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Effects of Christian REACH forgiveness intervention to reduce aggressiveness in adolescents with conduct disorder

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Abstract

While there have been significant advances in the treatment of conduct disorder (CD), there is still a need to seek and develop therapeutic solutions that can overcome the poor long-term prognosis. In this evidence-based research, we evaluated the effect of immediate REACH Forgiveness training on the severity of aggressiveness among adolescents with CD. The purposive sample consisted of 32 Catholics aged 15–18 randomly placed in an experimental or non-intervention control group. Participants in the experimental group were subjected to an immediate REACH Forgiveness session for Christians, which lasted 6 h, while participants in the control group played board games and spent time together in the day care center during this time. The scores obtained by adolescents in the experimental group regarding forgiveness (decisional and emotional) and aggressiveness (anger, physical aggression, verbal aggression, and hostility) improved under REACH Forgiveness training, and these positive effects were still evident 1 month after the intervention (while the control scores did not change in a statistically significant way). The data obtained indicate that the Christian version of REACH can provide important support for other forms of psychopedagogical therapy in adolescent Catholics with CD in reducing aggressive behavior.

KEYWORDS
adolescents, aggression, conduct disorder, forgiveness, REACH forgiveness

Practitioner points

- The results indicate that the Christian version of REACH forgiveness training may positively impact socio-emotional functioning in Catholic adolescents with conduct disorder.
- The study reveals that REACH forgiveness training changes adolescents' decisional and emotional forgiveness with conduct disorder.
- One 6-h REACH session appears to be sufficient to reduce anger, physical and verbal aggression, and hostility.

1 | INTRODUCTION

Current research indicates an increasing prevalence of aggressive behavior among children and adolescents (Castillo-Eito et al., 2020; Connor et al., 2019; Ferguson, 2015; Shao & Wang, 2019). From a nosological perspective, one of the disorders for which these behaviors are a primary diagnostic criterion is conduct disorder (CD) (Fairchild et al., 2019). In light of the International Classification of Diseases, 11th Revision (ICD-11; WHO, 2021) and DSV-5 (APA, 2013) criteria, a child or adolescent may be diagnosed with CD when their behavior violates the rights of others and social norms in a significant way and becomes a persistent pattern (i.e., occurs at least within 6 months). In its milder or early form, the disorder manifests itself with outbursts of anger, frequent quarreling, failure to follow social rules, spiteful and vindictive behavior, and use of obscene language (Rolon-Arroyo et al., 2013). Juveniles with developed CD often come into conflict with the law, and some of them become criminals (Seligman et al., 2001). The disorder co-occurs with deficits of empathy and moral reasoning, as well as impulsivity (Broulidakis et al., 2016). Research suggests that both genetic and environmental factors contribute to the development of CD, with interactions between genetic predisposition and environmental stressors playing a significant role (Salvatore & Dick, 2018). CD is one of the most stable (unchangeable) and difficult to intervene disorders of childhood and adolescence. It is more common in boys (6%–16%) than in girls (2%–9%) (Dick et al., 2003, 2011). The disorder is most often visualized and diagnosed at age 11–12. In contrast, the onset of CD before the age of ten has a much worse prognosis, is more resistant to treatment, and may lead to the development of antisocial personality disorder (ASPD) in adulthood (Gelhorn et al., 2007; Kołakowski, 2018). This childhood-adulthood continuum means that without taking firm and systematic therapeutic action (carried out at various levels), it is impossible for the problem to resolve itself.

In the treatment of CD, psychopedagogical therapy is most often used to: (a) learn to identify and control situations that may trigger aggression in the child, (b) acquire the ability to take the other person's perspective, and (c) deal with conflict situations. While there have been significant advances in the treatment of CD (Frick, 2012; Henggeler & Sheidow, 2012), there is still a need to seek and develop therapeutic solutions that can alleviate CD and overcome the poor long-term prognosis. It seems reasonable to use forgiveness training, since according to researchers, forgiveness—regardless of religiosity and demographic variables—is associated with lower levels of various forms of aggressiveness (Ashy et al., 2010; Berry et al., 2016; Brown & Phillips, 2005; Ross et al., 2007; Webb et al., 2012; Worthington et al., 2001) and anger conceptualized in terms of trait as well as state (Fehr

et al., 2010). In contrast, other research suggests that the link between unforgiveness and health may be mediated by hatred, hostility, and fear (Toussaint & Webb, 2005; Worthington et al., 2001).

Bulechek and McCloskey (2013) define *forgiveness* as a process in which someone has replaced feelings of anger and resentment toward another, self, or higher power with benevolence, humility, and empathy. Meanwhile, Worthington et al. (2007) distinguish dispositional forgiveness from emotional forgiveness. The first involves the decision to forgive. The second is an emotional feeling that an act of forgiveness has taken place. According to Enright (2001), forgiveness represents a sequence of cognitive, emotional, and behavioral steps that the forgiver must take after the wrongdoing (regardless of the type of behavior of the perpetrator). The author developed a model of forgiveness with four sequential phases: 1. *Uncover your anger*, where during a cognitive assessment the person becomes aware of emotional pain, 2. *Decide to forgive*, which involves a change of heart or gaining new insight into the situation, 3. *Work on forgiveness*, which involves a process of cognitive reformulation, i.e. changes in perceptions of the perpetrator's actions, and 4. *Release from emotional prison*, where forgiveness occurs, experienced as a sense of diminishing negative and at the same time increasing positive feelings toward the perpetrator, leading to a sense of internal emotional release (Enright, 2001). Processual models make it possible to see the phenomenon of forgiveness not so much as a single event, but as a sequence of sensations, thoughts, feelings and behaviors experienced by the wronged person, thus making it easier to identify which stage of this path the wronged person is on.

The relationship between forgiveness and aggression can also be explained using available psychopedagogical theories. In *the General Aggression Model* (GAM; DeWall & Anderson, 2011) it was found that engaging in aggressive behavior is influenced by individual differences, situational variables, available affect, and cognitive content, but also by the cognitive appraisal process that ultimately leads to thoughtful or impulsive behavior. The GAM authors also believe that "the ability to override unwanted impulses depends on a limited [self-regulatory] energy resource that becomes depleted after prior exertion" (DeWall & Anderson, 2011, p. 22). Similarly, according to *the I^3 Theory* (Slotter & Finkel, 2011) aggressive behavior is more likely to occur if a person "lacks the resources and motivation to alter their immediate appraisal of the situation. If they possess the resources and motivation, however, they may reappraise the situation and act in a more thoughtful fashion" (p. 36). On the other hand, models of interpersonal forgiveness emphasize the role of cognitive evaluation in terms of broadening the horizon of seeing the wrongdoer's harm and actions, refraining from impulsive revenge, and understanding the situation. In contrast, forgiveness itself is a resource for identifying and dealing with the negative emotions that naturally and legitimately arise after an offense (Enright et al., 1998; Rusbult et al., 2005; Worthington, 2015). These converging theoretical assumptions suggest that although aggression and forgiveness are two independent processes, they can occur in parallel to each other. Thus, it is highly likely that there is a broad and positive relationship between forgiveness and controlling (inhibiting) aggressiveness.

Among psychoeducation to promote forgiveness, REACH Forgiveness training is one of the most widely used (Worthington, 2020), and nonrandomized and randomized studies consistently show the effectiveness of this method in reducing unforgiveness, increasing empathy, decisional forgiveness and emotional forgiveness (Worthington et al., 2000; Kiefer et al., 2010; Kurniati et al., 2020; Toussaint, Worthington, et al., 2020). The effectiveness of the intervention was exhibited not only among adults, but also adolescents (e.g., Beck, 2005; Shechtman et al., 2009). To date, REACH Forgiveness trainings have been successfully applied in various cultural contexts, including Australia, the Philippines, India, Indonesia, and the United States (Kurniati et al., 2020; Lin et al., 2014). Moreover, the method has also been adapted to the needs of Christians (Lampton et al., 2018; Stratton et al., 2008; Worthington et al., 2010). In this version, the encouragement to forgive is based on, among other things, describing scriptural mandates of the Christian faith, an attempt to imitate Jesus or the belief that the true work of forgiveness is accomplished through the working of God. Although according to Worthington et al. (2011) religious adaptations of psychological interventions generally do not provide additional mental health benefits, they may increase indicators of spiritual well-being. On the other hand, in the study by Shechtman et al. (2009), secular forgiveness intervention showed less approval of aggression, revenge, avoidance, and hostility than among students in the control condition. Similar studies have not been previously conducted among adolescents with CD.

The purpose of the present study was to evaluate the effectiveness of the REACH Forgiveness training on decisional and emotional forgiveness, as well as aggressiveness among adolescents with CD.

2 | MATERIALS AND METHODS

A randomized controlled study was conducted in the fall of 2022 with the approval of the Ethics Committee of the University of Economics and Human Sciences in Warsaw. Recruitment was carried out among adolescents aged 15–18 residing in youth social adaptation centers (i.e., open probation hostels) in Mazowsze (Poland). Candidates were required to have a certificate with a CD diagnosis issued by a psychiatrist. All of the participants had a current placement in special education. Approximately 56% of the sample lived with both biological parents, 26% lived with a parent and stepparent, and 18% lived in Comparing Family Environments with either a single mother or single father. None of the participants remained in pharmacotherapy (however, this was not a recruitment condition). The final analyzed sample included 32 people (CONSORT flow diagram see Figure 1). Adolescents and their parents or legal guardians gave informed consent to participate. Young people were randomly assigned to one of two study groups (forgiveness intervention vs. nonintervention control) using the Random Number Table method. Group one participated in immediate REACH Forgiveness training for 6 h conducted by a psychologist

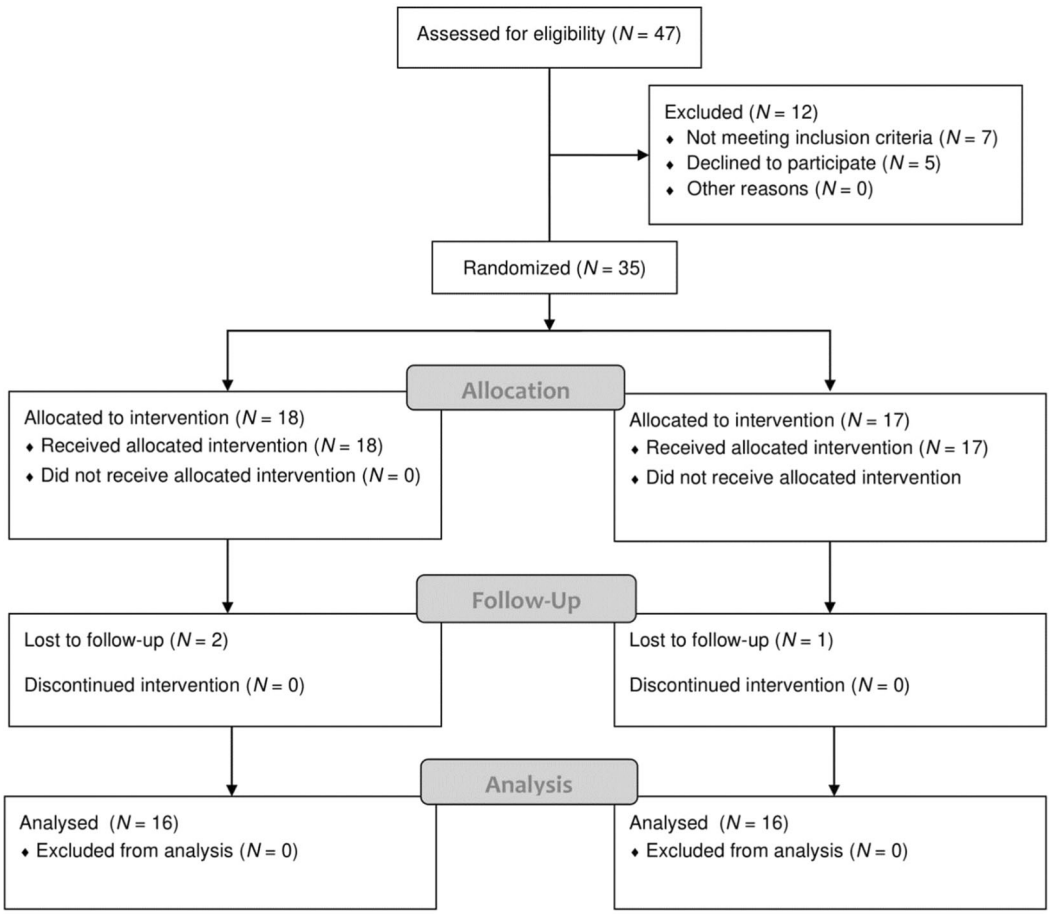

FIGURE 1 CONSORT flow diagram.

(see evworthington-forgiveness. com). In addition to the author's guidance about the purpose and procedure, a volunteer reviewed materials (videos, manuals) for trainers available at the REACH website. The adolescents in the control group did not participate in the intervention, while at the same time they were in the day care center, where they played board games and read books and newspapers. There was no statistically significant difference between the two groups regarding age and they also shared a similar gender distribution (Table 1). All participants declared a Catholic religious affiliation (again, this was not a condition of recruitment). Aggressiveness and forgiveness were assessed at three time points: 1 h before the experiment (Pre), 1 week after the experiment (Post), and 1 month following the experiment (FU).

2.1 | REACH forgiveness

The REACH Forgiveness training allows you to understand the phenomenon of forgiveness and identify the benefits of forgiveness, promotes the decision to forgive, teaches five steps to emotional forgiveness (for a specific offense), and allows you to generalize the adopted model to other aspects of life by encouraging universal forgiveness. The term "REACH" itself is an acronym representing the aforementioned five steps that victims go through to try to achieve forgiveness: R = Recall the hurt, E = Empathize with the offender, A = Altruistic gift of forgiveness, C = Commit to Change, and H = Hold on to forgiveness (Worthington, 2003). Participants then independently complete 12 exercises to identify other unforgiven wrongs and decide on and forgive them, which in turn generalizes the use of the REACH model (the person becomes more forgiving, i.e., forgiveness). In training, participants (1) recount the most challenging transgression that they have forgiven, (2) identify a target transgression to try to forgive, (3) conduct an assessment of forgiveness of this target transgression, (4) define decisional and emotional forgiveness, (5) learn about the psychological effects of forgiveness, (6) work through the five-step emotional forgiveness process known as REACH, (7) contemplate the decision of forgiving, (8) follow 12-step generalization protocol to widen applicability beyond the target transgression (the person becomes more forgiving, i.e. forgiveness), (9) measure forgiveness of the target transgression and compare it to the primary evaluation (workbook assessments were not used as formal results in the study). While most of the research supporting REACH Forgiveness interventions has been secular, several studies have pointed to the benefits of using

TABLE 1 Forgiveness and aggressiveness measurements in adolescents with conduct disorder.

	REACH forgiveness (*N* = 16) 75% males, age: 15.3 ± 1.4					**Nonintervention (*N* = 16)** sex: 69% males, age: 15.8 ± 1.3				
	***M* (SD)**					***M* (SD)**				
	Pre	**Post**	**FU**	$F_{(2, 28)}$	η^2	**Pre**	**Post**	**FU**	$F_{(2, 28)}$	η^2
Emotional forgiveness	3.2 (0.8)	3.9 (0.9)	3.9 (0.9)	24.7***	0.62	3.3 (0.8)	3.3 (0.6)	3.2 (1)	0.25	0.02
Decisional forgiveness	2.6 (0.8)	3.7 (1)	3.6 (0.9)	15.7***	0.51	2.7 (0.8)	2.7 (1.3)	2.6 (1)	0.38	0.03
Anger	3.6 (0.5)	3.2 (0.6)	3.3 (0.6)	20.4***	0.58	3.5 (0.7)	3.4 (0.7)	3.5 (0.8)	0.69	0.04
Physical aggression	3 (0.9)	2.6 (1)	2.8 (0.8)	18.2***	0.55	3.1 (0.8)	2.8 (0.9)	2.9 (0.8)	2.75	0.15
Verbal aggression	3.9 (0.8)	3.2 (1.1)	3.5 (0.9)	6.41*	0.30	4 (0.8)	4.0 (1)	3.9 (0.7)	0.61	0.04
Hostility	4.1 (0.7)	3.6 (0.8)	3.8 (0.8)	7.10*,[a]	0.32	4.1 (0.8)	3.9 (1.1)	4.0 (1.1)	1.07	0.07

Note: Pre measurement 1 h before the experiment, Post measurement 1 week after the experiment, FU measurement in naturalistic follow-up after 1 month.

[a]Lower-bound correction of epsilon was applied due to the lack of variance sphericity, $F_{(1, 15)}$.

*$p < .05$; ***$p < .001$.

a Christian adaptation of REACH Forgiveness because of its resonance with the religious beliefs and values of those who identify with that faith (Lampton et al., 2018; Stratton et al., 2008; Worthington et al., 2010). Since more than 80 percent of the population in Poland consider themselves Catholics (Dobrakowski et al., 2021) (such faith was also declared by all project participants), we used REACH training in this study to help become more forgiving Christians (detailed session script and workbook template: evworthington-forgiveness.com). No adolescent behavior problems were observed during the training, and all participants showed full attentiveness when solving the tasks. While working with the workbook, the educator was present in the room and equally motivated everyone to engage in solving the exercises (however, to guarantee the participants' privacy, the actual compliance of the answers with the instructions was not evaluated, and the types of transgressions reported by the participants were not reported).

2.2 | Measures

To assess aggressive behavior, we used the Buss-Perry Aggression Questionnaire (BPAQ) by Buss and Perry (1992) in its Polish adaptation (Aranowska & Rytel, 2012). The tool consists of 29 statements arranged into four factors that describe different types of aggressive behavior: *Physical aggression* (nine items, $\alpha = .85$), *Verbal aggression* (five items, $\alpha = .72$), *Anger* (seven items, $\alpha = .83$) and *Hostility* (eight items, $\alpha = .77$). The respondent expresses their attitude towards each of the statements on a 5-point Likert scale, where 1—"extremely uncharacteristic" and 5—"extremely characteristic." This questionnaire is considered the gold standard for the measurement of aggression among adolescents (Reyna et al., 2011). The Polish version of the BPAQ presents strong correlations with other measures of aggressiveness, as well as average correlations with scales of impulsiveness, assertiveness, and competition (Aranowska & Rytel, 2012). Sample items: "If I have to resort to violence to protect my rights, I will (Physical aggression)" and "I often find myself disagreeing with people (Verbal aggression)."

The Decision to Forgive Scale (DTFS) by Davis et al. (2015) in its Polish version (Mróz et al., 2022) was used to measure decision forgiveness as "the cognitive letting go of resentment and bitterness and need for vengeance" (DiBlasio, 1998, p. 78). Decisional forgiveness incorporates an intellectual dimension and modifies one's intentions as to their behavior toward a transgressor, particularly motivation for revenge and avoidance (Exline et al., 2003). DTFS consists of five statements arranged in one factor ($\alpha = .91$). The respondent expresses their attitude towards each of the statements on a 5-point Likert scale, where 1—"extremely uncharacteristic" and 5—"extremely characteristic." Sample items include: "My choice is to forgive them" and "I decided to forgive them."

The Emotional Forgiveness Scale (EFS) by Hook et al. (2012) in its Polish adaptation (Mróz et al., 2022) was used to measure emotional forgiveness and peace of mind in relation to a particular offense. The ESF ($\alpha = .75$) consists of eight items describing the presence of positive and pro-social feelings toward the aggressor and a reduction in negative feelings toward the perpetrator. The respondent expresses their attitude towards each of the statements on a 5-point Likert scale, where 1—"extremely uncharacteristic" and 5—"extremely characteristic." Sample items include: "I no longer feel upset when I think of him or her" and "I feel sympathy toward him or her."

2.3 | Statistical analyses

Statistical data analysis was conducted in Statistica (TIBCO Software Inc). The normality distribution was verified using the Kolgomorov–Smirnov test. The equality of variance was assessed using Levene's test. The results allowed for applying parametric tests. The significance of differences between the groups was assessed using repeated measures ANOVA (verify of the REACH training effects on emotional and decisional forgiveness, as well as aggression subscales), as well as the Student's *t*-test (for a priori comparisons between participants in results emotional and decisional forgiveness and aggression subscales). Mauchley's test was used to assess sphericity in a

repeated measures ANOVA. The Bonferroni correction was used for multiple comparisons. The magnitude of the effect was assessed using Cohen's d and partial η^2. The significance level was determined at $p < .05$.

3 | RESULTS

Mean values regarding forgiveness and aggression in adolescents with CD obtained at three measurement time points (Pre, Post, FU), as well as the significance of differences based on repeated measures ANOVA are shown in Table 1. To verify the effects of REACH forgiveness training, 2 × 3 mixed-design multivariate ANOVA was conducted. Between-subjects factor included TREATMENT—participation in REACH forgiveness training versus participation in the nonintervention group. The within-subjects factor was TIME, the measurement time point: Pre, Post, and FU. The dependent variables included: emotional forgiveness, decisional forgiveness, *Anger*, *Physical aggression*, *Verbal aggression*, and *Hostility*.

As a result of the analyses, statistically significant multivariate effects were obtained: TREATMENT main effect, $F_{(6,25)} = 4.62$, $p = .003$, $\eta^2 = 0.53$ and TIME main effect $F_{(12,19)} = 7.04$, $p < .001$, $\eta^2 = 0.82$. Moreover, a statistically significant multivariate interaction effect of TREATMENT and TIME factors was observed, $F_{(12,19)} = 5.60$, $p < .001$, $\eta^2 = 0.78$.

3.1 | Pre versus Post and FU

An a priori analysis was then conducted to determine the differences between the Pre and Post measurements in REACH Forgiveness training participants about forgiveness and aggressiveness (Table 2)—TIME factor analysis. Adolescents with CD exhibited more beneficial scores on all scales during the Post time point than the Pre time point. The biggest effect concerned *Physical aggression* ($\eta^2 = 0.74$), while the smallest effect pertained to *Hostility* ($\eta^2 = 0.36$). In the next Pre versus FU comparison, significant differences were also obtained with regard to all measures (more beneficial scores during FU time point). The biggest effects pertained to emotional- and decisional forgiveness ($\eta^2 = 0.67$). The smallest effect pertained to *Hostility* ($\eta^2 = 0.28$). The nonintervention group did not display a statistically significant impact of the TIME factor on the results of forgiveness and aggressiveness (Table 1) and was therefore not included in further analyses (comparisons).

TABLE 2 Comparing forgiveness and aggressiveness of subjects receiving REACH Forgiveness training across time points ($N = 16$).

	Pre-Post		Pre-FU	
	$F_{1(1, 15)}$	η^2	$F_{1(1, 15)}$	η^2
Emotional forgiveness	30.64***	0.67	30.52***	0.67
Decisional forgiveness	20.86***	0.67	14.12***	0.67
Anger	23.27***	0.61	20.86***	0.59
Physical aggression	42.70***	0.74	20.74***	0.57
Verbal aggression	10.97**	0.42	7.57*	0.34
Hostility	8.58**	0.36	5.78*	0.28

Note: Pre measurement 1 h before the experiment, Post measurement 1 week after the experiment, FU measurement in naturalistic follow-up after 1 month.

*$p < .05$; **$p < .01$; ***$p < .001$.

3.2 | REACH forgiveness versus nonintervention

In the next step, a priori comparisons were made for the TREATMENT factor at all measurement time points (Pre, Post, FU). There were no statistically significant differences between REACH Forgiveness participants and nonintervention participants during the Pre time point regarding all measures (Table 3). Statistically significant differences were observed during Post and FU time points. REACH Forgiveness training participants demonstrated more beneficial scores than nonintervention participants. The biggest effect during Post and FU measurements concerned decisional forgiveness ($d = .89$). The smallest effect during Post ($d = -.28$) and FU ($d = -.22$) measurements concerned *Physical aggression*.

3.3 | Summary of analyses

A statistically significant multivariate interaction effect of TREATMENT and TIME factors was that REACH Forgiveness training participants displayed more beneficial scores on forgiveness and aggressiveness during Post and FU time points than nonintervention participants. In addition, REACH Forgiveness training participants showed more beneficial scores on measures during the Post and FU time points compared to the Pre time point, whereas the results achieved by nonintervention participants did not differ statistically significantly between all of the time points.

4 | DISCUSSION

The purpose of this study was to evaluate the effectiveness of REACH Forgiveness training in reducing CD symptoms in adolescents. As expected, one 6-h session proved sufficient to reduce aggressiveness (i.e., anger, physical and verbal aggression, and hostility) and increase forgiveness (decisional and emotional), and the resulting effects were sustained at 1-month naturalistic follow-up. Unlike REACH Forgiveness training participants, nonintervention control showed no significant changes in aggressiveness and forgiveness during the experiment. The results correspond with previous reports indicating that REACH Forgiveness trainings produce beneficial changes in forgiveness, emotional reactions, and self-esteem (Kiefer et al., 2010; Kurniati et al., 2020; Toussaint, Worthington, et al., 2020; Worthington et al., 2000). The obtained results can also be explained by leading theories of aggression (DeWall & Anderson, 2011; Slotter & Finkel, 2011), according to which

TABLE 3 Comparing forgiveness and aggressiveness between REACH Forgiveness training and nonintervention participants ($N = 32$).

	Pre		Post		FU	
	$t_{(1,30)}$	d	$t_{(1,30)}$	d	$t_{(1,30)}$	d
Emotional forgiveness	−0.84	−0.10	3.41**	0.76	3.02**	0.71
Decisional forgiveness	−0.53	−0.08	3.81***	0.89	3.80***	0.89
Anger	0.91	0.17	−1.91*	−0.32	−2.00*	−0.37
Physical aggression	0. 79	0.09	−1.73*	−0.28	−1.76*	−0.20
Verbal aggression	−0.48	−0.07	3.09**	−0.73	2.99**	−0.70
Hostility	−0.45	−0.06	−1.98*	−0.31	−1.69**	−0.22

Note: *Pre* measurement 1 h before the experiment, *Post* measurement 1 week after the experiment, *FU* measurement in naturalistic follow-up after 1 month.

*$p < .05$; **$p < .01$; ***$p < .001$.

psychoeducation on forgiveness may provide the resources and motivation to change the direct assessment of the situation and, consequently, undertake more thoughtful (i.e., nonaggressive) behavior.

It should be noted that every participant in this study declared Catholic faith. While we did not assume that using the Christian version of REACH Forgiveness would increase the benefits of the intervention (see Worthington et al., 2011), we felt that such an adaptation would be better suited to the individual needs of the participants and the circumstances of the study. For example, in a recent study by Osei, followers of Jesus who received the Christian version of REACH benefited from the intervention through a greater number of forgiveness and conciliatory motivations, decisional and emotional forgiveness, forbearance, and dispositional forgivingness. On the other hand, Rye (2007) noted that participants in forgiveness training benefit from their religious and spiritual resources regardless of whether they participate in a secular or Christian training program.

Another major contribution of this study to the literature is to confirm the applicability of REACH Forgiveness training among the Polish population. In past studies, REACH intervention has promoted forgiveness regardless of culture (Kurniati et al., 2020; Lin et al., 2014; Toussaint, Worthington, et al., 2020). Despite the above, Hook et al. (2008, 2012) noted that forgiveness in collectivist cultures may be more decisional than emotional forgiveness, so REACH interventions may serve different functions in different cultures. However, it should be noted that comparative studies have consistently indicated the individualistic nature of Polish and US societies (Bartosik-Purgat & Schroeder, 2007), so there is no need to adapt the content of REACH Forgiveness to specific cultural conditions. Moreover, in our study, Polish participants reported similar emotional forgiveness scores compared to American students (e.g. Toussaint, Griffin, et al., 2020).

The resulting effects appeared to be moderate or large. As per Wade et al. (2014), the expected increase on the forgiveness scales for those participating in the 6-h REACH training should be higher by ca. 0.4–0.5 of the standard deviation value compared to the results in the nonintervention group. In our study, the average standardized increase in forgiveness of REACH participants equaled $d_{RM} = 0.68$. Similarly, we observed a larger-than-expected effect in terms of reducing verbal aggression ($d = -0.73$). On the other hand, the obtained effect sizes correspond with data Toussaint, Griffin, et al. (2020) collected on a Christian university campus with a predominantly Christian sample of students. Thus, it seems that religious people may show greater effects of forgiveness training because of a stronger motivation to forgive through personal devoutness to faith, personal spirituality, or functioning in a Christian culture.

Despite its strong aspects, our study is affected by certain limitations which need to be taken into consideration before broad generalizations. First of all, the study was conducted on a small sample of Catholic youth in Poland. Further replications are needed to confirm the findings, including in other populations (including those in countries more secular than Poland and using a secular version of REACH), to unequivocally conclude that forgiveness training can reduce CD symptoms. Secondly, the homogeneity of participants' ages and the gender distribution of the group (CD is more common among men than women) prevented the inclusion of these demographic variables in the analyses. Moreover, in the study, we did not control for comorbidities of other psychiatric disorders (such as depression or anxiety) that could potentially affect the benefits of the intervention. Finally, it is essential to point out the limitations of the REACH Workbook itself, which seems like a good introduction to the idea of forgiveness, but there is not enough research to support its use for deep hurt and trauma and long-lasting change and behavior. Suggestions for longer follow-ups, such as 6 months to 1 year, would be more informative. Taking these restrictions into account may serve as an inspiration for further research. In future studies, it would also seem interesting to use the assessment of CD severity as a co-variable (in this study, we only had a certificate of diagnosis of the disorder from a physician) to assess whether REACH Forgiveness would be as effective in situations of poor long-term prognosis.

5 | CONCLUSIONS

This was one of the first studies to evaluate the effect of forgiveness training on changes in self-description of behavior associated with CD in adolescents. The data obtained indicate that the Christian version of REACH can provide support for other forms of psychopedagogical therapy in adolescent Catholics with CD. One 6-h REACH

session appears to be sufficient to increase decisional and emotional forgiveness, as well as reduce anger, physical aggression, verbal aggression and hostility in this clinical group. The conclusions obtained have application value and can be used in the design of impact methods by social service providers. Nevertheless, due to the complexity of CD (its treatment often requires combining multiple forms of therapy in parallel), the method proposed in this study should not be considered as a first-line treatment, but can be used additionally to improve self-regulation of emotion and affect. Although we used only group forgiveness training in this study, in light of the literature data (Greer et al., 2014) we speculate that stand-alone workbooks may be comparably effective in promoting forgiveness and reducing aggressiveness in CD. Sometimes such a solution can prove more economical (and accessible), as the people concerned do not need to attend a session led by a professional helper at a specific time and place, and the workbooks themselves can be easily distributed to interested individuals, such as church members who are struggling with CD.

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CONFLICT OF INTEREST STATEMENT

The author declares no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This study was approved by the Ethics Committee of the University of Economics and Human Sciences in Warsaw. Informed consent was obtained from all individual participants included in the study.

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