information and communication technologies could be contributing to the high rates of aggression observed on SNSs, including anonymity, immediacy, accessibility to information, permanent contact, the quick dissemination of information, and the existence of a large audience (Stonard, 2020, 2021). In addition, it should be noted that cyberspace may decrease the aggressor's capacity to feel empathy for the victim and to increase the feeling of impunity (Stonard, 2021). As a result of the aforementioned, the boundaries between common and acceptable seem to be blurring.

In this context, a large body of literature indicates that the misuse of ICT is related to the increased perpetration and victimization of cyberbullying during adolescence (e.g., Álvarez-García et al., 2015; Barkoukis et al., 2016; Camerini et al., 2020; Gámez-Guadix et al., 2016); however, the literature examining the risk behaviors associated with SNSs and the social perceptions of adolescents remains scarce (e.g., Donoso-Vázquez et al.; 2018; Marwick, 2012; Sánchez-Hernández et al., 2020). In this respect, Donoso-Vázquez et al. (2018) noted through a cross-sectional study that adolescents seem to perceive risk in behaviors such as chatting with strangers or unknown people frequently, or posting personal information on the internet; nevertheless, they do not often notice the risk derived from posting photos or videos on SNSs. Likewise, these authors found that cyberbullying behaviors that are more normalized and perceived as less violent are those that are perpetrated against girls who do not follow established social norms of female sexuality, such as apparently "provocative" girls or who are sexually objectified on the internet. Moreover, several studies have noted that being female is itself a risk factor of cybervictimization on SNSs during adolescence (e.g., Donoso-Vázquez et al., 2018; Hébert et al., 2016; Merrill & Hanson, 2016). More specifically, Mishna et al. (2020) recently showed that female adolescents tended to be more targeted, blamed, and criticized compared with male adolescents, experiencing high levels of gender-based cyberbullying. The normalization and acceptance of this type of behavior against females in the virtual environment may derive in part from the high frequency with which it takes place (Marwick, 2012). Consistent with this idea, through an in-depth interview methodology, Scarduzio et al. (2018) found that female undergraduates tended to normalize the cyberbullying they suffered—they stated that they spent part of their time removing or blocking cyber aggressors as well as inappropriate comments from others on their profiles because they suffered it constantly. Additionally, various research studies have shown that adolescents tend to observe and recognize aggressive behaviors against females on SNSs, but few of them recognize being perpetrators or victims (e.g., Donoso-Vázquez et al., 2018; Sánchez-Hernández et al., 2020). The aforementioned seems to indicate a lack of recognition of cyberabusive behaviors when one is directly involved in violence; however, these could be perceived more easily when

adolescents act as bystanders of such violence. Therefore, in our study, we focused on analyzing adolescents' perceptions of the risk of suffering from cyberbullying on Instagram by posting selfies from the perspectives of bystanders.

Study 1

This study was aimed at examining the social perceptions of adolescents regarding the risk of being a victim of cyberbullying behavior by posting personal selfies on Instagram, based on the selfie type (objectified vs. non-objectified) and the target's gender (male vs. female). Specifically, we expected that:

H1a: Participants assigned to the selfie objectified (vs. non-objectified) condition will show a higher risk perception.

H1b: Participants assigned to the selfie objectified (vs. non-objectified) condition will show a higher perception that the target will suffer from cyberbullying behaviors.

H2a: Participants assigned to the female (vs. male) condition will show a higher risk perception.

H2b: Participants assigned to the female (vs. male) condition will show a higher perception that the target who uploaded a personal selfie will suffer from cyberbullying behaviors.

H3a: Participants assigned to the selfie objectified (vs. non-objectified) and female (vs. male) condition will show a higher risk perception.

H3b: Participants assigned to the selfie objectified (vs. non-objectified) and female (vs. male) condition will show a higher perception that the target will suffer from cyberbullying behaviors.

Methods

Participants

Through a priori power analysis (G*Power: Faul et al., 2009), we determined a sample size of 158 (1 – β = 80%; α = .05) to detect small-to-medium effect sizes (f = 0.10–0.25; J. Cohen, 1969) when comparing the differences between conditions (using an analysis of covariance [ANCOVA] with four groups, two degrees of freedom, and three covariates). We recruited a convenience sample of 411 adolescents from seven high schools in Granada (Spain). Thirty-one participants were removed because they failed the manipulation check (i.e., failed to identify the condition they were in), five participants were removed because they were older than 19 years[1], and five participants were removed because were detected as atypical values[2]. The final sample consisted of 373 adolescents (aged 13–18 years, M_{age} = 15.97, SD = 1.14), including 222 (59.5%) girls, and 147 (39.4%) boys, and four (1.1%) who preferred not to disclose their gender. All participants had to have active accounts on Instagram to participate in our research. They were not paid to complete the questionnaire.

Procedure and Design

We informed all high schools in Granada (Spain) about the opportunity to participate in our study. Those who were interested contacted us to establish the collaboration. Before the study began, we sent our informed consent to the school counselor for the parents to sign. The consent informed them of the purpose of the study, the anonymity of the participants, and the confidentiality of their children's answers. Those adolescents for whom their parents did not sign the consent did not participate in the study. The questionnaire was paper-pencil format, and it was filled out in the students' classrooms, thus allowing the students to maintain their usual schedules. Two trained researchers informed the participants about the purpose of the study, that their participation was voluntary, and that their answers would be confidential and anonymous. The researchers were present while the adolescents completed the questionnaire, thus resolving possible doubts about the task and ensuring that each participant provided his or her own individual answers. Upon the completion of the questionnaire, the participants were thanked for their participation and were fully debriefed. We collected the data during March and April 2019. Once the data were collected, we transferred the participants' responses to an SPSS file to analyze the results. The research study was part of a broad project that has received approval from the ethics committee of the University of Granada (Spain). The questionnaire took approximately 15 minutes.

The study used a factorial experimental design 2 (personal selfie type: objectified vs. non-objectified) x 2 (target's gender: male vs. female) with risk perception and the perception of cyberbullying behaviors as the dependent variables. A vignette or hypothetical scenario methodology was used to perform the experimental manipulation (e.g., see Sánchez-Hernández et al., 2020; Tiggemann et al., 2018). Specifically, we developed four conditions to which participants were randomly assigned (selfie type: objectified vs. non-objectified; target's gender: male vs. female). After reading the hypothetical scenario, the participants completed a total of 17 items. Specifically, they responded to the measures of manipulation check, risk perception, the probability of suffering from cyberbullying behaviors, and the time spent on Instagram, as well as the sociodemographic variables: gender (*What is your gender? Male/Female/Other [specify]*) and age (*What is your age?*).

Measures

Experimental Manipulation. We used a vignette methodology to carry out the experimental manipulation. As Schoenberg and Ravdal (2000) pointed out, in social studies, this methodology allows for analyzing beyond the participant's protagonist situation given that it assesses the attitudes that can guide their future behavior. In the present study, the designed vignette showed a protagonist (Juan vs. María) who, before going out with his or her friends, took several selfies. After choosing the photo he or she liked best (objectified vs. non-objectified), the protagonist decided to upload it to Instagram. We used Bell et al. (2018) to create the objectified selfie condition. These authors coded images as objectified if one or more characteristics of objectification (cleavage, abdomen, arms, or legs) were present, that is, whether the skin was exposed. Therefore, the photo that the target (Juan vs. María) chose in the objectified condition showed skin (i.e., the abdomen or cleavage, respectively), whereas, in the non-objectified condition, he or she did not show his or her skin. The hypothetical scenarios were as follows:

It's the weekend, Juan/Maria has plans to go out with some friends and while he/she's getting ready, he/she decides to upload something to Instagram. He/she stands in front of the mirror and takes several pictures…

(non-objectified condition) … After choosing the photo he/she likes the most, he/she decides to upload it to Instagram stories. In a short time, most of his/her followers have seen his/her story.

(objectified condition) … After choosing the photo he/she likes the most, the photo that shows abdomen/cleavage, he/she decides to upload it to Instagram stories. In no time, most of his/her followers have seen his/her story.

Manipulation Check. We designed two items with a categorical response format to check whether the manipulation had worked as intended, that is to say, whether the participants had identified the conditions they were in. Specifically, we created an item for the selfie type condition: *In the situation that you have read, the protagonist has uploaded to Instagram a photo that: (a) showed skin (i.e., cleavage or the abdomen) or (b) did not show skin.* We created another item for the target's gender condition: *In the situation you have read, the protagonist who has uploaded a photo to Instagram is: (a) María or (b) Juan.* These items were shown at the end of the questionnaire; however, they were described below the scenario to unify the description of the manipulation in the same section.

We conducted two Pearson chi-square tests to check whether participants had correctly identified the experimental conditions to which they were assigned. The chi-square statistic enables analysis of group differences between categorical variables (de la Fuente, 2016; Sánchez-Hernández et al., 2020; Ugoni & Walker, 1995). The results of the chi-square test revealed that in the selfie type condition (objectified vs. non-objectified): 94.9% (n = 223) of the participants who were assigned to the objectified selfie condition identified the condition they were in, and 5.1% (n = 12) did not. Meanwhile, 91.7% (n = 154) of the participants assigned to the non-objectified selfie condition identified the condition properly, and 8.3% (n = 14) did not, χ^2 (1, 403) = 303.01, p < .001, φ = 0.87. In relation to the target's gender condition (Juan vs. María): 99% (n = 202) of the participants assigned to the Juan condition adequately identified the condition, and 1% (n = 2) did not. Finally, 98.5% (n = 199) of the participants in the María condition identified the condition they were in, and 1.5% (n = 3) did not, χ^2 (1, 406) = 386.26, p < .001, φ = 0.98. Therefore, this analysis allowed us to check the effectiveness of the experimental manipulation. In particular, 31 participants did not correctly identify their own conditions and were removed from the following analyses (see participants section for more details of data exclusion).

Risk Perception. Risk perception was evaluated with an adaptation of the self-anchoring scaling (Kilpatrick & Cantril, 1960), which Sánchez-Hernández et al. (2020) recently used to measure risk perception in the context of violence. The participants reported their risk perception by uploading photos to Instagram like the protagonist did in the scenario (Juan vs. María). Specifically, we showed participants a pictorial 10-point ladder scale, and then we gave them the following instruction: *Please point out the option that best reflects your perception of the risk of*

uploading photos like the one uploaded by the protagonist, Juan (male condition)/María (female condition). The highest part of the ladder represented a maximum risk, and the lowest part represented a minimum risk. The average scores were calculated, with higher scores indicating a greater risk perception. The highest part of the ladder represented a maximum risk, and the lowest part represented a minimum risk. The average scores were calculated, with higher scores indicating a greater risk perception.

Perceived Probability of Suffering from Cyberbullying Behaviors. The subscale of cyber victimization of the European Cyberbullying Intervention Project Questionnaire (ECIPQ; Brighi et al., 2012) was used. Del Rey et al. (2015) adapted it to the Spanish adolescent population. It assesses the frequency of cyber victimization exercised toward peers through SNSs. The subscale consisted on 11 items (e.g., *Someone posted information about me online* or *Someone posted embarrassing videos or pictures of me online*) with a Likert-type response of 0 (*never*), 1 (*once or twice*), 2 (*once a month*), 3 (*once a week*), or 4 (*more times a week*). For the purpose of this study, the original subscale was adapted. The participants were given the following instructions: *Thinking about the situation described above, to what extent do you think the protagonist (Juan vs. María) will be exposed to any of the following behaviors.* Next, the adapted items were shown; in this case, the target of the aggressive behavior was Juan (male condition) or María (female condition). An example of an item is as follows: *Someone will post protagonist information about (Juan or Maria) online*. With this sample, the Cronbach's alpha obtained was .93 (similarly to the Spanish adaptation, α = .97).

Time Spent on Instagram. The participants were asked approximately how much time they spent on Instagram every day (Sánchez-Hernández et al., 2022). The responses were coded as 0 (*less than 10 minutes*), 1 (*10–30 minutes*), 2 (*30–60 minutes*), 3 (*1–2 hours*), 4 (*2–3 hours*), and 5 (*more than 3 hours*). The responses were averaged, with higher scores indicating more time spent on Instagram.

Statistical Analyses

We performed a multivariate covariance analysis (MANCOVA) to test the main and interaction effects of the experimental conditions of risk perception and to estimate the probability of suffering from cyberbullying behaviors. We introduced the selfie type and target's gender conditions as independent variables, as well as risk perception and the probability of suffering from cyberbullying behaviors as the dependent variables. All analyses were carried out using version 22.0 of IBM SPSS Statistics for Windows, controlling for gender, age, and time spent on Instagram.[3]

Results

Effect of Experimental Manipulations on Risk Perception and Perception of Cyberbullying

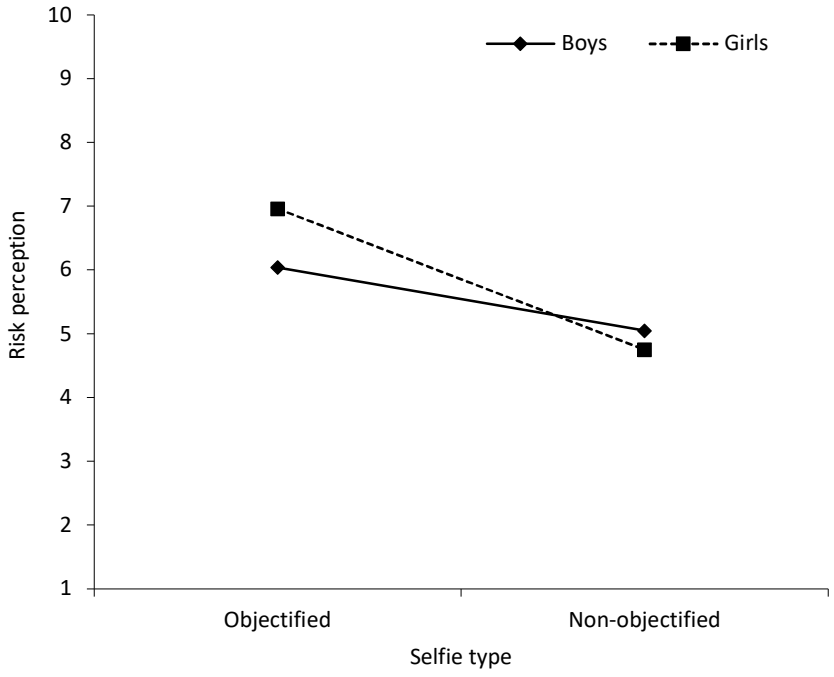
Regarding the selfie type condition (objectified vs. non-objectified), the results of the MANCOVA revealed that participants assigned to the objectified selfie condition perceived more risk than those in the non-objectified condition did (Hypothesis 1a), $F(1, 361) = 33.18$, $p < .001$, $\eta_p^2 = 0.08$. That is to say, the participants seemed to perceive more risk when the protagonist uploaded an objectified versus a non-objectified selfie on Instagram ($M_{objectified} = 6.57$, $SD = 2.56$; $M_{non\text{-}objectified} = 4.87$, $SD = 2.61$). Likewise, participants perceived a greater probability of suffering from cyberbullying behaviors in the objectified selfie condition (vs. the non-objectified condition; Hypothesis 1b), $F(1, 361) = 10.78$, $p < .001$, $\eta_p^2 = 0.03$. That is, the participants seemed to perceive that it would be more likely that the protagonist would suffer from cyberbullying behaviors to a greater extent when he or she uploaded an objectified versus a non-objectified selfie on Instagram ($M_{objectified} = 1.53$, $SD = 1.01$; $M_{non\text{-}objectified} = 1.19$, $SD = 0.91$). In relation to the target's gender condition (male vs. female), the results found no statistically significant differences in risk perception, $F(1, 361) = 1.25$, $p = .273$, $\eta_p^2 = 0.00$; thus, Hypothesis 2a was not supported. By contrast, it was found that participants perceived that it would be more likely that the protagonist would suffer from cyberbullying behaviors to a greater extent in the female target condition (vs. male; Hypothesis 2b), $F(1, 361) = 7.84$, $p = .005$, $\eta_p^2 = 0.02$, ($M_{female} = 1.52$, $SD = 0.99$; $M_{male} = 1.27$, $SD = 0.96$). Additionally, no significant interaction effects were found for risk perception, $F(1, 361) = 0.05$, $p = .819$, $\eta_p^2 = 0.00$, or the probability of suffering from cyberbullying behaviors, $F(1, 361) = 0.03$, $p = .864$, $\eta_p^2 = 0.00$. Therefore, this result was not supported by the assumption that in the objectified selfie condition, and when the target was female, the participants showed a higher risk perception (Hypothesis 3a) and a higher perception of the idea that she would suffer from cyberbullying behaviors (Hypothesis 3b).

Finally, concerning control variables, gender was statistically significant for risk perception, $F(1, 361) = 3.97$, $p = .047$, $\eta_p^2 = 0.01$ ($M_{girls} = 6.02$, $SD = 2.72$; $M_{boys} = 5.67$; $SD = 2.70$) and for the perception of cyberbullying behaviors, $F(1, 361) = 4.61$, $p = .032$, $\eta_p^2 = 0.01$. That is, female adolescents showed higher scores for risk perception and the probability of suffering from cyberbullying behaviors compared with male adolescents regardless of the experimental condition ($M_{girls} = 1.44$, $SD = 0.94$; $M_{boys} = 1.33$; $SD = 1.04$). Time spent on Instagram was not significant for risk perception ($p = .057$); however, it was significant for the perception of the probability of suffering from cyberbullying behaviors, $F(1, 361) = 5.13$, $p = .024$, $\eta_p^2 = 0.01$. That is, the participants who spent more time on Instagram ($M = 1.41$; $SD = 0.98$) perceived a greater likelihood that the protagonists would suffer cyberbullying behaviors than those who spent less time on Instagram ($M = 1.35$; $SD = 0.98$). Age was not statistically significant for risk perception ($p = .174$) or for the perception of the probability of suffering from cyberbullying behaviors ($p = .218$).

Auxiliary Analyses

As reflected in previous analyses, the participant's gender seemed to affect the risk perception and the perception of suffering from cyberbullying behaviors. Female adolescents seemed to perceive more risk in the protagonist's behavior and that he or she would be a target of cyberbullying behaviors to a greater extent when compared with male adolescents. On this basis, we decided to explore, in a more exhaustive way, the role of participants' gender through additional analyses. We first included gender as an exploratory independent variable in an MANCOVA analysis together with the selfie type and target's gender conditions, taking the risk perception or the probability of suffering cyberbullying behaviors as dependent variables, respectively (controlling for age and time spent on Instagram). The results revealed a significant interaction term Participant's gender X Selfie type on risk perception, $F(1, 358) = 4.59$, $p = .031$, $\eta_p^2 = 0.01$. We then executed a moderation analysis to ease the interpretation (simple slopes) of this two-way interaction effect. This analysis was carried out with the PROCESS macro (Model 1; Hayes, 2018) for SPSS version 3.4.1 with 10,000 bias-corrected bootstrap samples and 95% confidence intervals. As depicted in Figure 1, the effect was statistically significant in female adolescents, $b = -2.12$, $SE = 0.35$, 95% CI [−2.81, −1.44], and not significant in male adolescents, $b = -0.85$, $SE = 0.44$, 95% CI [−1.71, 0.02]. This finding showed that female adolescents seemed to perceive more risk in the objectified photo condition than in the non-objectified photo condition (see Figure 1).

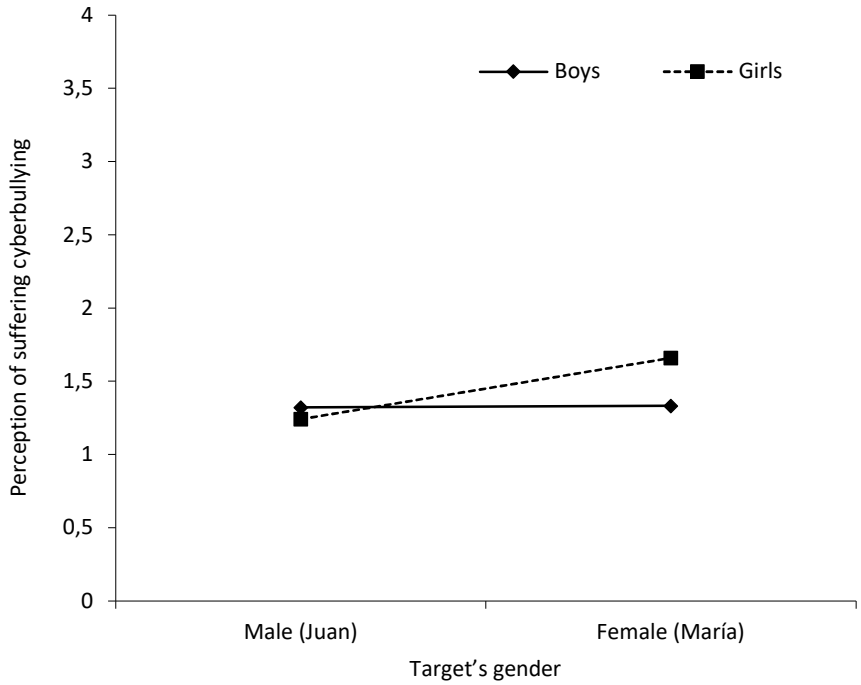
Figure 1. *Two-Way Interaction Between Participant's Gender × Selfie Type on the Risk Perception.*



Additionally, we found a significant interaction effect of the participant's gender and the target's gender on the perception of the probability of suffering from cyberbullying behaviors, $F(1, 368) = 6.34$, $p = .010$, $\eta_p^2 = 0.02$. Simple slopes revealed that the effect was statistically significant for female adolescents ($b = 0.43$, $SE = 0.13$, 95% CI [0.18,

0.69]) and was not significant for male adolescents, b = −0.02, SE = 0.16, 95% CI [−0.33, 0.29]. This finding showed that female adolescents seemed to perceive that María (female condition) would be a target of cyberbullying behaviors to a greater extent when compared with Juan (male condition; see Figure 2).

Figure 2. *Two-Way Interaction Between Participant's Gender × Target's Gender on the Perception of Probability of Suffering Cyberbullying Behaviors.*



Discussion

The results indicated that uploading objectified selfies to Instagram is a behavior that may increase the risk perception and perceived likelihood of being a victim of cyberbullying compared with uploading non-objectified selfies. Also, in line with previous research (e.g., Donoso-Vázquez et al., 2018; Hébert et al., 2016; Merrill & Hanson, 2016), the results seem to indicate that being a girl might itself be a risk factor on SNSs, as adolescents perceived an increase in the likelihood of suffering cyberbullying behaviors when a girl (vs. a boy) posted a selfie to Instagram. Furthermore, in an exploratory way, these results suggested that the participant's gender moderated the effect of the type of selfie (objectified vs. non-objectified) and the target's gender (male vs. female) on the perceived risk of the behavior and on the likelihood of suffering from cyberbullying behaviors, respectively. The findings of Study 1 and the results of previous research seem to indicate that female adolescents show higher levels of awareness when it comes to identifying the risky and violent situations they observe in cyberspace. Therefore, these results suggested the need to carry out a second study replicating the findings and further analyzing the role of the participant's gender in risk perception and in the perceived probability of being a victim of cyberbullying behaviors. Specifically, in the second study, we focused on objectified selfies and manipulated the target's gender to examine its effect on the dependent measures.

Study 2

The aim of this study was to examine the social perceptions of adolescents regarding the risk of being a victim of cyberbullying behaviors by posting objectified selfies on Instagram, based on the target's gender (male vs. female) and the participant's gender. On this basis, we expected that:

H1a: Participants assigned to the female (vs. male) condition will show a higher risk perception.

H1b: Participants assigned to the female (vs. male) condition will show a higher perception that the target who uploaded a personal selfie will suffer from cyberbullying behaviors.

H2: Female (vs. male) participants assigned to the female (vs. male) condition will show a higher perception that the target who uploaded a personal selfie will suffer from cyberbullying behaviors.

H3: Risk perception will mediate and the participant's gender will moderate the relationship between the target's gender and the probability of suffering from cyberbullying behavior.

Methods

Participants

Originally, we collected 319 participants, but 43 participants were removed because they did not complete the measures, 44 participants failed the attention check (i.e., *If you are reading this question, answer with 3*), 18 participants were older than 19 years of age[4], one participant did not disclose his or her gender (i.e., he or she indicated *other*), and four participants failed the manipulation check. The final sample consisted of 209 undergraduate students: 52.20% girls (n = 109) and 47.80% boys (n = 100) at the University of Granada between 17 and 19 years old (M = 18.39, SD = 0.68). It should be noted that 22% (n = 47) of participants recognized having suffered from cyberbullying: 26.6% (n = 29) of girls and 18% (n = 18) of boys, whereas 77.5% (n = 162) of participants did not, 73.4% (n = 80) girls, 82% (n = 82) boys. On the other hand, 3.3% (n = 7) recognized having engaged in cyberbullying behaviors, 3.7% (n = 4) girls, 3% (n = 3) boys, whereas 96.7% (n = 105) of participants did not, 96.3% (n = 105) girls, 97% (n = 100) boys. A priori power analysis (G*Power; Faul et al., 2009) with a power of .80 (α = .05) determined a sample size of 158 (ANCOVA with four groups, two degrees of freedom, and five covariates) to detect small-to-medium effect sizes (f = 0.10–0.25; J. Cohen, 1969). The inclusion criteria were to have an active account on Instagram and not to be older than 19 years old. The participants were not paid to complete the questionnaire.

Procedure and Design

Through a convenience sample, we distributed the online questionnaire[5] (using the online platform Qualtrics) on the university's email server, providing any undergraduate student between the ages of 17 and 19 who had an Instagram account with the opportunity to participate. Before answering the study measures, the participants were required to accept the informed consent form, which told them about the anonymity and confidentiality of their responses. The form allowed them to agree or to decline to answer the questionnaire. It took approximately 15 minutes to complete. We collected the data during October and November 2020, with the survey remaining open for two months.

We used a factorial experimental design 2 (target's gender condition: male vs. female) x 2 (participant's gender: male vs. female) with risk perception and the perception of the probability of suffering from cyberbullying behaviors as dependent variables. The experimental manipulation was carried out via the critical incident technique. Specifically, two conditions were designed (the target's gender condition: male vs. female), and the participants were randomly assigned to them. After reading the critical incident, the participants completed a total of 18 items. Specifically, they responded to the measures of manipulation check, risk perception, the probability of suffering from cyberbullying behaviors, previous experiences of cyberbullying victimization, time spent on Instagram, and selfie-taking frequency, as well as the sociodemographic variables: gender (*What is your gender? Male/Female/Other [specify]*) and age (*What is your age?*).

Measures

Experimental Manipulation. The critical incident technique (Flanagan, 1954) was conducted for an experimental condition (target's gender: male vs. female). The participants were asked to *think of a selfie that a boy/girl uploads to Instagram in underwear or a swimsuit showing different parts of his or her body, and that you yourself or others might consider to be sexy.* This technique allows for obtaining more complete information about the participants' experiences, including their cognitions responses.

Manipulation Check. The participants were asked to indicate whether in the situation above (person who uploads a photo in a swimsuit/ underwear to Instagram) *you were asked to think of a boy or a girl*. This categorical format item allowed us to check whether the participants had identified the conditions they were in.

The results of a chi-square test showed that 100% (n = 114) of the participants assigned to the female target identified the condition properly. By contrast, in the male target condition, 96.9% (n = 95) identified the conditions they were in, and 3.4% (n = 4) did not, χ^2 (1, 213) = 197.47, p < .001, φ = 0.96, which were removed from the analyses.

Risk Perception. Risk perception was identical to that of Study 1 (Hernández-Sánchez et al., 2020; Kilpatrick & Cantril, 1960).

Perceived Probability of Suffering Cyberbullying. In this study, we obtained an α-Cronbach of .94.

Previous Experiences of Cyberbullying. After we provided participants with the ECIPQ (Del Rey et al., 2015), we asked them about their previous experiences of cyberbullying victimization using an item with a categorical response format: *Considering the online behaviors described in the previous scale, have you ever suffered/exercised cyberbullying?* (e.g., *Someone threatened me through texts or online messages/I threatened someone through texts or online messages)* Yes/No.

Time Spent on Instagram. We used the same measure as in Study 1.

Frequency of Taking Selfies. An item based on Connors' (2020) study was used to assess the frequency with which participants took these selfies (*How often do you post selfies that you yourself or others might consider to be sexy?*). We used a Likert-type scale ranging from 1 (*never*) to 5 (*frequently*).

Statistical Analyses

We conducted a MANCOVA to test the effect of gender on risk perception and on the perception of cyberbullying. The target's gender condition and the participant's gender were introduced as independent variables, and risk perception and the probability of suffering from cyberbullying behaviors were dependent variables. To ease the interpretation of the two-way interactions, we performed simple slope tests (Model 1; Hayes, 2018). Age, time spent on Instagram, the frequency of taking selfies, having suffered cyberbullying, and having engaged in cyberbullying behaviors were introduced as the control variables.[6]

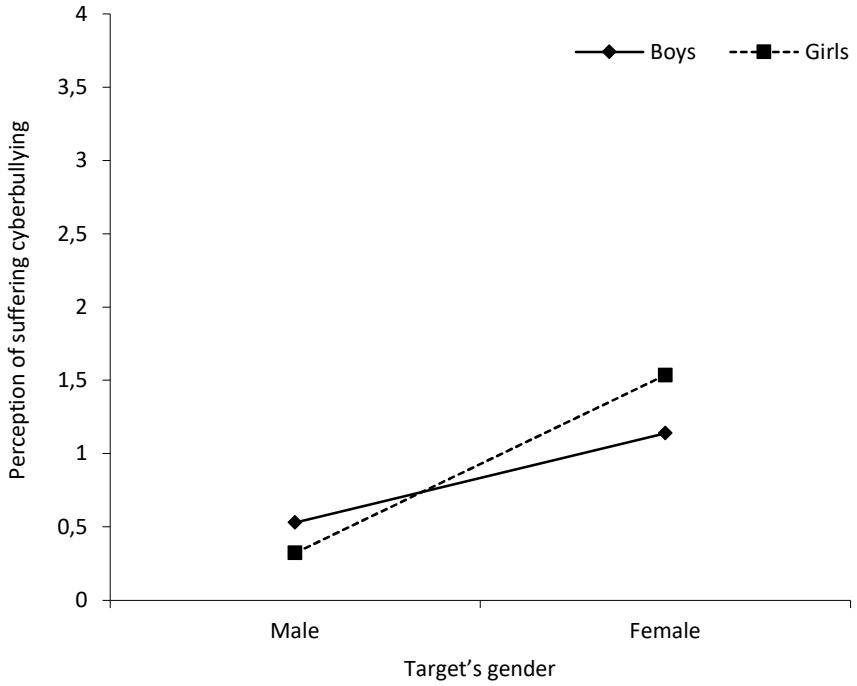
Results

Effect of Gender on Risk Perception and Perception of Cyberbullying

Regarding the target's gender, a MANCOVA analysis indicated that the participants assigned to the female condition showed a higher risk perception compared with those assigned to the male condition, $F(1, 201) = 41.69$, $p < .001$, $\eta_p^2 = 0.17$ ($M_{female} = 6.03$, $SD = 1.96$; $M_{male} = 4.22$, $SD = 2.17$). Likewise, the participants assigned to the female condition showed a higher belief that the person who uploaded a personal selfie would suffer from cyberbullying behaviors, $F(1, 201) = 59.66$, $p < .001$, $\eta_p^2 = 0.23$ ($M_{female} = 1.92$, $SD = 0.82$; $M_{male} = 0.99$, $SD = 0.84$). These results supported Hypotheses 1a and 1b.

In relation to the participant's gender, we expected female participants to perceive to a greater extent that the target would suffer from cyberbullying behaviors when the person who uploaded the objectified selfie was female (vs. male; Hypothesis 2). The interaction condition of the participant's gender was statistically significant for the perception of suffering from cyberbullying behaviors, $F(1, 201) = 6.64$, $p = .010$, $\eta_p^2 = 0.03$. Simple slopes (Model 1; Hayes, 2018) indicated that the effect was stronger in female adolescents, $b = 1.22$, $SE = 0.16$, 95% CI [0.89, 1.54], than in male adolescents, $b = 0.61$, $SE = 0.17$, 95% CI [0.28, 0.25], thus supporting Hypothesis 2. As in Study 1, female adolescents (vs. male) seemed to perceive that a girl would be a target of cyberbullying's behaviors to a greater extent than a boy would (see Figure 3). No effect of covariates was found ($p > .05$).

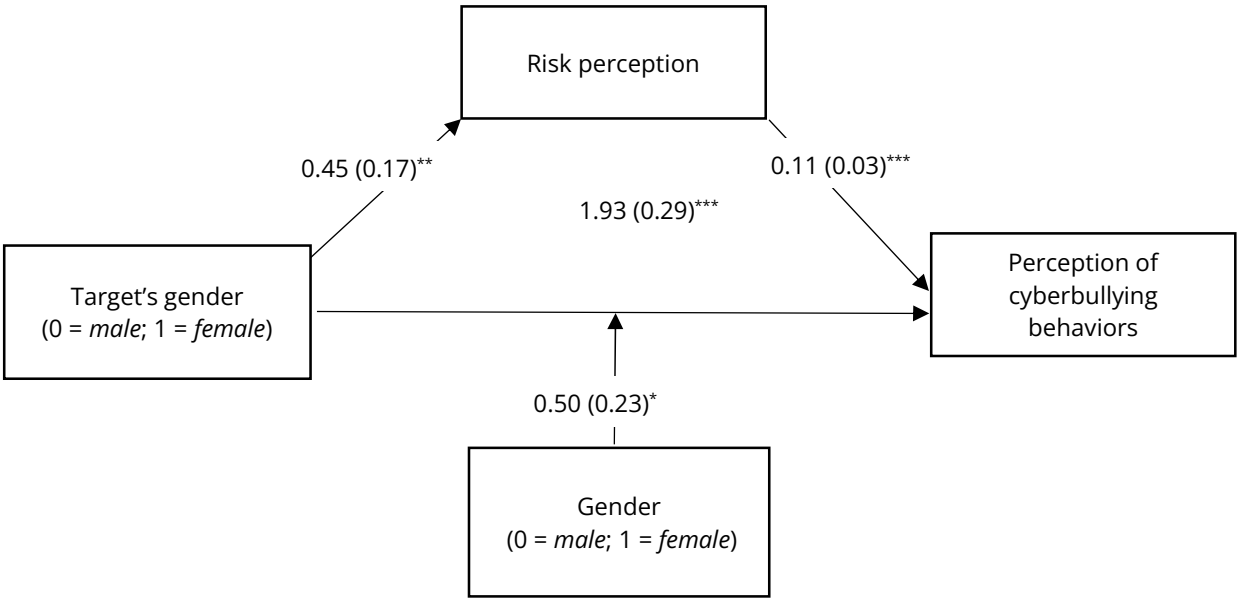
Figure 3. *Two-Way Interaction Between Target's Gender Condition × Participant's Gender on the Perception of Probability of Suffering Cyberbullying Behaviors.*



Effect of Target's Gender on the Perception of Suffering From Cyberbullying Behaviors Through Risk Perception

Finally, we analyzed whether risk perception mediated and the participant's gender moderated the relationship between the target's gender and the probability of suffering from cyberbullying behaviors (Hypothesis 3). That is, we expected an indirect effect of the target's gender and the probability of suffering from cyberbullying behaviors through risk perception with the moderation of the direct effect (i.e., the moderation of gender on the direct relationship between the target's gender and the probability of suffering from cyberbullying behaviors). We performed a moderated mediation analysis with the PROCESS (Model 5; Hayes, 2018) macro for SPSS (version 3.4.1) with 10,000 bias-corrected bootstrap samples and 95% confidence intervals. The target's gender condition was introduced as the predictor (X), risk perception as the mediator (M), the probability of suffering from cyberbullying behaviors as the criterion (Y), and the participant's gender as the moderator variable (W). Age, time spent on Instagram, the frequency of taking selfies, having suffered cyberbullying, and having engaged in cyberbullying behaviors were introduced as the control variables. According to Hayes (2018), X (the target's gender) exerts its effect on Y (the perception of suffering from cyberbullying behaviors) indirectly through M (risk perception) but also directly, with the magnitude of the direct effect being dependent on W (the participant's gender). As can be observed in Figure 4, risk perception mediated the relationship between the target's gender and the perception of suffering from cyberbullying behaviors (indirect effect: b = 0.21, SE = 0.07, 95% CI [0.10, 0.36]). Additionally, gender moderated the relationship between the target's gender and the perception of suffering cyberbullying. Simple slopes indicated that the effect was stronger in female adolescents, b = 0.96, SE = 0.17, 95% CI [0.62, 1.29], than in male adolescents, b = 0.45, SE = 0.17, 95% CI [0.12, 0.79]. No effect of covariates was found (p > .05). It should be noted that the variables included in the model predicted 33.15% of the variance of the perception of suffering from cyberbullying behaviors.

Figure 4. *Graphic Representation of the Model of Mediation With Moderation of Effect of Participant's Gender.*



Note. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Discussion

In this study, it was found that when a girl (vs. a boy) uploaded an objectified selfie, the participants perceived more risk associated with her behavior, and they perceived that she would be more likely to suffer from cyberbullying behaviors. Moreover, this study extends to the result of Study 1, in which we found that female adolescents (vs. males) seemed to perceive that a girl would be a target of cyberbullying behaviors to a greater extent than a boy would when she uploaded an objectified photo. This corroborated the moderating role of the participant's gender in this relationship. Lastly, exploratory analyses have demonstrated that participants perceived that uploading an objectified photo was perceived as more risky when the target was a girl (vs. boy), which in turn led to suffer cyberbullying's behaviors to a greater extent.

General Discussion

In the current research study, we aimed to examine the social perceptions of adolescents regarding the risk of being a victim of cyberbullying behaviors by posting personal selfies on Instagram from the perspective of a bystander. In relation to the selfie type condition (objectified vs. non-objectified), the results revealed a greater perceived risk and a greater perception that the target would suffer from cyberbullying behaviors when he or she uploaded an objectified selfie (vs. non-objectified). These findings extend the research of Donoso-Vázquez et al. (2018), who suggested that although adolescents do not often notice the risk derived from posting photos or videos on SNSs, they tend to perceive more risk and cyberbullying behaviors when they are observers (i.e., they are not directly involved). This is in line with the findings of Sanchéz-Hernández et al. (2020). That is, it appears that adolescents, in general, perceive the risk of these behaviors when someone performs them to a greater extent than when they do it. Moreover, the previous research pointed out that one of the most frequent cyberbullying behaviors is exercised against people who are sexually objectified (Donoso-Vázquez et al., 2018; Scarduzio et al., 2018). Therefore, given the high frequency with which self-objectified individuals are victims of cyberbullying behaviors, it seems reasonable to find that, from an observer's perspective, the risk of suffering cyberbullying was identified to a greater extent when users uploaded objectified selfies on SNSs. In this line, our findings suggest that adolescents tend to easily identify the potential victims of posting objectified selfies compared with people who upload non-objectified selfies.

Regarding the gender's target, we expected a higher risk perception when the gender's person who posted the selfie was female (vs. male). However, the results were not significant. By contrast, as we expected, the participants showed a higher belief that the person could suffer from cyberbullying behaviors to a great extent when the person was female (vs. male). These findings suggest that adolescents could perceive no gender difference in the risk of uploading photos on SNSs; however, they seem to recognize that girls are more likely to experience

cyberbullying by peers. A false belief of equality seems to be observed given that, although the perceived risk appears to be the same for both genders, when we specifically examined the probability with which the target might suffer from cyberbullying behaviors (e.g., someone could post embarrassing videos or pictures of him/her online, or someone could spread rumors about him/her), the discrepancies appeared, with girls being the potential victims. In this respect, previous studies indicated that women are in a vulnerable situation compared with men in the online environment (e.g., Buelga et al., 2010; Donoso-Vázquez et al., 2016; Estébanez & Vázquez, 2013; Sourander et al., 2010), thus becoming potential victims. More specifically, the fact that a higher risk perception of suffering cyberbullying when a girl posts a personal selfie (vs. a boy) is congruent with the results by Mishna et al. (2020), who suggested that girls tend to be more targeted, blamed, and criticized on SNSs than boys are for gender-based reasons. In this sense, several research studies have noted that the costs of self-objectified behaviors on SNSs seem to be more negative for women, who are judged more based on their bodies and on sexualization compared with men (e.g., Barthel & Aydt, 2016; Calogero, 2012; Nezlak et al., 2015). Thus, SNSs, such as Instagram, could be contributing to the legitimization of ideological and symbolic violence based on gender distinction. That is mainly exercised against women who deviate from the normative impositions of patriarchy (Donoso-Vázquez et al., 2016; Flores & Browne, 2017).

On the other hand, we expected that the publication of an objectified selfie (vs. a non-objectified one) when the individual was a girl (vs. a boy) would be associated with higher levels of risk perception and a higher belief that the person would suffer from cyberbullying behaviors. Despite the fact that the results of Study 1 revealed that this interaction was not significant, the MANOVA results showed that the effect of experimental manipulations on the perception of suffering from cyberbullying behaviors were going in the expected direction.[7] Specifically, we observed that in the objectified (vs. non-objectified) condition, the mean scores on the cyberbullying probability measure were higher when the target was female compared with male. However, this was not the case for the risk perception measure. These results are in line with our explanation of the false belief of equality, suggesting that, although women are not recognized as vulnerable or as at risk in the online context, they are perceived as potential victims of cyberbullying—a specific violent behavior—to a greater extent than men are. Nevertheless, we carried out a second study to analyze this effect and the abovementioned plausible explanation in a more exhaustive way, focusing on the objectified selfies and manipulating the gender's target. In this respect, the results of Study 2 revealed that the participants assigned to the female condition (vs. male) showed a higher risk perception and a higher belief that the target would suffer from cyberbullying behaviors from uploading an objectified selfie. Moreover, the results showed that the participants perceived that uploading an objectified selfie was more risky in the female (vs. male) condition, which, in turn, led to a higher perception of suffering from cyberbullying behaviors. These results are in line with the previous literature indicating that being female is itself a risk factor of cyber victimization on SNSs among adolescents (e.g., Donoso-Vázquez et al., 2018; Hébert et al., 2016; Merrill & Hanson, 2016). Furthermore, these findings contribute to previous research suggesting that adolescents and young people seem to identify, to some degree, cyber violence against women in the online environment (Donoso-Vázque et al., 2018; Sánchez-Hernández et al., 2020). However, it would be interesting to investigate more about how being involved in violence (vs. being a bystander) could hinder its recognition and contribute to its normalization and justification, both by the victim and by the aggressor (Sánchez-Hernández et al., 2020).

Finally, in relation to covariables, the participant's gender affected the perception of suffering from cyberbullying behaviors, that is, the female adolescents showed higher scores for risk perception and the probability of suffering from cyberbullying behaviors than male adolescents did. Considering this finding, we carried out auxiliary analyses in Study 1 to further investigate the effect of the participant's gender on the study variables. The results showed that female adolescents perceived: (a) that a girl would be a target of cyberbullying behaviors to a greater extent than a boy would be, and (b) more risk in the objectified photo condition (vs. non-objectified photo condition). Such effects were not significant in boys. A second study led us to extend these results focused on the objectified condition, and it revealed that female adolescents (vs. males) seemed to perceive that a girl would be a target of cyberbullying behaviors to a greater extent than a boy would be. This effect was stronger in female adolescents than in male adolescents. These results are in line with previous findings suggesting that female adolescents show higher levels of awareness in identifying all of the situations of violence that they observe in cyberspace (Donoso-Vázquez et al., 2018). Indeed, it has been found that women have a higher risk perception of gender-based violence because they have a greater knowledge of this violence by experiencing them to a greater extent (Osuna-Rodríguez et al., 2020). Female adolescents seem to be the main victims of cyberbullying behaviors (Hébert et al., 2016; Merrill & Hanson, 2016); in fact, our research corroborates the previous findings by revealing that 26.6% of girls acknowledged having been victims of cyberbullying compared with 18% of boys. Moreover, because

female adolescents frequently suffer from cyberbullying behaviors by posting objectified selfies (Donoso-Vázquez et al., 2020), it would be logical to think that they also identify to a greater extent the risk situations associated with this behavior, and they perceive themselves as potential victims. However, our results should be taken with caution because we used self-reported measures, which may be subject to response biases, such as social desirability and recall biases. Moreover, participants' perceptions about cyberbullying may be influenced by other factors not considered in our research. For example, people's perceptions may be guided by their personality traits, where agreeableness is negatively related to cyberbullying behaviors (van Geel et al., 2017), whereas neuroticism has been positively related (Kowalski et al., 2014). Likewise, other individual variables could affect perceptions, such as normative beliefs about aggression and gender (Kowalski et al., 2014). According to social role theory (Eagly, 1987), men are socialized to be socially aggressive and competitive, showing, in general, greater use for and justification of violence, whereas women are educated to be prosocial and prioritize caring for others. This differential gender socialization could also affect the degree to which men and women identify and perceive the risk of violence in different contexts, as it could be to suffer cyberbullying for posting self-objectified photos on Instagram. Therefore, more research is needed in this field to substantiate our assumptions.

Although the current research study contributes to a better understanding of the social perception of cyberbullying behaviors, some limitations should be considered in future studies. The sample included members of the population from the southern part of Spain, so its generalization to other geographical areas is limited. We also used a nonprobability convenience sampling, therefore it is not possible to generalize our results to the overall population. Future researchers should use random sampling and consider other relevant sociodemographic factors (e.g., sexual orientation, nationality, ethnicity, or cultural values). Moreover, our sample is relatively small, and larger samples are needed to test moderated mediation analyses with medium–large effect sizes; therefore, it would be desirable to test these analyses with larger and more generalizable samples. Additionally, the experimental manipulation (i.e., hypothetical scenario) of Study 1 could have certain limitations; it is relevant to treat with caution the degree of naturalness, accuracy, and experience that this methodology achieves (Hughes, 1998). However, this technique has been widely used because it allows varying specific characteristics as other characteristics remain constant, which is an advantage when making causal statements (e.g., Hammock et al., 2015; Tamborra et al., 2014). In our research, we observed that the type of photo (sexuality vs. non-sexuality) and the gender of the protagonist (male vs. female), which were manipulated using the vignette methodology, influenced participants' perceptions of the risk and likelihood of cyberbullying, therefore showing its validity. However, this potential limitation was overcome in Study 2 through the use of the critical incident technique. It allowed us to obtain more information about the participants' experiences. This reduced, to some extent, the social distance from the target, and it improved the effectiveness of the experimental manipulation used. It should also be noted that Instagram has recently incorporated a new update that allows the number of likes to be hidden, thus keeping these data invisible to the user or to others. Analyzing this feature could be very interesting for future research. For example, it would allow researchers to examine the degree of importance that adolescents and young people with a high tendency to objectify themselves on SNSs attach to the visibility of their "likes," and how this affects their online behavior (see Wallace & Buil, 2021). Moreover, although in our study we did not find an effect of previous experiences of cyberbullying on participants' perceptions, we encourage future researchers to further explore this issue in real situations rather than scenarios. Additionally, they could use a more objective measure that captures cyberbullying victimization and perpetration behaviors and assess their possible effect on the risk perception in real situations. On the other hand, given that egalitarian gender attitudes have been negatively associated with the perpetration of several types of violence in adolescents (Miller et al., 2020), it would be interesting for future researchers to take into account these attitudes as a possible variable affecting their social perceptions of cyberbullying behaviors in response to objectified selfies.

Finally, the findings showed the relevance of considering the gender perspective to develop educational programs given that it could decrease future cyberbullying behaviors at the adolescence stage. In addition, these programs should attempt to increase awareness of the risks associated with uploading personal information on SNSs. Specifically, the study variables could be key in the design of cyberbullying intervention programs from a gender perspective. It is not only necessary to work on gender differences in risk perception and cyberbullying but also on gender differences in the outcomes of intervention programs (Kapitány-Fövény et al., 2022). Likewise, the likelihood of cyberbullying seems to increase among minority groups (Llorent et al., 2016; Xu et al., 2020). Therefore, we consider it relevant to develop intervention programs adapted to the needs and individual characteristics (gender identity, sexual orientation, ethnicity, etc.) of adolescents to achieve greater effectiveness in intervention, promoting equality, inclusiveness, and diversity.

Footnotes

[1] According to the World Health Organization, the period of adolescence ends at age 19. Moreover, recent studies have followed this standard (e.g., Beltrán-Morillas et al., 2020; Villanueva-Moya et al., 2023).

[2] Through the Mahalanobis distance ($p < .001$) we identified five atypical values, which were removed from the main analyses.

[3] Gender was included as a control variable in our analysis because previous findings seem to indicate that female adolescents show higher levels of awareness in identifying all of the situations of violence that they observe in cyberspace (Donoso-Vázquez et al., 2018). Moreover, the effect of age on cyberbullying among adolescents is inconclusive (Moreno-Ruiz et al., 2019). Thus, we also controlled for age. Finally, we controlled for the time spent on Instagram because it has positively related to cyberbullying behaviors (e.g., Gámez-Guadix et al., 2016).

[4] According to the World Health Organization, adolescence ranges from 10 to 19 years of age.

[5] Previous studies have shown that the online sampling methods are valid with paper-pencil ones (e.g., Topolovec-Vranic & Natarajan, 2016).

[6] The frequency with which individuals post objectified selfies seems to influence how they and others perceive their bodies (Bell et al., 2018).

[7] The participants scored higher for the perception of suffering from cyberbullying behaviors when the selfie was objectified and the person was female ($M_{\text{objectified-female}} = 1.68$, $SD = 1.33$; $M_{\text{objectified-male}} = 1.42$, $SD = 1.00$; $M_{\text{non-objectified-female}} = 1.33$, $SD = 0.95$; $M_{\text{non-objectified-male}} = 1.02$, $SD = 0.84$).

Conflict of Interest

The authors declare that there is no conflict of interest, given that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Authors' Contribution

M. Dolores Sánchez-Hernández: conceptualization, data curation, formal analysis, investigation, methodology and project administration, supervision, visualization and writing—original draft, review & editing. **M. Carmen Herrera:** conceptualization, funding acquisition, supervision, writing—review & editing. **Laura Villanueva-Moya:** conceptualization, data curation, formal analysis, investigation, methodology and project administration, supervision, visualization and writing—original draft, review & editing. **Francisca Expósito:** conceptualization, funding acquisition, resources, supervision, writing—review & editing

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About Authors

M. Dolores Sánchez-Hernández is a PhD in Social Psychology at the University of Granada. Her research interests address gender violence, sexism, cyberdating abuse, cyberbullying, social perception, and well-being.

https://orcid.org/0000-0003-1011-2199

M. Carmen Herrera, PhD, is lecturer in Social Psychology at the University of Granada. Her research interests include gender violence in the digital age, sexism, power relationship, gender violence, social network, and pornography.

https://orcid.org/0000-0001-6960-5866

Laura Villanueva-Moya is a PhD in Social Psychology at the University of Granada. Her research interests include gender inequality and close relationships.

https://orcid.org/0000-0002-4705-7827

Francisca Expósito, PhD, is professor in Social Psychology at the University of Granada. Her research interests include gender inequality, sexism, intimate partner violence, and close relationships.

https://orcid.org/0000-0001-6157-4292

Correspondence to
Laura Villanueva-Moya, Mind, Brain, and Behavior Research Center (CIMCYC), Department of Social Psychology, University of Granada, Campus Universitario Cartuja, s/n, Granada, 18011, lauravm@ugr.es