



The role of CU traits, empathy and moral disengagement in bullying

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Accepted: 24 May 2023 / Published online: 2 June 2023
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Abstract

Bullying and victimization have been of interest to a wide variety of disciplines for years due to their serious consequences (Zych et al., 2019). The focus has primarily been on personality factors which have significant associations with bullying perpetration. These factors include CU traits, empathy, and moral disengagement (e.g., Gini, 2006; Thornberg et al., 2015; Zych et al., 2019). However, the relation between those constructs and bullying perpetrator behaviors are unclear and have not been integrated in a single study. Additionally, studies suggest that students with special education support needs are overrepresented in bullying dynamics (e.g., Hartley et al., 2015). Therefore, the objective of this study was to examine whether moral disengagement and empathy act as mediators of CU traits on bullying perpetrator behavior while controlling age, gender and special educational needs. The sample consists of 201 students ($M_{\text{age}} = 12.85$; $SD = 1.37$) which were enrolled in schools in Germany. High CU traits were associated with low cognitive and affective empathy and high moral disengagement. Additionally, special educational needs were associated with higher moral disengagement. Moral disengagement mediates the relationship between CU traits and bullying. These findings expand the knowledge of influencing factors in the bullying dynamic and have significant implications for prevention and intervention practices.

Keywords Bullying · Moral disengagement · CU Traits · Empathy · Adolescence

Theoretical background

Although research to explain bullying is expanding, the mechanisms behind it remain partially unexplained (Kljajkovic & Hunt, 2016). Recent research has identified different predictors of bullying, including personality constructs (e.g., Book et al., 2012; Volk et al., 2021). Prominent explanatory constructs researched include personality traits such as CU traits (antisocial personality disorder) and socio-emotional skills such as empathy and moral disengagement (e.g., Hymel et al., 2005; van Geel et al., 2017; van Noorden et al., 2015; Zych et al., 2019). Studies (Hymel et al., 2005; van Geel et al., 2017; van Noorden et al., 2015; Zych et al.,

2019) indicate that these constructs play a relevant role in explaining bullying perpetration, but their specific role has not yet been adequately examined, especially with a focus on different subgroups (i.e., students with special educational needs). Adolescents with special educational needs make up a 7.7% (KMK, 2020) of the students in the school system and are increasingly involved in bullying acts internationally as well as nationally (e.g., Blake et al., 2012; Eilts et al., 2022). However, consideration of the predictors of bullying, such as CU traits, empathy and moral disengagement remains missing for students with special educational needs. Thus, limiting the perspective regarding inclusive schooling. Therefore, the goal of this study will be to not only identify predictors of bullying, but also to consider the role of special educational needs in the association of the predictors and bullying.

Bullying

Bullying is defined as intentional, repeated aggressive behaviour by a (subjectively perceived) superior person (perpetrator) towards an inferior one (victim) (Olweus, 2013). In addition to the bully and the victim Salmivalli et al. (1996)

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identified further roles, indicating that each student within a classroom is appointed a role within the bullying dynamic. These roles can be seen as supporters of the bully (i.e., assistant of the bully, reinforcer of the bully and outsider) or supportive of the victim (i.e., defender of the victim). Outsiders can be viewed as passive bystanders (i.e., silently witnessing bullying and therefore seemingly supporting the bully; Gini et al., 2020, Salmivalli et al., 1996). However recent studies merged the reinforcer and assistant of the bully as one role (Demaray et al., 2016). The involvement of all students in the bullying dynamic highlights why bullying is considered the most frequent form of aggressive behaviour in schools (Bergmann et al., 2017; Fischer et al., 2020). Additionally, research shows that grades 6 to 11 report bullying others more frequently than students in lower grades (e.g. Blake et al., 2012; Limber et al., 2018). The increase of bullying behaviors during adolescence might be explained by developmental psychological changes which occur during adolescence (Adams & Berzonsky, 2006; Scheithauer et al., 2003). During adolescence aggressive behaviors are valued less negatively compared to childhood, relationships with peers increase in their influence and the social role within the peer group is focused on more intently (Adams & Berzonsky, 2006; Moffitt, 1993). Analysis of gender differences reveal some inconsistent results regarding the stability of bullying involvement. However, boys tend to be more involved as perpetrators when compared to females (Crapanzano et al., 2011; Sentse et al., 2015).

Due to the UN Convention of the rights of persons with disabilities (2007) bullying must be investigated with a focus on the heterogeneity of the students. The heterogeneity can, for example, be brought into focus by considering special educational needs (SEN). Students with special education needs have a heightened risk of being involved in the bullying dynamic when compared to students without disabilities (Hartley et al., 2015). Because of the risk factors already associated with a SEN (Erskine et al., 2016; Haller et al., 2016) involvement in the bullying dynamic further increases the disadvantages of these students. However, Rose and Espelage (2012) highlight that the increased risk cannot be explained by special education needs but by related problems in areas such as CU traits, lower empathy, and moral disengagement (e.g., Frick et al., 2003; Myschker & Stein, 2018). Research on students with disabilities supports the assumption that the peak of bullying is in middle school (grades 6 to 8) (Blake et al., 2012).

Studies have focused on identifying mechanisms which influence the role-taking of students within the bullying-dynamic for some time. The socio-ecological model (Swearer & Espelage, 2004) highlights that different levels of factors influence the participation in the bullying-dynamic. In addition to external factors (such as school

climate, parenting, socio-economic status) internal factors affect the bullying dynamic. Focus in recent years has been on empathy (Zych et al., 2019), callous-unemotional traits (e.g., Fanti et al., 2009; Zych et al., 2019) and moral disengagement (e.g., Gini, 2006; Thornberg et al., 2015) as possible internal factors. These studies indicate that they have an influence on the participation in the bullying dynamic. Regarding the influence of CU traits and moral disengagement on bullying the evidence reported in the studies are consistently showing a positive association (Fanti et al., 2009; Gini, 2006; Thornberg et al., 2015; Zych et al., 2019). Additionally the subscale unemotional does not have a predictive effect on bullying whereas the subscales uncaring and callousness do have a predictive effect (Munoz et al., 2011; Schipper & Koglin, 2021; Thornberg & Jungert, 2017). However, studies focusing on empathy report inconsistent results where either both cognitive and affective or only affective empathy influences bullying perpetration (Stavrinides et al., 2010; Zych et al., 2019; Zych & Llorent, 2019). Additionally, bullying perpetration shows a stronger association with CU traits, empathy, and moral disengagement than victimization (e.g., Fanti et al., 2009; Zych et al., 2019; Gini, 2006; Thornberg et al., 2015). Gini (2006) could also find significant correlations between moral disengagement and the roles of assistant and outsider. Therefore, investigating the influence of these factors in an integrated model is especially relevant for the roles sympathizing with the perpetrator, such as the assistant and to an extent the outsider/passive bystander (i.e., “I pretended not to notice when things were taken or stolen from another student”, Demaray et al., 2016). Additionally, Zych and Ttofi (2019) report that moral disengagement acts as a mediator between affective empathy and bullying perpetration.

CU traits

Callous-unemotional traits (CU traits) are used to describe an extreme form of aggressive-dissocial behaviour (Koglin & Petermann, 2012). The DSM-5 characterizes CU traits by an inclination to violent behaviour and social behaviour disorders (Falkai & Wittchen, 2018). Current research interest is primarily related to the predictive influence of CU traits on conduct disorders and aggressive or dissocial behaviors (Frick et al., 2004; Frick & White, 2008; Rowe et al., 2010), as well as bullying (Thornberg & Jungert, 2017).

Traits such as lack of remorse, lack of empathy skills, lack of concern for poor performance in school, work, or other areas of life, and affectivity in social interactions are used to describe CU traits (Frick, 2004; Frick & Viding, 2009; Koglin & Petermann, 2012). A recent meta-analysis by Waller et al. (2019) indicates a significant negative relationship between empathy (cognitive and affective) and CU

traits. Studies have shown (e.g., Blair, 1999; de Wied, 2012) that adolescents with high CU traits do not react to emotional cues the same way students with low CU traits do, suggesting that these students do not process fear, anger, sadness, and pain of others the same way (Blair, 2013). The indication that these students do not respond to fear and pain of others could influence their participation in the bullying dynamic. Due to their inability to react to the distress emotions of other students they might agitate others further than other students with low CU traits, therefore increasing their likelihood of being a perpetrator (Gini, 2006; Thornberg et al., 2015).

CU traits are part of the concept of antisocial personality disorder in adulthood and can appear as early as kindergarten age (Hare & Neumann, 2008; Koglin & Petermann, 2012). During childhood and adolescence complex, goal-oriented thinking increases (Crone & Steinbeis, 2017) as does the ability to understand what other people think and feel (Foulkes & Blakemore, 2018).

Empathy

The positive influence empathy has on, for example moral and social functioning (Paciello et al., 2013; Zych & Llorent, 2019), has placed it in the focus of research for quite some time. Zych and Llorent (2019) suggest that students with high levels of affective empathy behave morally because they do not find it acceptable that another person is hurting whereas students with few affective empathy skills go through a slow and rational process when deciding how to act and are therefore more likely to morally disengage. Paciello et al. (2013) additionally suggest that high empathy can promote altruistic responses whereas personal distress might heighten moral disengagement mechanisms to reduce stress. Additionally, lack of empathy skills have been identified as a predictor of bullying perpetration (Zych et al., 2019; Eisenberg et al., 2014) defined empathy as an emotional response that corresponds to other people's emotions in each situation. Due to the processes behind the ability to gauge/match others' emotions, empathy is defined by two dimensions: cognitive and affective. Cognitive empathy includes the understanding of other people's emotions whereas affective empathy comprises of also feeling vicarious emotions (Jolliffe & Farrington, 2006).

Empathy has been linked to the development of morality by Hoffman (2000). Hoffman's (2000) empathy theory includes an emotion-based perspective in moral research. It highlights that both moral emotions and moral cognitions are important for the early development of moral action tendencies (Hoffman, 2000). The affectiveness represents a central component of morality when integrating an emotional perspective. The interplay of empathic affect and the

ability to take someone else's perspective enables someone to take moral actions. It also represents an important component of moral empathy development and comprises of affective and cognitive components (Hoffman, 2000) distinguishes between dispositional empathy, which he defines as a stable trait, and temporary affective empathy, as a response to a specific situation. According to Hoffman (2000), four stages of empathy development can be distinguished: global empathy, egocentric empathy, empathy for others' feelings (emotional empathy), and empathy for other people's general situation (contextual empathy) (Hoffman, 1991; 2000; Malti et al., 2009).

Lack of empathy skills (i.e., the inability to understand and feel the emotions of others) might be connected to bullying in the same way CU traits are (Zych et al., 2019; Zych & Llorent, 2019). If students are unable to understand and sympathize with their peers, they are unable to understand the hurt they have caused their peers. Therefore, increasing the risk of participating in the bullying dynamic as perpetrator or sympathizer of the perpetrator. Zych et al. (2019) found that students who were identified as bullies had lower odds of scoring high in cognitive and affective empathy with no differences between boys and girls. However, other studies indicate that only the affective component of empathy has a negative effect on bullying perpetrator behavior (e.g., Stavrinides et al., 2010; Zych & Llorent, 2019). The inconsistent results show that further studies differentiating between the two components of empathy are needed to get a clear picture of the influence of empathy on bullying perpetrator behavior. Additionally, research focusing CU traits also indicate that the different components of empathy are differently related to CU traits (Frick & Kemp, 2021; van Noorden et al., 2015).

Moral disengagement

Moral disengagement is the detachment from moral beliefs (Bandura, 1990). The concept of moral disengagement also includes the process by which individuals justify their aggressive or harmful behaviour toward others. The goal of the disengagement process is the ability to behave immorally without violating his or her own beliefs, values, or norms. Bandura et al's. (1996) strategies of Moral disengagement include: (1) Moral justification ("detrimental conduct is made personally and socially acceptable by portraying it in the service of valued social or moral purposes" (Bandura et al., 1996, p. 365), (2) Euphemistic labeling (using language to make harmful behavior respectable/sounding better), (3) Advantageous comparisons (contrasting one's own immoral behavior with worse things done by others), (4) Displacement of responsibility (viewing of actions as commands from authorities), (5) Diffusion of responsibility (in group

settings one's own responsibility is minimized), (6) Disregarding consequences (avoidance of facing consequences for others), (7) Distorting consequences (minimization of harm the other person faces), (8) Dehumanization (denial of human attributes of the victim) and (9) Attribution of blame (immoral behavior due to provocation by the victim). Bandura's (1990; 2000) research indicates that cognitive reframing (i.e., justifying the harmful behaviour), attributing responsibility to others, and dehumanizing the victim are the most commonly used disengagement mechanisms. In their model Visconti et al. (2015) place moral disengagement as a link between aggression and individual goals.

The ability to detach or neutralize aggressive/bullying behaviour (Ribeaud & Eisner, 2010; 2012) can increase the risk of exerting these types of behaviors. If students can justify bullying acts as 'normal' behaviour they will not feel guilty about it (Paciello et al., 2020) which heightens the risk of behaviors occurring repeatedly. In their meta-analysis Gini et al. (2014) found medium significant effects between moral disengagement and bullying. Indicating that moral disengagement is a predictor of bullying perpetration (Gini et al., 2014; Zych & Llorent, 2019). Additionally, Killer et al. (2019) report a positive relationship between moral disengagement and bullying behaviour but none for MD and bystander behaviour. Gini et al. (2020) report negative associations between moral disengagement and defending and positive associations between moral disengagement and passive bystanding. Additionally Bjärehed et al. (2020) found positive associations between different subsets of moral disengagement (Moral justification, euphemistic labeling, advantageous comparison, diffusion of responsibility, displacement of responsibility, distortion of consequences and victim attribution) and pro-aggressive bystander behavior. Whereas Thornberg and Jungert (2013) found negative associations between moral disengagement and outsider as well as defender behavior.

Both CU traits and moral disengagement individually influence bullying behaviors (Gini et al., 2014; Zych et al., 2019). Although the focus has been primarily on the association between moral disengagement and bullying behavior studies suggest that differences in moral disengagement depending on the bullying role exist (Menesini et al., 2003; Thornberg & Jungert, 2013; Wachs, 2012). Additionally, both associations, CU traits on moral disengagement (e.g., Hyde et al., 2010; Thornberg & Jungert, 2017) and moral disengagement on CU traits (e.g., Sijtsema et al., 2019), have been investigated with inconclusive results (Paciello et al., 2020). However, most studies propose an association from CU traits on moral disengagement with possible reciprocal effects (Paciello et al., 2020).

Current study

Although CU traits, empathy, and moral disengagement are likely to be significantly associated with bullying perpetration, they have not been jointly studied before. The current study addresses the question whether moral disengagement mediates the associations of CU traits, cognitive and affective empathy on bullying perpetration behaviors. From the theory described above, it can be seen that the variables are subject to developmentally relevant differences. For this reason age, gender and SEN were controlled in the model.

We hypothesize that CU traits negatively predict cognitive and affective empathy and cognitive and affective empathy negatively predict moral disengagement. Additionally, we expect CU traits to be positively related to moral disengagement. Furthermore, we hypothesize that CU traits and moral disengagement are positively related to perpetration behaviors whereas cognitive and affective empathy is negatively related to it. Regarding the mediation of moral disengagement, we hypothesize that it significantly mediates the relationship between CU traits, cognitive and affective empathy, and perpetration behaviour. Additionally, we hypothesize that empathy mediates the relationship between CU traits and moral disengagement. In addition, we expect that SEN is positively related to CU traits, moral disengagement and bullying perpetration involvement and negatively related to empathy.

Methods

Participants

For this project, the approval of the state education authority, a positive vote by the Commission for Research Assessment and Ethics have been obtained. Schools in Bremen and Lower Saxony, Germany were contacted and asked to participate in the study. After approval from the school administration was obtained consent forms, with information about the study, the questionnaire, and the handling of the data, were handed out to the students. The students were only allowed to participate when their parents signed the consent form. In total nine secondary schools participated in the study.

Procedure

Data collection took place from January 2022 until July 2022. The Data was processed pseudonymously. The sample consists of $N=210$ students (52.9% female) between 10 and 17 years ($M=12.85$; $SD=1.39$). The a priori tested

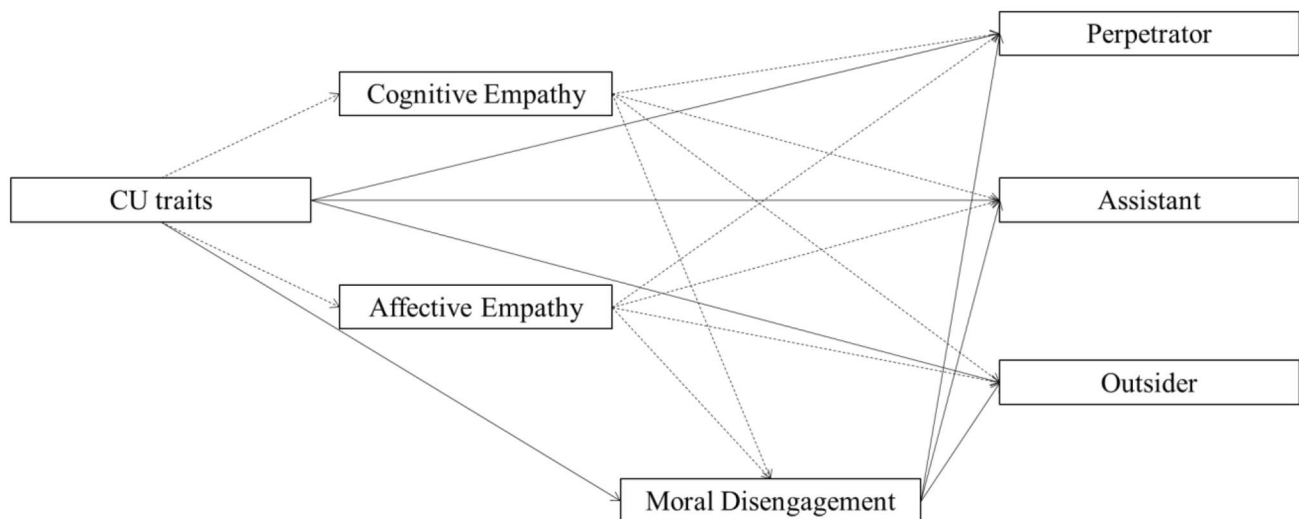


Fig. 1 shows the hypothesized relationships between the variables. For clarity reasons the control variables (SEN, gender and age) are not shown in the figure

power indicates a required sample of $N=129$ subjects with an expected mean effect size $f=0.15$, a 5% α error probability, and 4 predictors (Faul et al., 2009). Students filled out a self report questionnaire with German translations of the measures. Teachers were asked to indicate whether a student had a special education need. In total 32 (15.2%) students have special education needs.

Measures

The *Inventory of Callous Unemotional Traits* (ICU; Essau et al., 2006) is a 24 Items self-report scale. It can be divided into callousness (11 Items; “I do not care who I hurt to get what I want”), uncaring (8 Items; “I always try my best” - reverse scoring) and unemotional (5 Items; “I do not show my emotions to others”). The students were asked how strongly they agreed with the statements on a 4-point-likert scale (0 = “not at all true,” 1 = “somewhat true,” 2 = “very true,” and 3 = “definitely true”). For this study only the Total ICU score ($\alpha=0.78$) will be used. Scores were calculated by reverse coding the positively worded items and then adding the answers of each question. The meta-analytic review of Cardinale and Marsch (2020) indicates acceptable external validity of the total ICU score.

The *Basic Empathy Scale* (BES; Jolliffe & Farrington, 2006) consists of 20 Items which can be divided into affective (11 Items; “My friends’ emotions don’t affect me much”, $\alpha=0.78$) and cognitive empathy (9 Items; “I can understand my friend’s happiness when she/he does well at something”, $\alpha=0.79$). Students were asked how strongly they agreed with each statement on a 5-point-likert scale (0=strongly disagree; 1=Disagree; 2=neither agree nor disagree; 3=Agree; 4=strongly agree). The score was calculated by

reverse coding the negatively worded items and summing the answers of each scale. Jolliffe and Farrington (2006) provide evidence about the validity of their instrument in their study. In accordance with other studies females scored higher on the BES, the correlations with other personality constructs were according to theoretical expectations and the correlation between cognitive and affective empathy additionally points to a valid measurement of empathy (Jolliffe & Farrington, 2006).

Bullying Participation was measured using the *Bully Participant Questionnaire* (Summers & Demaray, 2008), a self-report measure in which students were asked to answer questions regarding the different roles in the bullying dynamic. Each role (Bully, Victim, Assistant, Defender, and Outsider) assessed in the questionnaire consists of 10 Items (e.g., Bully: “I have called another student bad names”, $\alpha=0.83$; Outsider: “I pretended not to notice when someone else tripped another student on purpose”, $\alpha=0.91$; Assistant: “I have made fun of someone when they were pushed, punched, or slapped”, $\alpha=0.78$). Students were asked how often they engaged in these behaviors in the last 30 days (0=never, 1=1 to 2 times, 2=3 to 4 times, 3=5 to 6 times, 4=7 or more times). All roles were measured however only the roles of bully, outsider and assistant will be investigated in this study. Scores were added together per role. The authors of the questionnaire provide evidence for congruent, convergent and divergent validity of the scores (Demaray et al., 2016). Additionally, the five factor structure of the questionnaire has been confirmed in recent studies (Jenkins et al., 2022; Jenkins & Canivez, 2021; Qiu et al., 2021). Frequency of the roles was calculated by appointing students who got a sum of 0 for a role as never occupying the role, students with sum greater than one *SD* above the mean were

categorized as often occupying the role. Students above 0 and below 1 SD above the mean were categorized as sometimes occupying the role (Rose et al., 2015).

Moral disengagement was assessed using the *Unified measure of Moral neutralization* questionnaire from Ribeaud and Eisner (2010; 2012). The questionnaire consists of 18 Items which focus on neutralization of aggressive behaviors and bullying (e.g., “It is alright to fight to protect your friends”, $\alpha=0.88$). The individual scores were calculated by summing the answers to each question. The authors report construct and criterion validity for their questionnaire (Ribeaud & Eisner, 2010; 2012).

Data analytic procedures

To answer the proposed research questions, a path analysis (serial mediation) was calculated using AMOS 26. The aim of the analysis is to cross-sectionally examine the influence of CU traits on affective and cognitive empathy as well as on moral disengagement and on bullying. Furthermore, direct associations of affective and cognitive empathy as well as moral disengagement on bullying will be tested. For data analysis, a path model will be established in which empathy (affective and cognitive) and moral disengagement will be analyzed as mediators of the relationship between CU traits and bullying. The terms predictor and mediator are used in the statistical sense and not to implicate a chronology. Special educational needs, age, and gender were also controlled for in the path analysis. Path analysis was performed using the bootstrap method with confidence estimates. In the present study, confidence intervals at a 95% level were obtained for indirect effects with a bootstrap of 1000 samples (Poi, 2004). Analyzes of missing data indicated that the missing completely at random condition is fulfilled (MCAR; $\chi^2 = 4568.979$, $df=4415$, $p=.052$; see Little, 1988). Model fit was assessed using root mean square error of approximation (RMSEA) (Browne & Cudeck, 1993), comparative fit index (CFI), normalized fit index (NFI), and Tucker-Lewis index (TLI) (Arbuckle, 2012). According to Hu and Bentler (1999) values of TLI, CFI and NFI > 0.95 and RMSEA < 0.06 indicate a good fit of the data.

Results

Descriptive statistics for all the included variables are shown in Table 1. Bully perpetration significantly correlated with CU traits and moral disengagement. Assistant behavior correlated with age, CU traits, moral disengagement, and perpetration. Additionally, outsider behavior significantly correlated with CU traits, moral disengagement, affective empathy, and the other bullying roles. Table 2 displays the

Table 1 Descriptive Statistics and correlation matrix

Variable	N	M	SD	Skew-ness	Kurtosis	Range		1	2	3	4	5	6	7	8	9	
						Min	Max										
1 SEN	210																
2 Age	210	12.85	1.37			10	17	-0.14*									
3 Gender	210							0.10	-0.03								
4 CU traits	210	22.78	7.39	0.56	0.14	8.0	47.0	0.16*	0.28**	0.26***							
5 MD	210	10.60	7.71	1.36	2.30	0.0	43.0	-0.06	0.18**	0.22*	0.49***						
6 Cognitive empathy	210	26.30	5.25	-0.73	0.56	9.0	36.0	-0.06	-0.16*	-0.34***	-0.43***	-0.16*					
7 Affective empathy	210	25.13	7.34	-0.32	0.17	4.0	41.0	-0.01	-0.24**	-0.47***	-0.62***	-0.23***	0.48***				
8 Perpetrator	210	5.13	5.40	2.12	5.95	0.0	31.0	0.07	0.18**	0.01	0.26**	0.51***	-0.04	-0.11			
9 Assistant	210	2.52	3.73	3.11	15.05	0.0	28.0	0.00	0.28**	0.07	0.29***	0.47***	-0.04	-0.14*	0.77***		
10 Outsider	210	4.72	6.82	2.60	8.34	0.0	40.0	-0.04	0.22*	0.06	0.32***	0.45***	-0.15*	-0.19**	0.43***	0.59***	

Note: MD = Moral Disengagement; N = Sample Size; M = Mean; SD = Standard Deviation; Md = Median; Gender: 1 = female, 2 = male; * $p < .05$, ** $p < .01$, *** $p < .001$

Table 2 Frequency of Roles

Role	Never		Sometimes		Often	
	Percentage	<i>N</i>	Percentage	<i>N</i>	Percentage	<i>N</i>
Perpetrator	13.3%	22	74.7%	124	12.0%	20
Assistant	32.5%	54	56.0%	93	11.4%	19
Outsider	24.7%	41	63.3%	105	12.0%	20

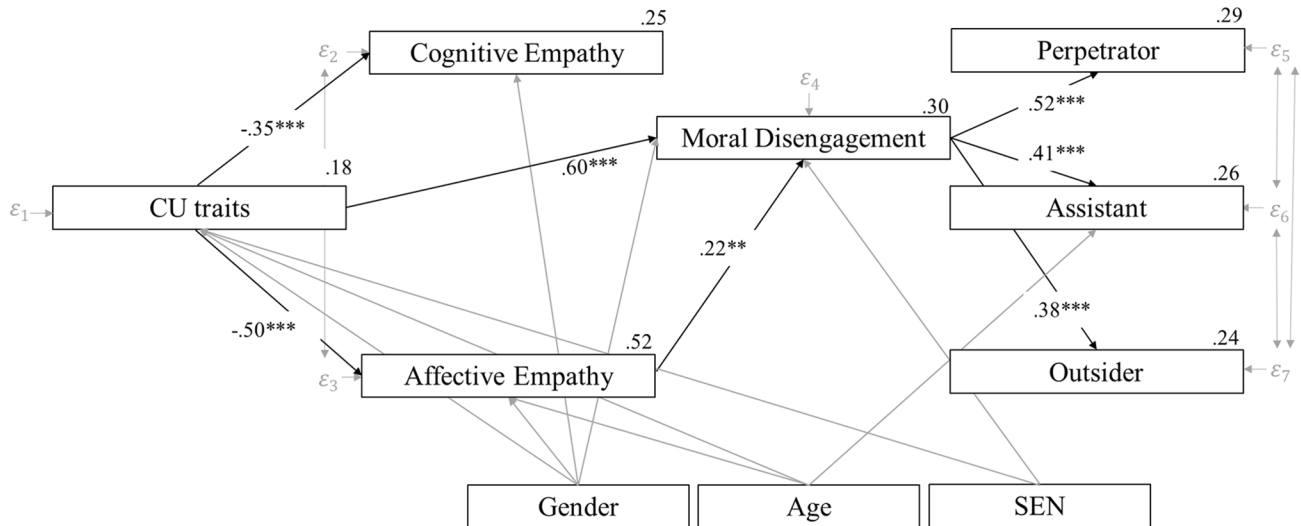


Fig. 2 Path Analysis. *Note* Solid lines were used for significant associations and dashed lines were used for non-significant associations. The significant associations of gender, age, and SEN were shown in a

solid line; non-significant associations were not shown for clarity. The numbers above the variables represent R^2

frequency of the bullying roles. 33% of the students states that they have never occupied the role of assistant, 24.7% the role of outsider and 13.3% the role of the perpetrator. 11.4% (Assistant) and 12.0% (Perpetrator and Outsider) stated that they have often taken on the role.

The path model is shown in Fig. 1 and provides an acceptable fit to the data ($N=210$; $\chi^2/df=0.63$, $p=.531$, $CFI=1.00$, $NFI=1.00$, $TLI=1.02$, $RMSEA=0.000$) and explains 18% of the variance for the CU traits and 25% of cognitive empathy, 52% of affective empathy, 30% of moral disengagement, 29% of perpetrators, 26% of assistants, and 24% of outsiders. Direct paths from the CU traits to cognitive ($\beta = -0.35$, $p < .001$), and affective empathy ($\beta = -0.50$, $p < .001$), as well as to moral disengagement ($\beta = 0.60$, $p < .001$) are significant. Affective empathy shows a direct significant path to moral disengagement ($\beta = 0.22$, $p < .01$). Moral disengagement shows direct associations with perpetrators ($\beta = 0.52$, $p < .001$), assistants ($\beta = 0.41$, $p < .001$), and outsiders ($\beta = 0.38$, $p < .001$).

Furthermore, significant paths of age on CU traits ($\beta = 0.33$, $p < .01$), on affective empathy ($\beta = -0.14$, $p < .01$), and on assistants ($\beta = 0.20$, $p < .001$) can be inferred from the analysis. Adolescent gender shows a significant path to CU traits ($\beta = 0.25$, $p < .001$), cognitive empathy ($\beta = -0.25$, $p < .01$), affective empathy ($\beta = -0.35$, $p < .001$), and moral

disengagement ($\beta = 0.21$, $p < .001$). Significant associations of special educational need on moral disengagement ($\beta = -0.14$, $p < .05$) and CU traits ($\beta = 0.19$, $p < .05$) are evident.

Indirect effects were analyzed (Table 2). The results show indirect associations of CU traits via affective empathy on moral disengagement ($\beta = -0.01$, $p = .029$). Additionally, CU traits shows indirect associations via affective empathy and moral disengagement on the role of perpetrators ($\beta = -0.01$, $p = .016$), on the role of assistants ($\beta = -0.01$, $p = .011$), and on the role of outsiders ($\beta = -0.01$, $p = .008$). The association of CU traits with the role of perpetrators ($\beta = 0.32$, $p = .001$), on the role of assistants ($\beta = 0.25$, $p = .001$), and on the role of outsiders ($\beta = 0.23$, $p < .001$) was additionally inferred by moral disengagement. Moreover, affective empathy shows indirect associations with the role of perpetrators ($\beta = 0.12$, $p = .016$), on the role of assistants ($\beta = 0.09$, $p = .013$), and on the role of outsiders ($\beta = 0.09$, $p = .008$) via moral disengagement.

Discussion

The aim of the study was to investigate whether moral disengagement mediates the associations of CU traits, cognitive and affective empathy on bullying perpetration

Table 3 Significant Indirect Effects

Indirect Path	Standardized Estimates	p Value	95% CI Lower	95% CI Upper
CU - affective - MD	-0.011	0.029	-0.21	-0.04
CU - affective - MD - Perpetrator	-0.011	0.016	-0.09	-0.01
CU - affective - MD - Assistant	-0.011	0.011	-0.05	-0.01
CU - affective - MD - Outsider	-0.011	0.008	-0.09	-0.02
CU - MD - Perpetrator	0.32	0.001	0.15	0.35
CU - MD - Assistant	0.25	0.001	0.07	0.19
CU - MD - Outsider	0.23	<0.001	0.13	0.34
Affective - MD - Perpetrator	0.12	0.016	0.17	0.02
Affective - MD - Assistant	0.09	0.013	0.10	0.01
Affective - MD - Outsider	0.09	0.008	0.15	0.01

Note. CU = Callous unemotional traits, affective = affective empathy, MD = Moral disengagement

behaviors. Age, gender and SEN were controlled in the model. The analysis was able to show the relationships between CU traits, empathy, moral disengagement, SEN, and bullying perpetrator behavior. Thereby the analysis was able to explain 0.18 to 0.52 of the variance in the dependent variables.

Regarding our research question only the relationship between CU traits, affective empathy and bullying perpetration roles were mediated by moral disengagement.

Gender has the expected association with empathy and CU traits. Girls scored higher on both empathy scales which supports previous research on gender differences in empathy (e.g., Michalska et al., 2013). In contrast boys scored higher in CU traits and moral disengagement which is also supported by research on CU traits (e.g., Crapanzano et al., 2011) and moral disengagement (Perren & Gutzwiller-Helfenfinger, 2012; Thornberg & Jungert, 2014). Additionally, boys scored higher on assistant behaviour. This is in accordance with previous studies examining gender differences in bullying roles (Crapanzano et al., 2011; Jenkins et al., 2016). Age is positively associated with CU traits, assistant behavior and negatively with affective empathy. Therefore, older students show more CU traits and assistant behavior whereas younger students show more affective empathy. Studies on CU traits indicate that they are unstable in children and adolescents (Fanti et al., 2017). The association between age and assistant behavior did coincide with current studies who report that Bullying behavior decreases in adolescence the behavior has its peak at the change to the secondary schools (Blake et al., 2012; Limber et al., 2018). Further, the association between age and affective empathy does not conform to the results of previous studies (Allemand et al., 2015). SEN has a significant association with moral disengagement and CU traits. The results indicate that students with SEN tend to show lower moral disengagement and more CU traits. These results are preliminary in nature and should therefore be interpreted with caution. To be able to generalize these findings further studies should

investigate moral disengagement and CU traits in a bigger population of students with SEN. However it should be noted that the percentage of students with SEN in our sample is bigger (15.2%) than to be expected according to the population (7.7%) (KMK, 2022).

In accordance with our hypotheses, the results show that CU traits significantly explain a great variance of affective and cognitive empathy. This is in accordance with Waller et al. (2019) who also found significant associations between CU traits and empathy. CU traits have a greater influence on affective empathy which coincides with Kahn et al. (2017). The results suggest that empathizing with the emotions of others is impaired by the CU traits and their manifestations of callousness and the lack of empathy. Furthermore, it can be seen that the recognition of emotions is also impaired by the presence of the CU traits, although not as strongly as affective empathy.

The strongest direct path is shown by CU traits on moral disengagement. Higher CU traits seem to lead to increased moral disengagement which is in line with our hypothesis. This is in accordance with Muratori et al. (2017) who also found that CU traits are significantly associated with moral disengagement. Since people with high levels of the CU traits do not care about the feelings of others, they are presumably better able to justify harming others or accepting the harm of others.

The non-significant direct association of the CU traits on the bullying roles does not correspond to the hypotheses we formulated in advance. Similarly, previous studies also show direct associations between CU traits and bullying (van Geel et al., 2017). This means that the CU traits trigger moral disengagement, which in turn leads to bullying. Thus, it is not the CU traits themselves that are decisive for the behavior but the neutralization of harmful actions.

Contrary to the previously established hypotheses, cognitive empathy does not have a significant association with any of the bullying roles or moral disengagement which is also contrary to the meta-analysis by Zych et al. (2019) and Zych

and Llorent (2019). Jolliffe and Farrington (2006) argue that frequent execution of bullying perpetration is needed to identify an effect of empathy on bullying. Affective empathy however does have a significant association with moral disengagement. Contrary to recent studies (Kokkinos & Kipritsi, 2018; Zych et al., 2019; Zych & Llorent, 2019) and our hypothesis our model shows a positive association between affective empathy and moral disengagement. Interestingly the negative association between affective empathy and moral disengagement in the descriptive statistics changes to a positive association in the path model. This could be due to the shared variance with CU traits in explaining moral disengagement pointing to a suppression effect which needs to be examined in depth using longitudinal studies. Due to the opportunity sample, it cannot be assumed that the students involved frequently execute bullying perpetration.

Only moral disengagement emerged as a significant direct factor associated with the bullying roles perpetrator, assistant and outsider. Indicating that moral disengagement influences the association of CU traits and empathy on bullying perpetration behavior. The results raise the question of how to interpret the findings on moral disengagement. If we pay attention to the wording of the items, it could be assumed that the moral disengagement questionnaire measures moral attitudes rather than disengagement from moral values. The Questionnaire (similarly to the questionnaire of Bandura et al., 1996 and Hymel et al., 2005) focuses on the strategies behind moral disengagement (e.g. dehumanizing the victim) without clarifying whether the students answering the questions have moral standards from which they disengage. Therefore the questions could be understood as moral standards and not as a process by which moral digressions are justified. In connection with the CU traits, it would otherwise have to be assumed that those children and adolescents with high CU traits also have moral values from which they have to disengage, which we do not assume in terms of content (Schipper & Koglin, 2021).

Conclusion

The results indicate that using moral disengagement as a mediator between CU traits, empathy and bullying seems to suppress the direct effect CU traits and empathy should have on bullying perpetration according to previous studies (Munoz et al., 2011; Schipper & Koglin, 2021; Stavrinides et al., 2010; Thornberg & Jungert, 2017; Zych et al., 2019; Zych & Llorent, 2019). Thus, the results of this study raise the most interesting point of the discussion: Do individual preconditions (CU traits and Empathy) play a less significant role than the learned moral attitudes (Moral disengagement) of adolescents? This discussion point can be

a connecting point between moral and bullying research. Studies from moral research show that in addition to moral disengagement, other constructs of morality are also used in the explanation of bullying (e.g., Schipper & Koglin, 2021) and demonstrate the relevant role of other moral constructs in addition to the existing findings on moral disengagement.

Limitations

Some methodological limitations for this study must be considered. The greatest limitation of the study results from the cross-sectional design, which does not allow the examination of reciprocal effects. Previous studies (e.g., Muratori et al., 2017; Stavrinides et al., 2010; Wang et al., 2017) indicate that reciprocal effects between the different variables are to be expected. Additionally, Wang et al. (2017) indicate that previous bullying has a greater effect on moral disengagement than moral disengagement has on bullying perpetrating behavior. Further studies should therefore investigate reciprocal effects within the proposed model.

Due to the opportunity sample, the generalizability of the results presented here is limited. Furthermore, it should be noted that the results were collected by a self-assessment of the adolescents and only asked about bullying behaviors in the last thirty school days. Multi-method-multi-informant approaches could capture multiple perspectives on behavioral and cognitive levels and thus counteract potential method bias. Michalska et al. (2013) for example were able to show that gender differences in empathy were only significant when the children's self-reports were used. Killer et al. (2019) report stronger associations between moral disengagement and bullying roles when using self-report than with peer nomination. They argue that using the same informant could lead to shared variance which increases the association (Hawker & Boulton, 2000; Killer et al., 2019). Therefore, including peer-nomination to measure bullying might portray the relationships between moral disengagement and bullying reliably. Additionally, it could minimize social desirability as well as underestimations due to self-reports. However, studies indicate that peer nomination and self-reported bullying report different perspectives on bullying behaviour (e.g. Bouman et al., 2012). Thus, using both self-report and peer nomination would capture more nuances of bullying behaviours and reflect the associations of influencing variables and bullying reliably. Furthermore, the roles described in the questionnaire regarding bullying (Demaray et al., 2016) are not mutually exclusive. Therefore, the students in this study could have more than one self-appointed role.

The small number of students with special educational needs is another limitation of the present study. However, since the sample was recruited from inclusive schools a low

number of students with SEN was to be expected compared to students without SEN. Although the study has the novelty of controlling for adolescents with special educational needs, future studies should control for larger cell populations. Further studies should control externalizing and internalizing behaviors instead of special educational needs to include students which do not have an official SEN but significant problems with their behavior similar to those with an official SEN. This would also create international comparability of results.

Implications

This study is intended to contribute to deriving implications for further research and, in next steps, for practice. The results found represent two new and key findings that need to be replicated in future research. A central result is that the inclusion of moral disengagement shows that it is not the individual factors such as CU traits and empathy that play a central role in bullying, but rather the learned attitudes of the adolescents. If future studies can replicate these same findings, it means for (special) education practice that there is a way to prevent bullying without directly addressing constructs that are difficult to change, such as CU traits. This possibility would involve promoting moral attitudes.

Koglin and Daseking (2021) also clearly state that, compared to other relevant intervention targets (e.g., social information processing, emotional competencies), there is a lack of empirical findings that show whether and to what extent, for example, promoting moral knowledge also improves moral action and thus reduces, for example, aggressive-dis-social behavior. Existing prevention and intervention programs to prevent bullying largely rely on the promotion of, for example, empathy. However, the present findings raise the question whether it might not be enough to promote only empathy when it comes to bullying but should much more exhaustively include the issue of morality and moral disengagement.

Furthermore, a central result, which is shown to be relevant, is that the SEN of adolescents shows a direct association with moral disengagement. The statements agreed to by adolescents with high levels of moral disengagement include “You have to hurt others before they hurt you” or “Many problems can be solved with violence”. These statements are considered “typical” statements for adolescents who are characterized by an environment of emotional neglect and coldness, as well as a lack of attention and care from their guardians and are thus noted as risk factors for emotional-social development (Gellman & Deluica-Waack, 2006).

In order to take up the question of capturing moral disengagement for future research, it should focus on capturing

that construct. Although Bandura et al. (1996) has shaped the operationalization and measurement of moral disengagement, we only see the measurement of the disengagement strategies. The question of how moral disengagement is to be distinguished from moral standards in its capturing should be clarified. A possible alternative acquisition could be the inquiry of moral standards, from which a detachment is argumentatively inquired.

Funding Open Access funding enabled and organized by Projekt DEAL. The authors received no relevant financial support for the research, authorship, and/or publication of this article.

Data Availability The datasets generated during and/or analysed during the current study are not publicly available due to copyright policies but are available from the corresponding author on reasonable request, and with permission of relevant third parties.

Declarations

Ethics approval The questionnaire and methodology for this study was approved by the Human Research Ethics committee of the University of Oldenburg, Germany (Ethics approval number: 2020/047).

Consent to participate Informed consent was obtained from all individual participants and their parents included in the study.

Conflicts of interest The authors declare that there is no conflict of interest.

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