



Moral Disengagement Strategies in Online and Offline Bullying

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A B S T R A C T

Bullying and cyberbullying perpetration can involve cognitive processes of moral disengagement; however, there is no clear evidence about which strategies have the greatest influence on this type of behaviour. The aim of this paper was to examine which dimensions of moral disengagement were associated to bullying (off/online) and to explore the effect of gender and age. A total 1,274 students (48.6% girls, aged 11 to 17 years old) from the south of Spain were surveyed ($M = 13.63$, $SD = 1.31$). Multivariate multiple regression analyses showed that age and all moral disengagement mechanisms were associated with both offline and online bullying. Univariate regressions revealed that cognitive restructuring was the most strongly associated with both. The interaction between age and cognitive restructuring was only related to offline bullying. Simple slope analyses showed different effects for younger and older classmates at high levels of cognitive restructuring. Specific moral disengagement strategies have special significance for adolescent bullying and cyberbullying perpetration, with cognitive restructuring in particular promoting bullying perpetration in younger students. The results are discussed in relation to practical implications to prevent bullying and cyberbullying.

Las estrategias de desconexión moral en el acoso escolar virtual y cara a cara

R E S U M E N

La agresión en forma de acoso escolar y ciberacoso implica la activación de procesos cognitivos de desconexión moral, aunque no existe una clara evidencia sobre las estrategias que influyen en mayor medida en este tipo de comportamiento. El objetivo fue examinar qué dimensiones de la desconexión moral se asociaban al acoso escolar (cara a cara/virtual) y explorar los efectos que tienen que ver con el sexo y la edad. Participaron un total de 1,274 estudiantes (48.6% chicas, de edades entre los 11 y 17 años) del sur de España ($M = 13.63$, $DT = 1.31$). Los análisis de regresión múltiple mostraron que la edad y todos los mecanismos de desconexión moral se asociaron con acoso escolar virtual y cara a cara; las regresiones univariadas indican que la reestructuración cognitiva ha sido la estrategia más asociada. La interacción entre la edad y la reestructuración cognitiva solo se ha relacionado con el acoso cara a cara. Los análisis de pendiente simple mostraron diferentes efectos en los más jóvenes y los más mayores cuando el nivel de reestructuración cognitiva era alto. Las estrategias específicas de desconexión moral tienen una gran importancia en los comportamientos de agresión en forma de acoso y ciberacoso en los adolescentes, siendo la reestructuración cognitiva la que particularmente potencia la agresión en forma de acoso en los alumnos más jóvenes. Se discuten los resultados en relación a sus implicaciones prácticas para prevenir el acoso y el ciberacoso.

Palabras clave:

Acoso escolar
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Bullying and cyberbullying constitute immoral behaviour because of the resulting humiliation and harm to other people (Gini et al., 2014). By late childhood, bullying is widely seen as morally wrong (Thornberg et al., 2016), and Australian data has found 99% of adolescents know cyberbullying to be morally transgressive (Bussey et al., 2015). Among the hallmarks of bullying and cyberbullying are the desire to do harm in a deliberate manner and repeatedly in the social context, and imbalance of power (Thornberg et al., 2015). Cyberbullying, an indirect form of bullying (Smith et al.,

2008), occurs when digital devices are used (e.g., to spread gossip, share embarrassing photos or videos, or send offensive messages to the victim) (Herrera-López et al., 2017; Quintana-Orts & Rey, 2018; Slonje & Smith, 2008). The fact that cyberbullying shares the defining characteristics of bullying has led many researchers to study the similarities and differences between both phenomena (Garaigordobil & Machimbarrena, 2019; Zych et al., 2015).

A large body of bullying research has focused on moral disengagement in an attempt to understand how some boys

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and girls are able to transgress moral standards and aggress others. A recent meta-analysis of the association of overall moral disengagement tendencies and bullying perpetration found a mean effect across forty-four studies of $r = .31$ (Killer et al., 2019); meta-analytic results for cyberbullying perpetration provide a similar overall value of $r = .38$ (Chen et al., 2017; Gini et al., 2014). However, moral disengagement is a multi-faceted construct, with multiple mechanisms that serve as strategies to reduce guilt, remorse, and self-sanctioning emotions; some of those mechanisms have been found to be more relevant to bullying than others (e.g., Runions, Shaw et al., 2019; Thornberg & Jungert, 2014). Examining the specific mechanisms that are most relevant to bullying provides more insight to the development of interventions to increase moral engagement and thereby reduce bullying. Thus, the overarching aim of this study is to examine selected mechanisms of moral disengagement to determine whether they play equivalent roles in bullying and cyberbullying perpetration.

Mechanisms for Moral Disengagement

As part of his Social Cognitive Theory addressing moral agency, Bandura (1999) proposed a set of psychological mechanisms that may operate to avoid aversive, self-sanctioning emotions such as guilt, remorse or shame that would otherwise ensue from behaviour that violates one's own moral commitments. These mechanisms of moral disengagement were conceptualized as a set of dynamic self-regulatory cognitive processes that permit an individual to commit harmful actions against others and not experience the negative intrapersonal consequences (Bandura et al., 2001; Van Noorden et al., 2014). Bandura (1999) posited eight mechanisms clustered into four broad strategies that can enable moral disengagement. First, mechanisms that serve a cognitive restructuring strategy operate to 'reshape' the transgression into something less transgressive via (i) moral justification that locates a 'greater good' served by the immoral act; (ii) euphemistic language that downplays the seriousness of the act; and (iii) advantageous comparison that downplays the act by contrasting with more heinous immoral precedents. The second set of mechanisms operate by shifting agency for the transgression away from the self, either by displacing responsibility to another person or diffusing it across a group. The third strategy operates by disregarding or distorting the modifying consequences of the transgressive act on others by disregarding or distorting the likely outcomes of the transgression, for example, arguing that bullying builds character in the victim. The fourth set modulates perceptions of the target, including dehumanizing those who may be harmed by the transgressive behaviour and blaming the victim for their own suffering.

In practice, these specific mechanisms often show high intercorrelations with one another, leading many researchers to use an omnibus measure of overall tendencies to nominate items reflecting moral disengagement (see Gutzwiller-Helfenfinger, 2015). As such, greater tendencies toward moral disengagement are associated with bullying for boys and girls (Gini, 2006; Menesini et al., 2003; Obermann, 2011; Paciello et al., 2008; Perren et al., 2012), with the most recent meta-analyses estimating a mean correlation of $r = .31$ (95% CI [.27, .34]; Killer et al., 2019). This is in line with an earlier meta-analysis on the association of moral disengagement and aggression more generally ($r = .28$; Gini et al., 2014). Similarly, meta-analyses revealed that overall proclivity toward moral disengagement is one the main predictors of cyberbullying perpetration ($r = .27$, 95% CI [.20, .34]; Kowalski et al., 2014; $r = .28$, 95% CI [.20, .36]; Chen et al., 2017).

Several studies have examined moral disengagement at the strategy or mechanism level, however, providing insight into the specific processes that might be most gainfully targeted in bullying

intervention and prevention. Bullying – both amongst 'pure bullies' who do not report being targets of bullying, and bully/victims, who report both perpetration and victimization – was associated with elevated levels of five mechanisms (moral justification, euphemistic labelling, diffusion of responsibility, distortion of consequences, and victim blame; Runions, Shaw et al., 2019). However, that study did not examine which mechanisms best predicted bullying, but only group differences. Pozzoli et al. (2012) looked at mechanisms of moral disengagement and analyzed the individual-levels of disengagement as well as the average levels across classrooms. On an individual level, they found a positive association between cognitive restructuring and bullying. On the group level, however, they found that minimizing responsibility, negative distorting consequences, and dehumanizing were linked to pro-bullying behaviour in the classroom. These results coincided with research showing that bullying was more likely in classrooms where the victim was perceived by others as someone who deserved to be bullied (Ahmed & Braithwaite, 2004; Van Noorden et al., 2014). A study by Thornberg and Jungert (2014) found that moral justification and victim attribution were the only dimensions of moral disengagement that independently contributed to bullying. In addition, Bjärehed et al. (2020) found that moral justification was positively associated with both direct (i.e., physical violence, threats) and indirect bullying (e.g., spreading rumours), after accounting for other mechanisms of moral disengagement.

Studies of cyberbullying perpetration have also examined moral disengagement. At the global level, it appears that moral disengagement works comparably for offline and online bullying and aggression. The meta-analysis by Gini et al. (2014) found the relation of moral disengagement to bullying and cyberbullying was equivalent. Later studies about similarities and differences between bullying and cyberbullying have shown that moral disengagement was significantly associated with both (Orue & Calvete, 2019). However, another study found non-significant relationship of moral disengagement to cyberbullying (Tanrikulu & Campbell, 2015).

Individual tendencies toward moral disengagement may matter less for online aggression than for offline aggression (Gini et al., 2014). Pornari and Wood (2010) have suggested that features of online settings may enable aggression (e.g., sense of anonymity; perceived distance from target). These and other features of common social media/online settings may afford easier opportunities for aggression than face-to-face settings where, for example, non-verbal and paralinguistic cues may elicit empathy in many would-be cyber-aggressors. Runions and Bak (2015) presented a conceptual framework for understanding how characteristics of information and communication technologies may 'lower the bar' for cyber-aggression via reducing the activation of moral engagement. This leads to the hypothesis that cyberbullying requires less 'individual' moral disengagement due to the technology serving to scaffold the bullying behaviour. This hypothesis has not been broadly established, however, as individuals involved in cyberbullying tend to be the same as those involved in traditional bullying, at least when it is assessed as a one-dimensional scale (Perren & Gutzwiller-Helfenfinger, 2012). Moreover, cyberbullying tends to occur in a social environment where peer relationships overlap greatly in online and offline networks (Juvonen & Gross, 2008).

Nevertheless, some strategies of moral disengagement may be particularly implicated in online settings. With regard to cognitive restructuring, the lack of social-emotional cues online may block the activation of empathy (Runions, 2013), robbing cyberbullies of the social data needed to understand that it was *not* "just a joke" (Pornari & Wood, 2010), and thus enabling euphemistic labelling of cyberbullying (Runions & Bak, 2015). Similarly, the invisibility of the immediate reaction of a victim to cyberbullying may enable the perpetrator to maintain advantageous comparisons to more overt, visibly damaging offline bullying exemplars (e.g., beating up another student). Indeed, the sharing of online media coverage of

severe bullying cases may also provide an advantageous comparison, built into the online medium (Runions & Bak, 2015). Only one study, conducted in Australia with a sample of 210 students aged 12-15 years, has compared specific moral disengagement mechanisms for traditional and cyberbullying (Robson & Witenberg, 2013). Traditional bullying was predicted by moral justification and diffusion of responsibility, cyberbullying by diffusion of responsibility and victim blame. Examination of raw correlations reveals that the associations were stronger for traditional bullying than for cyberbullying for all mechanisms of moral disengagement. Several moral disengagement mechanisms were significantly associated with traditional bullying, but not for cyberbullying: advantageous comparison, displacement of responsibility, and dehumanization of the victim. The interactions between gender and age and moral disengagement mechanisms were not explored. Overall, however, there remains little research into cyberbullying and the various mechanisms of moral disengagement (Runions & Bak, 2015).

Does the relationship of moral disengagement to (cyber) bullying depend on gender? Boys tend to be more involved in bullying and cyberbullying perpetration (Moyano et al., 2019; Wang et al., 2009; Zych et al., 2019). Boys have also been found to report higher overall moral disengagement (Menesini et al., 2013). Some studies have found that the relationship of moral disengagement to bullying does not differ for boys and girls (Menesini et al., 2013), and a meta-analysis found that the gender composition of the study did not serve as a significant moderator of the association of moral disengagement and aggressive behaviour (Gini et al., 2014). However, a meta-regression found that studies with a greater proportion of girls show a stronger positive association between bullying and moral disengagement (Killer et al., 2019). This suggests that the role of gender in moral disengagement and bullying is not resolved.

A closer analysis of specific mechanisms of moral disengagement and bullying reveals a more nuanced picture. Thornberg and Jungert (2014) found that boys reported more euphemistic labelling (Cohen's $d = 0.50$) diffusion of responsibility (Cohen's $d = 0.31$), distortion of consequences (Cohen's $d = 0.44$), and victim blame (Cohen's $d = 0.35$) than did girls. No differences were noted for moral justification, displacement of responsibility, or advantageous comparison. Unfortunately, gender was not considered as a moderator of the relationship of moral disengagement and bullying in this study.

Another study provides evidence that moral disengagement may operate differently in boys' and girls' bullying. In a study of 10-15-year olds, significant raw correlations between direct and indirect bullying and seven different moral disengagement mechanisms were observed for girls (aged 10-15 years). But amongst boys, no significant associations were found for any of the mechanisms (Bjärehed et al., 2020). Gender was a significant moderator of the association between victim blame and direct bullying: victim blame was a strong predictor of direct bullying for girls, but was not a significant predictor of boys' direct bullying. The moderation was not significant, however, for indirect bullying. Further research is required to clarify the role of gender in bullying, and whether gender moderation is found for cyberbullying as well as traditional modes of bullying.

Does the relationship of moral disengagement to (cyber) bullying depend on age? Conflicting findings exist regarding possible age differences in the relationship of moral disengagement and bullying. One study found that children use more moral disengagement than adolescents and that younger students perpetrate more bullying (Paciello et al., 2008). However, some recent studies have found that there are stronger associations between moral disengagement and bullying in adolescence (Gini et al., 2014; Wang et al., 2017). Wang et al. (2017) found, in a 3-wave longitudinal study with children aged 10 to 15 years, that older students reported more moral disengagement at two of the three waves. However, older students also reported "less" bullying, but

only for the last of the three waves. Finally, Bjärehed et al. (2020) found child age was not significantly associated with any moral disengagement mechanism. Further research is needed to examine whether the relationship of moral disengagement and bullying varies by child age.

The Current Study

To date, no studies have examined specific moral disengagement strategies in relation to both traditional and cyberbullying perpetration to see if the associations are differ by gender or age. This study aims to clarify the relationships of age and gender for bullying, cyberbullying, and moral disengagement through the following objectives: 1) to examine moral disengagement strategies in association with (cyber)bullying perpetration and 2) to examine gender and age moderation of the associations between the strategies and (cyber)bullying perpetration. The following hypotheses were proposed:

H1: Cognitive restructuring of negative actions was hypothesized to be the most effective set of psychological mechanisms for disengaging in bullying and cyberbullying (Pornari & Wood, 2010; Pozzoli et al., 2012), as indexed by the strongest relationship with both modes of bullying.

H2: As the features of online settings may enable moral disengagement, we predicted that lower levels of "individual-level" moral disengagement would be required to engage in bullying online, compared to offline. This would be reflected in a weaker relationship of moral disengagement and cyberbullying than for traditional bullying. Following Robson and Witenberg (2013), we hypothesized that this would be evident for strategies aimed at cognitive restructuring and distorting consequences.

H3: Following the findings of Bjärehed et al. (2020) that dehumanizing the victim was significantly associated with direct bullying for girls, but not for boys, it was hypothesized that gender would significantly moderate the association of dehumanizing the victim and traditional bullying, but not cyberbullying, predicting traditional bullying for girls but not for boys.

Regarding age as a moderator, in light of the results of Bjärehed et al. (2020), it was hypothesized that there were no differences regarding the strength of association between moral disengagement mechanisms amongst older versus younger adolescents.

Method

Participants

Participants were 1,274 schoolchildren from five different state secondary schools in the south of Spain (48.6% girls, $n = 619$). Students were between the ages of 11-17 years ($M = 13.62$, $SD = 1.31$). Just over a quarter (27.2%) were in their first year of secondary school, 25.2% in their second year, 24.2% in third, and 23.4% in fourth year.

Instruments

European Bullying Intervention Project Questionnaire (EBIPQ; Briguí et al., 2012) consists of 14 items, of which 7 are related to victimization (e.g. "A schoolmate has hit me, kicked me or has pushed me") and 7 to perpetration (e.g. "I told another schoolmate that if he didn't do what I said, I'd hurt him"). Only the perpetration items were used in this study. The items were answered on a four-point Likert scale in reference to the previous two months (0 = *no*, 1 = *once or twice*, 2 = *once or twice a month*, 3 = *about once a week*, 4 = *more than once a week*). Instructions to answer the questions considering the imbalance of power, the

Table 1. Means, Standard Deviations, and Tests of Mean Differences by Gender and Age for All Variables

	Sample		Boys		Girls		<i>t</i>	<i>d</i>	11 - 13 years		14 - 17 years		<i>t</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
B	0.26	0.407	0.32	0.479	0.19	0.301	5.595***	0.32	0.24	0.425	0.28	0.389	-1.739	
CB	0.15	0.323	0.17	0.389	0.13	0.235	2.289*	0.12	0.12	0.318	0.18	0.324	-3.052*	0.19
CR	1.62	0.625	1.80	0.686	1.45	0.498	10.156***	0.58	1.58	0.618	1.67	0.628	-2.405*	0.14
MR	1.84	0.693	1.90	0.721	1.77	0.654	3.181*	0.19	1.85	0.733	1.83	0.654	0.621	
DC	1.43	0.641	1.55	0.727	1.31	0.509	6.855***	0.38	1.44	0.697	1.43	0.584	0.386	
DH	1.50	0.673	1.63	0.753	1.36	0.548	6.970***	0.41	1.42	0.632	1.57	0.702	-3.778**	0.22

Note. *M* = mean; *SD* = standard deviation; *t* = Student's *t*; *d* = Cohen's *d*; B = bullying; CB = cyberbullying; CR = cognitive restructuring; MR = minimizing responsibility; DC = distorting consequences; DH = dehumanizing.

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

intentionality, and the repetition of the aggressive behaviours were given to students. This questionnaire showed good reliability indices in the Spanish validation study (victimization $\alpha = .84$ and aggression $\alpha = .73$) (Ortega-Ruiz et al., 2016) and with the current sample (victimization $\alpha = .82$; aggression $\alpha = .77$; total $\alpha = .84$).

European Cyberbullying Intervention Project Questionnaire (ECIPQ; Del Rey et al., 2015) is a 22-item questionnaire including the cyberbullying criteria of repetition and imbalance of power. Items address cyber-victimization (e.g., "Someone has said rude things about me or insulted me using social networks or WhatsApp") and cyber-aggression (e.g., "I have threatened someone on social networks or WhatsApp"). For this study, the cyber-aggression scale was used. The answers were given on a five-point Likert scale (0 = *no*, 1 = *once or twice*, 2 = *once or twice a month*, 3 = *about once a week*, 4 = *more than once a week*). This questionnaire was reliable in the Spanish validation study (cyber-victimization $\alpha = .80$ and cyber-aggression $\alpha = .88$) (Ortega-Ruiz et al., 2016) and in the current sample (cyber-victimization $\alpha = .86$ and cyber-aggression $\alpha = .89$; total $\alpha = .92$).

Moral Disengagement Scale (MDS; Caprara et al., 1995). It was first deployed in Bandura's seminal study of moral disengagement mechanisms in children (Bandura et al., 1996). The adolescent version of the MDS consisted of 24 items with five Likert-type response options (1 = *strongly disagree*, 2 = *partly agree*, 3 = *generally agree*, 4 = *very much agree*, 5 = *totally agree*). These items measure the four MD strategies: cognitive restructuring (e.g., "Hitting schoolmates who nobody can stand is just teaching them a lesson"), minimizing responsibility (e.g., "You can't blame kids for using rude words if all their friends are doing it too"), distorting consequences (e.g., "It's fine to tell white lies because they don't really harm anyone"), and dehumanizing/blaming (e.g., "Kids who are treated badly have usually done something to deserve it"). The MDS was adapted to Spanish language through back-translation: a) two Spanish professional translators adapted separately the original English version into Spanish; b) two English professional translators adapted the Spanish version; c) one bilingual psychology professor compared the back-translation with the original English version and discussed any discrepancies with the translators until a consensus was reached. CFA was performed, indicating satisfactory model fit indices: $\chi^2(247) = 438.6028$, $p < .001$, NNFI = .95, CFI = .96, TLI = .96, RMSEA = .05, SRMR = .064, which confirms the original four-factor structure. The reliability indices of the questionnaire with the present sample showed acceptable scores for all dimensions, higher than .60 (Fornell & Larcker, 1981). Composite reliability (CR) indices for each dimension, calculated in conjunction with structural equation modelling (Perterson & Kim, 2013), were cognitive restructuring = .84, minimizing responsibility = .77, distorting consequences = .67, and dehumanizing = .69.

Procedure

To collect the data, management teams of different schools were contacted and provided preliminary information about the study.

Schools that expressed interest were sent detailed information about the aims and procedures of the study. Written consent was obtained from the participants' parents and oral consent was obtained from the adolescents themselves. This study complied with the Declaration of Helsinki guidelines on confidentiality, privacy and informed consent and was approved by the Ethics Committee of Bioethics and Biosafety at University of Córdoba. Fewer than 2% of students declined to participate.

Hard-copy questionnaires were administered by trained psychological researchers in the adolescents' home classroom. Students were informed that the study was anonymous, and that they were free to choose whether to answer the questions. The test took 30-40 minutes to administer.

Data Analysis

The data analysis was performed using IBM SPSS Statistics 20 for Windows statistical software and included descriptive analyses for gender and age, as well as Student's *t* and the bivariate correlations between variables. Cohen's *d* was used to report effect size. Values below 0.50 are considered as a small effect, between 0.50 and 0.80 for a moderate effect, and above 0.80 for large effect (Cohen, 1992). Multiple multivariate linear regressions were performed, with bullying and cyberbullying as dependent variables. The first regression set combined traditional and cyberbullying into an omnibus bullying variables. Subsequent analyses examined offline and online bullying perpetration separately. For each of these sets of analyses, three models were examined: (i) only gender and age as predictors; (ii) adding the four MD strategies; and (iii) testing gender and age moderation. Durbin-Watson statistic indices, variance inflation factor (VIF), and tolerance (T) were all examined to ensure model tolerance via examination of model collinearity.

Results

Descriptive Results

Mean levels of bullying ($M = 0.26$) were higher than for cyberbullying ($M = 0.15$) (see Table 1). For moral disengagement, means for cognitive restructuring ($M = 1.62$) and minimizing responsibility ($M = 1.84$) were higher than for distorting consequences ($M = 1.43$) and dehumanizing ($M = 1.50$). Student's *t*-test showed that boys reported significantly more bullying ($M = 0.32$ vs. 0.19) and cyberbullying ($M = 0.17$ vs. 0.13) than girls (see Table 1). For moral disengagement, results showed significant differences in all dimensions of the scale, with significantly higher scores for boys: minimizing responsibility ($M = 1.90$ vs. 1.77), cognitive restructuring ($M = 1.80$ vs. 1.45), dehumanizing ($M = 1.63$ vs. 1.36), and distorting consequences ($M = 1.55$ vs. 1.31). The effect size (Cohen's *d*) was low in all the variables except in cognitive restructuring, where it was moderate (see Table 1).

To examine potential age differences, the sample was split into two halves (11-13 and 14-17 years old). Student's *t*-test showed statistically significant differences in cyberbullying, with higher scores in the older adolescents ($M = 0.18$ vs. 0.12), but no difference for offline bullying. Significantly higher scores for moral disengagement were found for students aged 14 to 17 in cognitive restructuring ($M = 1.67$ vs. 1.58) and dehumanizing ($M = 1.57$ vs. 1.42). The bivariate effect size was low for all the variables (see Table 1).

Bivariate correlations showed a significant and direct association between the variables of bullying and cyberbullying and all the dimensions of moral disengagement. The correlations ranged from $r = .29$ to $.51$ (see Table 2). Within mechanisms, intercorrelations ranged from $.42$ to $.61$.

Table 2. Correlations among Variables

	1	2	3	4	5
Bullying	1				
Cyberbullying	.53	1			
CR	.51	.41	1		
MR	.30	.29	.53	1	
DC	.37	.36	.60	.50	1
DH	.41	.32	.61	.42	.48

Note. CR = cognitive restructuring; MR = minimizing responsibility; DC = distorting consequences; DH = dehumanizing; all correlations were significant at $p < .001$.

Multivariate Regression of Bullying and Cyberbullying

Table 3 presents results for multivariate regression of combined offline- and online-bullying perpetration. Gender and age were significantly associated with bullying in Model 1 ($R^2 = .023$), with boys and older students reporting greater bullying. In Model 2, the separate moral disengagement strategies were added; all were significantly and independently associated with bullying ($R^2 = .281$). With these in the model, neither gender nor age were significant predictors. Multivariate tests showed that inclusion of moral disengagement strategies in Model 2 yielded a significantly better model fit.

Table 3. Summary of Multivariate Multiple Regression for Variables Associated with Combined Offline and Online Bullying

	Model 1		Model 2		Model 3	
	Wilks' λ	F	Wilks' λ	F	Wilks' λ	F
Gender	.976	12.183***	.998	1.191	.997	1.319
Age	.991	4.461*	.994	2.810	.993	3.340*
CR			.904	53.069***	.899	56.186***
MR			.993	3.569*	.994	3.249*
DC			.980	10.087***	.982	9.286***
DH			.988	6.145*	.987	6.410*
Age x CR					.981	9.916***
R^2	.023***		.281***		.290***	

Note. CR = cognitive restructuring; MR = minimizing responsibility; DC = distorting consequences; DH = dehumanizing; Pearson's correlation coefficient. * $p < .05$, *** $p < .001$.

For Model 3, interaction terms (mechanisms x gender; mechanisms x age) were added; only significant interactions were retained for parsimony (see Table 4). The results indicated that age, all moral disengagement mechanisms, and the interaction between age and cognitive restructuring were significantly associated with bullying (offline and online). This interaction contributed significantly to the overall model ($R^2 = .290$). The interaction of gender and moral disengagement strategies was not significant. Prior to examining the significant moderation, regression analyses were conducted for offline and online bullying separately.

Table 4. Summary of Multivariate Multiple Regression for Variables Associated with Offline and Online Bullying

	Model 4	
	Wilks' λ	F
Gender	.999	0.687
Age	.992	4.001*
CR	.905	52.405***
MR	.993	3.594*
DC	.987	6.458*
DH	.988	5.935*
Age x CR	.987	6.425*
Age x MR	1.00	0.095
Age x DC	.996	2.078
Age x DH	.994	2.953
Gender X CR	.999	0.339
Gender X MR	.997	1.466
Gender X DC	.996	2.195
Gender X DH	.995	2.450
ΔR^2	.294***	

Note. CR = cognitive restructuring; MR = minimizing responsibility; DC = distorting consequences; DH = dehumanizing; Pearson's correlation coefficient.

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

Univariate Regression Analyses of Bullying and Cyberbullying

Statistics for traditional bullying and cyberbullying perpetration from univariate regression analyses are presented in Table 5. Models 1, 2, and 3 are included for comparative purposes. There was no evidence of multicollinearity for any of the predictors for bullying: RC (tolerance = $.46$, VIF = 2.18), MR (tolerance = $.67$, VIF = 1.49), DC (tolerance = $.60$, VIF = 1.68) and DH (tolerance = $.61$, VIF = 1.64); and for cyberbullying: RC (tolerance = $.45$, VIF = 2.24), MR (tolerance = $.67$, VIF = 1.48), DC (tolerance = $.59$, VIF = 1.69) and DH (tolerance = $.62$, VIF = 1.63). Durbin-Watson statistics were 1.983 (offline bullying) and 2.030 (online bullying). For Model 1, gender was associated with both offline and online bullying, with boy reporting more bullying perpetration. Age was associated with cyberbullying: older student ages reported more cyberbullying perpetration, but not traditional bullying. For Model 2, MD strategies added significantly to explained variance in both offline and online bullying ($\Delta R^2 = .27$ and $.20$, respectively). For both offline and online bullying, cognitive restructuring, distortion of consequences, and dehumanizing the victim all significantly predicted greater bullying. Minimising responsibility was not significant for either offline or online bullying. In Model 3, the only significant moderation retained was age moderating cognitive restructuring, and this occurred only for traditional bullying (the non-significant term for cyberbullying was retained in Table 5 to enable comparison).

The interaction between age and cognitive restructuring was significant for traditional bullying ($B = -0.15$, $p < .001$, $d = 0.24$; $\Delta R^2 = .012$, $p < .001$), what indicates that the effect of cognitive restructuring on bullying differed for younger and older schoolchildren (see Figure 1). Simple slope analyses showed a positive association between cognitive restructuring and bullying for the youngest ($\beta_{\text{simple}} = .54$, $p < .001$), and the oldest ($\beta_{\text{simple}} = .46$, $p < .001$). Follow-up analyses showed that the effect of cognitive restructuring on bullying was significantly different for younger and older classmates at high ($\beta_{\text{simple}} = -.07$, $p = .03$) but not at low ($\beta_{\text{simple}} = -.02$, $p = .42$) levels of cognitive restructuring. This indicates that younger students are more inclined than older to engage in bullying if they score high on cognitive restructuring whereas there are no differences between ages to engage in bullying if they score low on cognitive restructuring.

Table 5. Summary of Univariate Multiple Regression for Variables Associated with Bullying and Cyberbullying

	Bullying					Cyberbullying				
	R^2	ΔR^2	B	SE	β	R^2	ΔR^2	B	SE	β
Model 1	.024	.026***				.013	.015*			
Gender			-0.126	.024	-.157***			-0.051	.020	-.080*
Age			0.034	.024	.042			0.061	.020	.095*
Model 2	.292	.270***				.209	.199***			
Gender			0.008	.022	.010			0.032	.019	.050
Age			-0.008	.021	-.010			0.034	.018	.053
CR			0.267	.025	.398***			0.137	.022	.257***
MR			-0.007	.018	-.012			0.017	.016	.035
DC			0.083	.022	.124***			0.094	.019	.177***
DH			0.065	.020	.107*			0.041	.017	.084*
Model 3	.304	.012***				.209	.001			
Gender			0.004	.022	.005			0.033	.019	.051
Age			-0.013	.021	-.017***			0.035	.018	.055*
CR			0.498	.059	.744***			0.087	.052	.163
MR			-0.005	.018	-.009			0.016	.016	.034
DC			0.073	.022	.109*			0.096	.019	.181***
DH			0.070	.020	.115***			0.041	.017	.083*
Age \times CR			-0.151	.035	-.362***			0.031	.030	.096

Note. All independent variables (except gender and age) are grand mean centered. $\Delta R^2 = R^2$ change; $R^2 = R^2$ adjusted; CR = cognitive restructuring; MR = minimizing responsibility; DC = distorting consequences; DH = dehumanizing; Pearson's correlation coefficient.

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

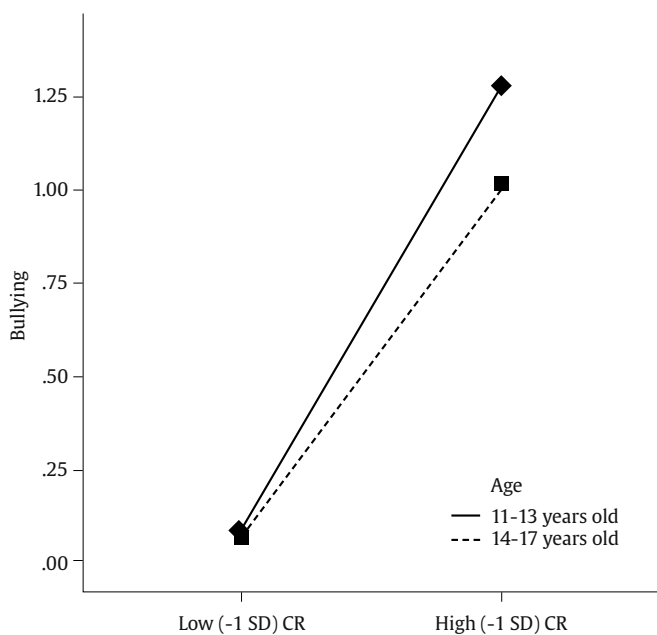


Figure 1. Interaction between Age and CR in Relation to Bullying Perpetration.
Note. CR = cognitive restructuring.

Discussion

The main aim of this study was to examine the association between the four classes of strategies of moral disengagement and bullying and cyberbullying perpetration and to examine if gender and age moderated these associations. Based on previous research, cognitive restructuring strategies had been proposed to be most strongly associated with both cyber- and traditional bullying perpetration. Based on theorising about the role of online settings in 'lowering the bar' for bullying, the second hypothesis was that the overall strength of associations of cyberbullying to cognitive restructuring and distorting consequences would be weaker than for offline bullying.

Finally, a third hypothesis was that dehumanizing the victim would have a stronger role in predicting offline bullying for girls but not for boys.

Our results provided support for the first hypothesis. Cognitive restructuring was the single strongest predictor of both offline and online bullying, which is consistent with previous research (e.g., Pornari & Wood, 2010; Pozzoli et al., 2012). As anticipated, overall cognitive restructuring was found to be associated with bullying and cyberbullying perpetration. People who can successfully invoke a positive moral outcome onto the infliction of harm to someone are likely to experience positive emotions such as satisfaction and pride, reinforcing the aggressive behaviour (Robson & Witenberg, 2013; Romera et al., 2019; Thornberg & Jungert, 2014).

Overall, the pattern of associations was similar for online and offline bullying perpetration. This may be because both behaviours tend to occur in a social environment where online and offline relationships overlap (García-Fernández et al., 2015; Zych et al., 2019). However, as per the second hypothesis, the association between moral disengagement and cyberbullying was weaker when compared to bullying, based on the R^2 value reported in this study. This suggests that the characteristics of online communication enable aggression and do not require as much individual-level moral disengagement for bullying to occur: due to features of online settings (acting anonymously and the distance between aggressor and victim), online settings might reduce the need for 'individual-level' moral disengagement (e.g., as assessed by self-report) to perpetrate cyberbullying (Pornari & Wood, 2010; Pozzoli et al., 2012; Robson & Witenberg, 2013; Runions & Bak, 2015). However, a chief limitation of the study must be noted at this point: the seminal moral disengagement scale used here included items that refer to behaviour that can only be conducted in a face-to-face setting; this may have biased the results (see Limitations, below).

It was hypothesized that cognitive restructuring and distortion of consequences would be more strongly related to bullying than cyberbullying (Robson & Witenberg, 2013). It was found for the former strategy but not the latter. Engaging in offline bullying may require greater individual tendencies to cognitively restructure one's actions, to overcome features present in face-to-face communication that are absent online (e.g., non-verbal or paralinguistic cues).

Findings regarding distortion of consequences emphasizes, on the one hand, that disregarding consequences enables bullying perpetrators to distance themselves from the harm caused or to emphasize positive (i.e., from their perspective) outcomes (Pozzoli et al., 2012). And on the other hand, the distance in time and space afforded by cyberbullying may facilitate disengaging from emotional consequences of harmful actions. Therefore, the lack of social-emotional information denudes the online setting of social and emotional cues needed to activate empathy, what may even lead the aggressor to think that the victim accepts the harmful action as a joke (Runions & Bak, 2015).

No hypothesis had been forwarded about dehumanizing/blaming the victim, but it also was associated with both bullying and cyberbullying, with no moderation of gender or age observed. Processes of blaming or dehumanizing one's target (victim attribution; Thornberg & Jungert, 2014) may work equivalently regardless of the medium of bullying. It is of note that victim attribution strategies were also robust in predicting both direct and indirect bullying (Bjärehed et al., 2020). As Bjärehed et al. (2020) concluded, the need to make the victim of bullying 'responsible' in some way for the bullying may be common across modes and forms of bullying. In some cases, bias-based bullying may happen, where the victim is simply unlucky enough to fit into a stigmatized category (e.g., those with disabilities or chronic health conditions; Mulvey et al., 2020; Runions, Vithiatharan et al., 2019). In other cases, young people may find idiosyncratic reasons to blame their victim, for example for (mis)perceived insults or exclusion. Further research – including qualitative studies – may help to understand how bully perpetrators are consistently able to frame the victim as the one in the wrong, and whether this intersects with issues of revenge and forgiveness (Barcaccia et al., 2017; de Castro et al., 2012; León-Moreno et al., 2019; Runions et al., 2018).

Minimizing one's agentive role was not independently associated with either bullying or cyberbullying, after accounting for other strategies of moral disengagement, which is inconsistent with two previous studies, both conducted in Australia (Robson & Witenberg, 2013; Runions, Shaw et al., 2019) although two other studies – both from Sweden – have also not found it to be a good predictor of bullying (Bjärehed et al., 2020; Thornberg & Jungert, 2014). However, it is important to note that the raw correlation of this strategy with bullying was positive and significant (see Table 1). This mechanism allows the aggressors to avoid assuming responsibility for actions which are carried out in groups, and therefore influences group behaviour more than individual behaviour (Gini et al., 2014). European young people may be less inclined to pass the moral "buck" than are young people in Australia. Alternately, one of the Australian studies found that bullies who are not themselves targets of bullying ("pure bullies") were more likely to use diffusion of responsibility as a mechanism than were bully/victims (Runions, Shaw et al., 2019). This suggests that the composition of the study – and how perpetration is operationalized – may affect the analysis and conclusions about this strategy's relevance for bullying, along with potential cultural and/or methodological differences. Future studies should consider these potential cultural and/or methodological differences in studying how moral disengagement mechanisms are used in individual and group aggression and cyber-aggression.

The third hypothesis focused on gender moderation of the association of moral disengagement and bullying. Mean gender differences were observed: boys in the current study scored higher on average on all mechanisms of moral disengagement than girls, but gender did not moderate the association of MD strategies with bullying and cyberbullying as hypothesized. In distinguishing between direct and indirect bullying, Bjärehed et al. (2020) found moderation by gender of direct bullying but not indirect forms of bullying. In the current study, online and offline bullying were assessed, either of which can be either direct/overt or indirect/

covert: some cyberbullying is blatant and overt to all users and some is hidden; the same can be said for offline bullying. These results support previous meta-analyses between MD and aggressive behavior, where the correlation between the two variables did not differ significantly across gender, even though boys are often higher in both. This may be because MD mechanisms operate in the same way when boys and girls bully others.

Age was associated with cyberbullying but not with bullying, with 14–17-year-old students reporting higher level of involvement than 11–13-year-old students. Previous studies found similar results in similar age groups (Kowalski & Limber, 2007; Robson & Witenberg, 2013). It is not clear if this is simply a question of access – children over 13 years of age may be more likely to have their own mobiles devices; alternately, it may be a function of lower parental supervision of online actions of older children, characteristics of higher ages that rise the involvement in risky cyber-behaviors (Gómez-Ortiz et al., 2018; Smith et al. 2008). Or it may reflect increasing covert tendencies for antisocial behaviours in older adolescents. Research addressing whether adolescents consciously move their bullying online modes to avoid detection is needed.

Finally, we found evidence for a significant age × cognitive restructuring interaction effect in bullying perpetration. Specifically, the plot of the relationships indicated that among younger students, those who use more cognitive restructuring, compared to those who use less, reported significantly more bullying perpetration. These results demonstrated that the risk of being involved in bullying is higher in young students with high cognitive restructuring levels. It may be that younger adolescents who bully others rely more on cognitive restructuring to avoid feeling guilt or remorse. Targeted interventions in early adolescence may help dismantle cognitive restricting and consequently reduce bullying. As many bullying prevention programs focus on these issues in this age group, even if not framed in terms of 'moral engagement', their relative efficacy may be in part due to the reliance on this moral disengagement strategy. But for older adolescents, for whom bullying prevention programs are less effective overall, or even counter-productive (Yeager et al., 2015), other strategies may be more relevant to bullying perpetration. This may include distortion of consequences, which was equivalently potent for younger and older participants. This finding highlights the importance of examining moral disengagement mechanisms in the study of bullying from a developmental perspective (Wang et al., 2017) and assessing changes in moral disengagement when testing bullying prevention interventions.

Limitations

This study has certain limitations, mainly related to the correlational nature of the study, which does not allow us to establish causal relationships. As well, the use of self-reports can be associated with a certain degree of social desirability bias, despite the anonymity of the test. In this study only bullying and cyber-bullying perpetration has been tested, despite other studies having shown differences between pure bully and bully/victim cases (Runions, Shaw et al., 2019). Also, moral disengagement was measured with the seminal instrument developed by Bandura and colleagues, but it is more oriented to face-to-face aggression and antisocial behaviours, which may have influenced in our results, and makes interpretation of our second hypothesis especially difficult. In spite of this, the use of the same instrument permits specific comparisons between both phenomena as per previous studies (Gini et al., 2014; Orue & Calvete, 2019; Tanrikulu & Campbell, 2015). The fact that MD mechanisms largely behaved equivalently across offline and online bullying perpetration suggests that the use of an omnibus antisocial moral disengagement scale may still have value.

In future research, it would be of interest to conduct prospective longitudinal research on the relationship between moral disengagement and bullying. This would help us advance towards complex explanatory models to understand their involvement in the phenomena of unjustified aggression between peers. Analyzing moral disengagement may allow to find cues that guide the design of prevention and intervention bullying programs adjusted to individual and group characteristics (Estévez et al., 2019; Pozzoli et al., 2012; Romera et al., 2017). Understanding how revenge operates in the motives for bullying perpetrators (cf. Runions et al., 2018) would also provide important directions for understanding the breadth of 'victim attribution' processes in the production of bullying.

Conclusions

The results of this study were consistent with previous research which demonstrated the importance of different moral disengagement mechanisms in interpersonal transgressions. This study suggests that cognitive restructuring is the most relevant strategy for both bullying and cyberbullying perpetration, especially for "tweens" (e.g., ages 11- 13 years). Distortion of consequences and to a lesser extent dehumanization of the victim were also important for both online and offline bullying, for boys and girls, and for younger and older adolescents. This study found no moderation by gender, suggesting that the relationship of moral disengagement strategies to bullying – both offline and online – are equivalent for boys and girls. These findings may have implications for managing moral disengagement mechanisms and both forms of peer aggression. Intervention strategies to address moral engagement via cognitive restructuring, distortion of consequences, and dehumanization appear to be key elements for bullying prevention programs.

Conflict of Interest

The authors of this article declare no conflict of interest.

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