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Persuasion strategies and sexual solicitations and interactions in online sexual grooming of adolescents: Modeling direct and indirect pathways

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ABSTRACT

Online sexual grooming and exploitation of adolescents is receiving increasing social attention. Drawing on a social influence framework, the aim of this study was to test a model of the direct and mediated relationships between an adult's use of persuasion strategies and online sexual grooming of early adolescents. The initial sample of the study consisted of 2731 early Spanish adolescents between 12 and 15 years old (50.6% female). Of these, 196 adolescents (7.17% of the total; 53% girls) were involved in online grooming (mean age = 14.93, *SD* = 0.90). Persuasion strategies by the adult through internet increased the probability of using deceit, bribery, and the minor's nonsexual involvement. In addition, deceit and bribery were associated with higher rates of sexual solicitation, which in turn increased abusive sexual interactions. Understanding strategies used by adults to groom minors contributes to the prevention of and intervention in this crucial societal problem.

1. Introduction

In recent years, concerns about the occurrence and consequences of online sexual grooming of minors has grown considerably both socially and academically (Burton et al., 2016; Patrick et al., 2016; Whittle, Hamilton-Giachritsis, Beech, & Collings, 2013). Online grooming of a child or adolescent is the process by which an adult through information and communication technologies gains access to and the confidence of a minor in order to maintain some sort of sexual interaction with the minor, either online, offline, or both (Craven, Brown, & Gilchrist, 2006; Gámez-Guadix, Borrajo, & Almendros, 2016; Kloess, Beech, & Harkins, 2014; Smith, Thompson, & Davidson, 2014; Webster et al., 2012). This process may include a wide range of modalities, from conversations about explicit sexual content, to online sex games (e.g., via a webcam) to sexual abuse face-to-face (Kloess et al., 2014). Online grooming usually includes online sexual solicitation made by the adult to engage in sexual talk, sexual activities, or to obtain personal sexual information from the minor (Burton et al., 2016; De Santisteban & Gámez-Guadix, 2017a; Mitchell, Finkelhor, & Wolak, 2007; Whittle et al., 2013). Sexual solicitations and interactions of minors with adults increase the likelihood of negative consequences for the victims, such as depressive symptoms or posttraumatic stress disorder (e.g., Ybarra, Leaf, & Diener-West, 2004).

The behaviors through which the adult develops a trusting relationship online with the adolescent to achieve his or her sexual compliance have scarcely been investigated to date (DeMarco et al., 2016). Luring communication strategies have been reported

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among male child sexual abusers in engaging their potential victims into a sexual relationship (Olson, Daggs, Ellefvold, & Rogers, 2007). Much of this knowledge is based on sex offenders' disclosures about their behavior directed to gaining access, isolating, and ultimately entrapping the minor into accepting sexual interactions (Briggs, Simon, & Simonsen, 2011; Campbell, 2009; Wolak, Finkelhor, Mitchell, & Ybarra, 2008). The subtle communication strategies used to foster relationship-building and trust developing enhances the probability of the victim lacking awareness and recognition that anything out of the ordinary that differs from a general online relationship forming is taking place (Kloess et al., 2014; Lang & Frenzel, 1988; Olson et al., 2007).

To date, little is known about the pathways from online to offline sexual offending of minors (DeMarco et al., 2016). Though several tactics have been reported among perpetrators to obtain behavior and attitude changes that increase the probability of victim assent with the adult sexual solicitations, ultimately deriving to sexual interactions, little of this has been framed within the social influence literature. To explore this further, we turn to Cialdini's (1984) six principles of influence, as they may be present in preparatory stages preceding sexual exploitation, as well as during and after exploitation to maintain and prevent disclosure of the abusive relationship.

1.1. Principles of influence in grooming situations

Cialdini (2009) pointed out that there are six universal principles of social persuasion: reciprocity, commitment and consistency, authority, social validation (also called social proof), scarcity, and likability. These principles are used as heuristic cues or cognitive shortcuts for decision making when evaluating messages and determining whether to comply with a request (Guadagno, Muscanell, Rice, & Roberts, 2013).

Reciprocity is based on the feeling of obligation to give back what is received from others (Cialdini, 2009, 2016). The use of attention, favors, and affection by child sex offenders has been widely reported in the offline world (e.g., Craven et al., 2006; Lang & Frenzel, 1988), which may make it more probable that the minor would comply with subsequent requests.

Commitment and Consistency play on the tendency to be consistent with prior commitments. The adolescent's tendency to exhibit consistency with prior actions may form the basis for ongoing, escalating activities suggested by the online sex offender. Initial requests might be for the adolescent's daily life images (e.g., adolescent's face; adolescent on holiday) before moving on to requests for sexually explicit material (O'Connell, 2003).

The *authority* principle relies on the tendency of people to rely on authority figures to guide their decisions, especially when under uncertain situations (Cialdini, 2009). Being perceived as trustworthy seems essential in the grooming process (e.g., Craven et al., 2006; Olson et al., 2007). Online sex offenders may use direct or indirect cues that signal status and expertise to increase their influence, even offering to mentor, teach or guide the adolescent to a greater understanding of his or her own sexuality (O'Connell, 2003).

Social proof relies on the actions of others to guide one's own behavior (Cialdini, 2009). In the child and adolescent abuse literature, evidence has been provided of offenders using this principle of influence, by attempting to demonstrate how many others, especially the minor's peers, have done the thing they are asking him or her to do (Lang & Frenzel, 1988).

The principle of *scarcity* is based on the value provided to items perceived as less available, rare, or uncommon (Cialdini, 2009). The use of the principle of scarcity by child sex offenders is probably about the most mentioned in the literature, from descriptions of the supposedly "secret," "exclusive," and/or "unique" adolescent-offender relationship (Craven et al., 2006; Kloess et al., 2014; Lang & Frenzel, 1988; Olson et al., 2007; O'Connell, 2003). The threat of loss of the "special relationship" they share may interfere with the adolescent's ability to disclose, look for protection, or end the relationship (Craven et al., 2006).

The *liking* principle relies on people's tendency to favor those who they know and like and their proneness to like those who are similar to themselves (Cialdini, 2009). A "friendship-forming" initial stage has been proposed as characterizing online sexual exploitation (O'Connell, 2003), and related contents have been found to predominate in pedophile online communications (Gupta, Kumaraguru, & Sureka, 2012). Learning about the adolescent's life and becoming knowledgeable about his or her existing preferences build a common ground among the offender and the adolescent that would inform subsequent persuasion attempts. Attempts to highlight similarities have been reported, such as verbal familiarity, pretending to share interests and hobbies, and engaging in activities preferred by the adolescent (Campbell, 2009; Kloess et al., 2014). More importantly, the influence agent's demonstrations of apparently genuinely liking and caring for the persuasion target would be the most influential mechanism of the liking principle (Cialdini, 2016). Offenders showing affection, caring, and understanding of what the adolescent is going through has been widely reported (Campbell, 2009; Olson et al., 2007; O'Connell, 2003).

There is increasing evidence of the effectiveness of these principles of persuasion in online settings (e.g., Guadagno & Cialdini, 2005, 2007; Guadagno et al., 2013; Muscanell, Guadagno, & Murphy, 2014). However, to date no study has examined their role in grooming.

1.2. Mediating variables between the principles of influence and sexual solicitations and interactions

Different variables may mediate the relationship between persuasion strategies used by the adult and the sexual solicitation and interactions that characterize online adolescent grooming. Specifically, based on previous literature, we propose that the persuasive appeals may increase the likelihood of a progressive involvement of minors with adults, and the successful employment of deception and bribery, which, in turn, could increase the likelihood of sexual solicitation and interactions.

One of the strategies most commonly used by offenders is deception (Bergen et al., 2014). Previous studies have estimated that up to 50% of the adults deceived minors about their identity, for example, lying about themselves, passing off fake photos of other

persons as themselves without the minors' knowledge or showing themselves as being physically attractive (Briggs et al., 2011; Malesky, 2007; Quayle, Allegro, Hutton, Sheath, & Lööf, 2014; Shannon, 2008; Wolak, Finkelhor, & Mitchell, 2004). One of the most common forms of deceit in online sexual offenders is deceiving on age, with about one quarter of adults simulating to be younger (Bergen et al., 2014). Deception could be difficult to detect for the adolescent due to the intrinsic characteristics of the internet such as the lack of cues of a real face-to-face social context (Smith et al., 2014). Deception could facilitate sexual solicitations and interactions, since adolescents may feel more comfortable engaging with adults with certain characteristics, such as being closer to his/her age (Quayle et al., 2014).

Another strategy often used by adults is bribery, namely, offering gifts or money to the adolescent with the aim of obtaining sexual access to adolescents both offline and online (De Santisteban & Gámez-Guadix, 2017a; Quayle, Jonsson, & Lööf, 2012). Shannon (2008) found that up to 47% of police reports on sexual solicitation included bribery. Webster et al. (2012) found that bribery was aimed at maintaining and escalating sexual solicitations and interactions between adult and child. For example, in the case of webcams as a gift, once the webcam has been accepted and installed by the minor, it is more difficult for the minor to resist the adult's future requests to keep in touch (Webster et al., 2012) or to send sexual material (i.e., sexting) (Gámez-Guadix, De Santisteban, & Resset, 2017). In addition, it has been argued that achieving any kind of content or sexual material from the minor after using bribery is a positive reinforcement of the adult behavior toward the minor and could help maintain the abusive interaction between both (Bergen, 2014).

Finally, obtaining emotional involvement of a nonsexual nature between the adult and the adolescent could be a mechanism that favors obtaining later sexual outcomes (De Santisteban & Gámez-Guadix, 2017a). There is strong empirical evidence that crimes involving adults and minors on the internet often follow a model of statutory rape in which the adult develops a relationship of trust and involvement with the adolescent, rather than an overtly coercive interaction (Wolak et al., 2008). Offenders frequently use compliments to indirectly introduce sexual topics, playing with nonsexual and sexual conversations to develop a closer rapport (Lorenzo-Dus & Izura, 2017; Van Gijn-Grosvenor & Lamb, 2016). In many cases, the victims develop close relationships with the offenders and even report being in love with the offenders (Tener, Wolak, & Finkelhor, 2015; Whittle, Hamilton-Giachritsis, & Beech, 2015). The development of emotional involvement could favor that minors do not consider the grooming process as exploitation and themselves as victims. In fact, Webster et al. (2012) found a group of intimacy-seeking groomers in which the sexual aspect of interactions played a secondary role. O'Connell (2003) found the existence of a friendship forming stage, during which sexual interactions are avoided and the formation of an emotional bond between the adult and the child is encouraged. Often this strategy is prior to sexual solicitation and could facilitate and maintain sexual interactions (Bergen, 2014).

1.3. This study

Based on the previous review, we tested the theoretical model of online adolescent grooming depicted in Fig. 1. First, we hypothesize that online persuasion strategies will be a key aspect of the process of grooming, preparing the minor for the abusive situation. Attempts of persuasion by the adult will be positively associated with deceiving the minor about who the adult really is and the adult's characteristics (hypothesis 1), bribery with gifts, money, or other exchanges (hypothesis 2), and the formation of an involved relationship with the minor (hypothesis 3). These three strategies will be associated with further sexual solicitation by the adult (hypotheses 4 to 6), which in turn will be positively associated with abusive sexual interactions between the adult and the minor (hypothesis 7).

2. Method

2.1. Participants

The initial sample of the study consisted of 2731 adolescents between 12 and 15 years old (female: 50.6%, male: 48.3%, not

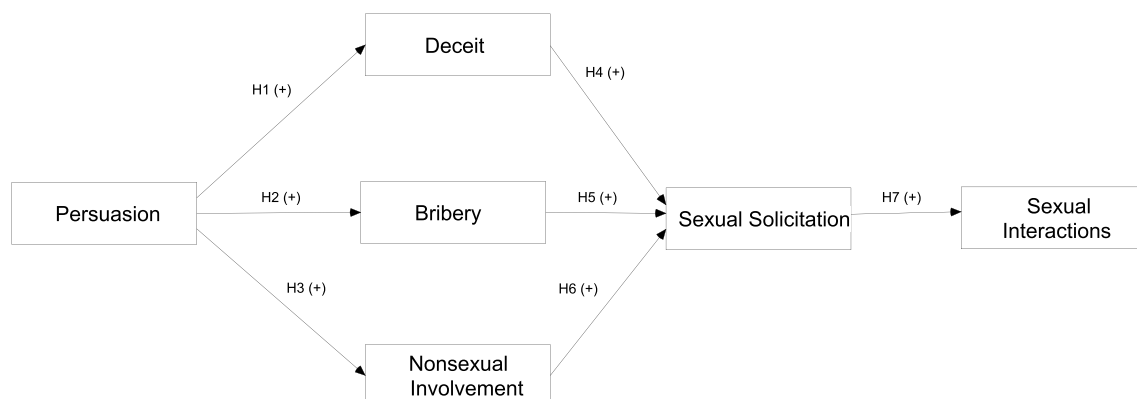


Fig. 1. Hypothesized theoretical model.

reported: 1.1%). Eleven schools of the Community of Madrid were randomly selected, including 7 public schools and 4 private schools. Considering the objectives of the present study, we identified those minors who had reported some type of sexual interaction with an adult through information and communication technologies. To this end, we determined the number of early adolescents who experienced at least one occasion in any of the situations described in the scale of sexual interactions (i.e., talking about sexual things with an adult on the internet, having sent an adult photos or videos with sexual content of his or herself, having maintained a flirtatious relationship with an adult online, having met in person an adult previously met on the internet, and having met offline to have sexual contact). According to this criterion, 196 adolescents (7.17% of the total; mean age = 14.93, $SD = 0.90$) had been involved in online grooming during the last year (104 females, 89 males, and 3 did not indicate gender).

2.2. Measures

2.2.1. Influence scale

The items were selected from the Influence in Close Relationships Scale, developed by [Almendros, Cialdini, Goldstein, and Carrobbles \(2017\)](#) as part of a wider research on influence and persuasion in close relationships within abusive group or intimate relationships. This scale was devised using as a categorization framework Cialdini's postulated six principles of influence: Reciprocation, Commitment/Consistency, Authority, Social Proof, Scarcity, and Liking ([Cialdini, 2009](#)). As a result, 24 items were included, four items for each dimension (e.g., for scarcity: "He/she encouraged me to think that I was lucky for having the unique opportunity of being with him/her"; for authority: "He/she suggested in some way that I wouldn't be able to do important things without his/her advice"). Items were rated on a Likert-type scale from 1 (*strongly disagree*) to 6 (*strongly agree*). Information provided by a Parallel Analysis ([Timmerman & Lorenzo-Seva, 2011](#)) and the Hull method ([Lorenzo-Seva, Timmerman, & Kiers, 2011](#)), recommended the extraction of one common factor with a total explained variance of 85.2%. Indicators for the model were adequate and the internal consistency alpha value for this study was .97.

2.2.2. Bribery scale

We developed three items to evaluate the frequency with which adolescents had experienced online bribery situations by adults during the last year using a 4-point Likert scale: 0 (*never*), 1 (*once or twice*), 2 (*3–5 times*), and 3 (*6 or more times*). Examples of items include "An adult has offered me money or gifts," "An adult has offered me free photo sessions." The internal consistency in the present study was .69.

2.2.3. Deception scale

Three items were developed to evaluate the frequency with which adolescents had experienced online deception situations by adults during the last year using a 4-point Likert scale: 0 (*never*), 1 (*once or twice*), 2 (*3–5 times*), and 3 (*6 or more times*). Examples of items include "To deceive me by pretending to be someone else" and "To pretend to be other person to convince me of things or to scare me." The internal consistency in the present study was .49.

2.2.4. Involvement scale

Items were selected from the Motivation and the Ability subscales of the Influence in Close Relationships Scale ([Almendros et al., 2017](#)). These two dimensions were added to complement the six principles of influence as they may affect the impact of the persuasion tactics employed in close relationships. Five items were used to measure the adolescent's involvement in the close relationship to the detriment of devoting time to him or herself or significant others (e.g., "My commitment to him/her was a clear priority compared to other aspects of my life," "While together, I thought being part of the relationship was the best and most important thing that had happened to me."). Response scale ranged from 1 (*strongly disagree*) to 6 (*strongly agree*). Cronbach's alpha for this study was .90.

2.2.5. Questionnaire of sexual solicitation and interactions with adults ([Gámez-Guadix, De Santisteban, & Alcázar, 2017](#))

This instrument measures two dimensions of sexual victimization that are part of the process of online grooming: Sexual Solicitations and Sexual Interactions. Adolescents were requested to indicate how often they experienced a particular sexual solicitation or interactions during the past year using a 4-point Likert scale: 0 (*never*), 1 (*once or twice*), 2 (*3–5 times*), and 3 (*6 or more times*). The Sexual Solicitation subscale was made up of five items (e.g., "an adult asked me for pictures or videos of myself containing sexual content," "An adult has asked me to have cybersex, for example, via a webcam"). The internal consistency in the present study was .85. The Sexual Interaction subscale was made up of five items (e.g., "I have sent an adult photos or videos with sexual content of me," and "We have met offline to have sexual contact."). The internal consistency in the present study was .69. The psychometric properties of the questionnaire were analyzed in a previous study and both scales had shown good psychometric properties in a Spanish sample of adolescents, including content, factorial, and concurrent validity, and reliability ([Gámez-Guadix, De Santisteban, & Alcázar, 2017](#)).

2.2.6. Procedure

The Autonomous University of Madrid Ethics Committee reviewed and approved the study. Participants' responses were kept anonymous to promote honesty. Twenty adolescents refused to complete the questionnaire (participation rate = 99.38%). Parents were notified and given the option of not allowing their child to participate in the study, and 85 parents (2.57%) declined. The adolescents completed the questionnaire in their classrooms with a study assistant present. The questionnaire required approximately

Table 1
Prevalence and gender differences for variables in the study.

	Total	Males	Females	χ^2
Persuasion strategies	65.6%	53.6%	75.5%	9.80**
Reciprocity	45.4%	32.5%	55.9%	10.07**
Commitment and consistency	44.3%	32.5%	53.9%	8.46**
Authority	51.6%	42.2%	59.4%	5.42*
Social proof	41.9%	31%	51%	7.59**
Scarcity	48.9%	36.9%	58.8%	8.85**
Liking	55.9%	38.1%	70.6%	19.73***
Deception	40%	44.3%	36.3%	1.27
Bribery	44.7%	33.7%	44.7%	2.39
Nonsexual involvement	36.3%	23.5%	46.5%	10.35**
Sexual Solicitations	53.4%	52.8%	53.8%	.021
Sexual Interactions	100%	100%	100%	–

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

30–40 min to complete. After completing the questionnaires, participants were given a sheet informing them of related resources in the community and the researchers' e-mail contacts should they need assistance with grooming problems or related mental health issues.

3. Results

3.1. Descriptive analyses

Table 1 presents the prevalence of each of the variables included in the study. Almost two out of three adolescents (65.6%) reported being the target of at least one type of persuasion by the adults. Girls presented a significantly higher prevalence of persuasion strategies used by the adults (53.6% of males and 75.5% of females, $\chi^2(1, N = 186) = 9.80, p < .01$). The prevalence for each of the persuasion strategies was also significantly higher for females (see Table 1). The most frequently used persuasion tactic was liking, with 55.9% of adolescents reporting that adults showed affection, caring, and similarity with them.

Forty percent of adolescents reported that they had been deceived by the adult, 44.7% reported any type of bribery, and 36.3% reported nonsexual involvement with the adult. No differences were found between males and females related to deception and bribery, whereas nonsexual involvement was significantly higher for females (23.5% of males versus 46.5% of females, $\chi^2(1, N = 182) = 10.35, p < .01$). Finally, 53.8% of adolescents reported sexual solicitation, with no significant differences between males and females.

3.2. Test of the theoretical model

Table 2 presents the descriptive statistics (mean and SD) and the correlations for the study variables. All the correlations were significant and in the expected directions. We used structural equation modeling to test the hypothesized theoretical model on grooming components. Goodness of fit was assessed using the normed fit index (NFI), the non-normed fit index (NNFI), the comparative fit index (CFI), and the standardized root mean square residual (SRMR). The root mean square error of approximation (RMSEA) should not be used when sample size is less than 250 (Hu & Bentler, 1998). NFI, NNFI, and CFI values of .90 or higher and SRMR values lower than .08 indicate an adequate fit (Byrne, 2006). The structural equation models were tested via maximum likelihood using EQS 6.1. Fourteen participants presented missing values in one or more of the variables included in the model, and listwise deletion was used to deal with missing values (Allison, 2001).

First, we analyzed the relationships between the principles of persuasion, mediating variables (deceit, bribery, and nonsexual involvement) and sexual solicitation and interactions. The initially estimated model showed that the direct path between nonsexual

Table 2
Bivariate correlations and descriptive statistics (means and standard deviations) for the study variables.

	1	2	3	4	5	6
1. Persuasion						
2. Deception	.24**					
3. Bribery	.25**	.27**				
4. Nonsexual involvement	.89***	.24**	.19**			
5. Sexual Solicitations	.29***	.28***	.55***	.21**		
6. Sexual Interactions	.41***	.15*	.31***	.41***	.50***	
M (SD)	1.79 (1.09)	1.30 (0.44)	1.34 (0.62)	1.55 (1.06)	1.40 (0.39)	0.45 (0.39)

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

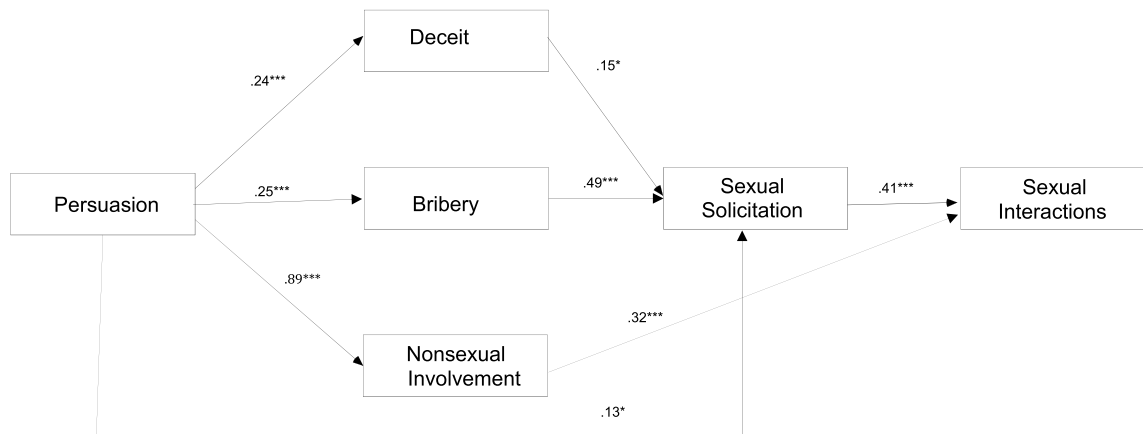


Fig. 2. Estimated Final Model on Online Sexual Grooming. Note. * $p < .05$; *** $p < .001$. $\chi^2(7, N = 182) = 11.87, p = .10$, NFI = .97, NNFI = .98, CFI = .98 and SRMR = .046.

involvement and sexual solicitation was not statistically significant. This path was removed from the model, which was re-estimated with only the significant paths (see Fig. 2). In addition, the modification indices provided by EQS (LM test statistics) suggested adding two additional paths: a) a direct path between persuasion and sexual solicitation, and b) a direct path between involvement and sexual interactions. The results for the final model are presented in Fig. 2. The data fit the model well: $\chi^2(7, N = 182) = 11.87, p = .10$, NFI = .97, NNFI = .98, CFI = .98 and SRMR = .046. As Fig. 2 shows, persuasion was significantly related to deceit, bribery, and minor's involvement. In addition, deceit and bribery were associated with more sexual solicitation, which, in turn, was related to more abusive sexual interactions between the adult and the minor. Finally, as can be seen, the direct relationship between persuasion and sexual solicitation and between involvement and sexual interaction were also statistically significant.

The model shown in Fig. 2 also suggests the presence of several mediated relationships between grooming components. The data supported the significance of the following indirect relationships: an indirect association between persuasion and sexual solicitation ($z = 2.85; p < .01$), between persuasion and sexual interactions ($z = 5.69; p < .001$), between bribery and sexual interaction ($z = 5.13; p < .001$), and between deceit and sexual interactions ($z = -2.25; p < .05$).

4. Discussion

Despite the negative impacts of grooming on adolescents and its significant magnitude (e.g., 7.9% of the sample in this study), little is known about the strategies used by the abuser on the pathway from online to offline sexual exploitation (e.g., DeMarco et al., 2016). This study helps to clarify the variables involved in grooming from a theoretical model of social influence and persuasion (Cialdini, 2009). The results indicate that the use of strategies of influence to exert social persuasion on the victim (reciprocity, commitment and consistency, authority, social validation, scarcity, and likability) are associated with three tactics used by the abuser (nonsexual involvement, deception and bribery) and, of these, the latter two are associated with sexual solicitation, whereas involvement is directly associated with sexual interactions.

The results obtained for bribery and deception are consistent with findings from previous studies. Thus, it has been found that bribery serves to maintain and enhance sexual requests and sexual interactions between the adult abuser and the minor (De Santisteban & Gámez-Guadix, 2017a; Webster et al., 2012). The association between persuasion and bribery was expected as persuasion includes the principle of reciprocity (Cialdini, 2009, 2016). Research on sexual abuse offline has highlighted the importance of this strategy, which would facilitate the minor's acceptance of the requests of the abuser (e.g. Craven et al., 2006; Lang & Frenzel, 1988). Our study highlights the role of this mechanism in grooming.

In addition, the use of deception, as mentioned, has been reported in many previous studies, especially when the abuser pretends to be younger so that the minor feels more comfortable and close to the abuser and thus provides a positive response to the sexual solicitation (Malesky, 2007; O'Connell, 2003; Quayle et al., 2012; Wolak et al., 2004). In addition, deception might be related with the principle of liking, because deception may favor the minor's perception of similarity and attractiveness cues. However, in our study, the path between the use of deceit and sexual solicitation showed a small effect size.

Interestingly, a higher path was found between persuasion and involvement. That is, the data suggest that under the influence of such principles, the adolescent may develop feelings and attitudes of deep emotional involvement with the aggressor. The adolescent may feel that being part of that relationship is the best and most important thing that has happened to him/her and be highly motivated to connect with the aggressor. The role that involvement with the aggressor plays in grooming is of great importance as the results indicate that such involvement is directly associated with the interaction and sexual abuse, without the mediation of sexual solicitation. These findings are congruent with previous research, which emphasized how victims develop close relationships with the offender and even report being in love with them (Tener et al., 2015; Whittle et al., 2015). Thus, it is possible that if adult manipulation is very strong and gives rise to intense involvement of the adolescent, the adult does not have to make a sexually explicit request for sexual access to the minor. This finding is congruent with previous studies that showed how offenders play with nonsexual

and sexual conversations to develop a closer rapport (Burton et al., 2016; Lorenzo-Dus & Izura, 2017; Van Gijn-Grosvenor & Lamb, 2016). It is therefore likely that many offenders spend much time in building this emotional bond with the victim, developing other facets of the relationship other than the sexual relationship. Research examining predatory chat conversations on the internet using linguistic-based analysis reveals the predominance of the relationship forming stage as compared to other stages of online grooming, and less sexual content in pedophile conversations as would have been expected (Gupta et al., 2012). The importance of the emotional bond between aggressor and victim had already been evidenced by previous studies (Webster et al., 2012; Wolak et al., 2008).

In addition, data showed a direct path between persuasion and sexual solicitation. It seems reasonable that, after persuasion, the adult can make a sexual solicitation to the adolescent without the mediation of the variables examined in this study (i.e., involvement, bribery, and deception).

Finally, it is important to highlight the considerable prevalence of different behaviors to manipulate and sexually exploit minors. Persuasion strategies were used among 66% of adolescents who reported sexual interactions with adults, which indicates that adults frequently use subtle tactics to manipulate and sexually exploit minors. In addition, the adults' use of deceit, bribery, and nonsexual involvement impacted around 40% of the adolescents. Girls more often reported that they were the target of persuasion strategies and nonsexual involvement, which indicates a higher risk for females of online sexual exploitation. This finding is consistent with previous studies and may be related to the fact that most offenders are heterosexual men (De Santisteban & Gámez-Guadix, 2017b).

This study has some limitations that contextualize the interpretation of findings. One limitation is the exclusive use of paper-and-pencil self-reports, which might have contributed to increasing the association between measures. Future studies should use additional assessment techniques, such as in-depth interviews. Another limitation is the relatively small sample size of victims. Future studies should replicate the findings with additional samples of minors. Finally, this study is cross-sectional in nature, which prevents us from establishing causal or temporal relationships between the variables. Follow-up over time of the sample would have helped to clarify the temporal relationships between the study variables.

Despite the limitations, the study contributes to the understanding of grooming from the theoretical perspective of persuasion. Furthermore, the results of this study have implications for interventions. Our study helps to show that the development of an emotional bond between aggressor and victim plays a key role in the dynamics of grooming and should be a priority in the interventions. This link appears to be built by the adult's use of compliance and persuasion strategies on the victim. For this reason, preventive interventions should educate adolescents by warning about these strategies and their potential influence on the victims. Such awareness could neutralize the impact of the principles of influence and avoid developing an emotional bond with the potential aggressor. Moreover, warning about the use of persuasive techniques by offenders could in turn reduce the effectiveness of the use of deception and bribery, enhancing the probability of the minors interpreting such behaviors as manipulative and aimed at obtaining sexual contact.

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