#### ORIGINAL ARTICLE





# Aggression and emotional forgiveness in a group of juveniles: A two-wave study

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#### **Abstract**

The purpose of the study was to determine the relationship between anger, hostility, physical aggression, verbal aggression, and emotional forgiveness (positive emotional forgiveness and reduction of negative emotions) in a longitudinal study design. Data were analyzed from 366 juveniles aged 10–18 (M = 15.18, SD = 1.63) who completed questionnaires during two waves. The procedure for both measurements consisted of completing questionnaires measuring emotional forgiveness and aggression. In order to achieve the aim of the study, we decided to evaluate a partial cross-lagged model. Our analyses showed that the reduction in negative emotions toward the offender at T1 was a significant predictor of anger and hostility at T2. Sex was a significant covariate for verbal aggression, anger, and hostility. This study adds to the current literature by supporting previously theorized relationships. It suggests the possibility of training forgiveness skills in juveniles, reducing aggressive and potentially delinquent behavior, especially in response to injustice and events that trigger anger and hostility.

#### KEYWORDS

aggression, emotional forgiveness, forgiveness, juveniles

## INTRODUCTION

Aggression is a significant problem during adolescence. The intensity of negative, rebellious, and oppositional behavior, with increased aggressiveness, is inscribed in the nature of this period. Though aggressiveness is common, it is the extreme manifestations of these behaviors and acts that become alarming. According to police statistics, in 2022, juveniles committed more than 18,000 criminal

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acts in Poland. Comparing 2021 and 2022, it should be noted that the values for both the total number of crimes and criminal acts (e.g., in the category of fights and beatings) show a slight upward trend. Aggression and behavior in violation of legal norms can result in the referral of juveniles by family courts to educational and probationary institutions (Konaszewski et al., 2019). Forced referral to a rehabilitation or therapeutic institution undoubtedly hinders and redefines the individual's previous psychosocial and physical functioning (Konaszewski, 2016; Kwiatkowski & Bańka, 2013). For many juveniles, such a referral to an institution can come as a shock and even have traumatic features (Ezell et al., 2018). Therefore, in this regard, it seems that a relevant variable potentially having an effect in the processes of therapy, parenting, and psychopedagogical intervention may be forgiveness (Fehr et al., 2010; Lundahl et al., 2008).

Forgiveness is a multifaceted psychological and interpersonal process that involves the deliberate decision to release feelings of resentment, anger, and vengeance toward an individual or group who has committed a perceived offense or wrong doing. It is characterized by a willingness to let go of negative emotions and potentially grant clemency, promote reconciliation, emotional healing, and possibly even the restoration of a harmonious relationship between the transgressor and the forgiver (Enright, 2019; Enright & Fitzgibbons, 2000; McCullough et al., 2000; McCullough & Witvliet, 2002). According to Wade et al. (2014), forgiveness is one of the critical resilience resources after interpersonal injury (Wade et al., 2014, 2018). Violent individuals lack the resources and motivation for more positive appraisals of situations by which they respond with acts of aggression and behaviors that do not conform to legal or social norms. Such people may be significantly less likely to have positive emotions accompanying forgiveness. In this case, aggression arises as a result of the lack of an alternative repertoire for dealing with a difficult situation, and undoubtedly forgiveness can be included in such a repertoire. As a result, forgiveness will result and affect aggressive behavior, including anger, hostility, physical, and verbal aggression.

# Aggression and forgiveness

Aggressive behavior, hostility, and anger are significant problems in the psychosocial functioning of the individual. Physical aggression includes behavior aimed at inflicting pain on another person. Verbal aggression is verbally hurting, humiliating, and injuring others. Anger is defined as physiological arousal associated with a readiness to harm someone, containing physiological responses and affective components. Hostility, on the other hand, has been operationalized as a negative attitude toward others, manifested by suspicion, envy, feelings of harm, and injustice (Buss & Perry, 1992).

Forgiveness can be seen as a response to a specific inter- or intra-personal harm, or as a general disposition to forgive offenses. When the offended person forgives, his or her thoughts, feelings, and behaviors toward the offender become less negative and more positive. Meanwhile, the motivation to avoid and/or seek revenge on the offender is replaced by the motivation to maintain a positive relationship (McCullough et al., 2000). With regard to the trait of forgiveness, people with high levels of it may be accustomed to forgiving others as their response to interpersonal offenses at different times and in different situations (Brose et al., 2005; McCullough & Witvliet, 2002). By forgiving, people can move beyond the desire for revenge and restore harmony within interpersonal relationships or within themselves (McCullough et al., 1997, 1998, 2000; Wai & Yip, 2009).

For the purposes of this study, we focused on the state of forgiveness and, more specifically, on its emotional component, which appears to be particularly involved in the regulation of negative affect, so that it can counteract the initiation of aggressive behavior. This type of forgiveness describes a reduction in negative emotions and the development of positive feelings toward the offender (Davis et al., 2015; Worthington et al., 2007). It is associated with a genuine change in emotional responses, including empathy, compassion, and even potential restoration of trust (McCullough & Witvliet, 2002; Witvliet et al., 2023)—these positive emotions have already been linked to a reduction

in aggression (Avcı & Sak, 2021; Witvliet et al., 2020). Emotional forgiveness can be described as a prosocially motivated reduction in negative affect and an increase in positive emotion following intra- or inter-personal trauma (Worthington & Wade, 1999).

Enright and Coyle (1998), based on available research findings, proposed that the forgiveness process refers to four phases. Discovery refers to awareness of the problem and emotional pain resulting from the offense, including anger and insight. Deciding involves realizing the need for an alternative solution. That is, realizing that continuing to focus on the trauma and its perpetrator may cause more unnecessary suffering and understanding that change must occur to continue the healing process. The work phase includes processes such as reformulation, empathy, and acceptance of pain. The forgiving person begins to actively work on forgiveness. Finally, deepening includes finding meaning and universality. In this phase, the forgiving person begins to realize that he or she is gaining emotional relief from the process of forgiving his or her offender (Enright & Coyle, 1998; Freedman et al., 2007; Freedman & Enright, 2019).

Similar to Enright and Coyle (1998) model, the dynamic model of the forgiveness process proposed by Ho and Fung (2011) includes socio-cultural, cognitive, emotional, motivational and behavioral components. It has been shown that emotional and cognitive variables can determine emotional forgiveness, and future research may verify whether it is these variables that influence different processes and forms of forgiveness (e.g., emotional forgiveness). In turn, the stress-and-coping models of forgiveness (Strelan, 2019; Toussaint et al., 2017), based on Lazarus and Folkman's (1984) stress-and-coping theory, present a comprehensive framework for understanding and addressing adolescent aggressiveness (Lazarus & Folkman, 1984). In this context, forgiveness refers to the ability to release feelings of anger, resentment, and hostility toward perceived offenders, while coping strategies encompass the adaptive techniques individuals employ to manage intra- and inter-personal stress and negative emotions. These models suggest that teaching forgiveness skills as an effective coping mechanism can significantly contribute to anger reduction and conflict resolution in adolescents prone to aggression.

Adolescents often face many interpersonal challenges, such as peer conflicts, family issues, or school stressors, which can trigger aggressive responses. By learning to forgive and employ constructive coping strategies, adolescents can break the cycle of aggression and develop healthier ways to deal with perceived wrongdoings. This approach emphasizes the importance of emotional regulation, empathy, and communication skills as critical components of forgiveness and coping, as they enable adolescents to navigate conflicts more effectively, reducing aggressiveness and improving overall well-being.

# Aggression and forgiveness: Empirical findings

Empirical associations of forgiveness with aggression and its various aspects have been widely demonstrated (Berry et al., 2005; Jones, 2014; Ross et al., 2007; Webb et al., 2012). Forgiveness has been found to be negatively related to aggressive behavior (Ashy et al., 2010), aggression, anger, hostility, or resentment (Aquino et al., 2006) and positively related to pro-social behavior (Karremans et al., 2005). Similarly, the development of children's emotion regulation skills significantly reduced their levels of aggression (Batum & Yagmurlu, 2007; Blandon et al., 2010). Moreover, forgiveness has been positively associated with psychological well-being, well-being, and health (Freedman et al., 2007; Toussaint et al., 2017; Witvliet et al., 2023; Worthington et al., 2007). Thus, regarding the relationship between aggression and forgiveness, it seems that correlations are largely taken for granted, and relatively little attention has been paid to studies in a longitudinal pattern. Moreover, while existing research largely confirms the relationship between aggression and forgiveness, thus supporting their broad, basic connections, a more detailed explanation of the role of forgiveness in the formation of aggressive behavior is needed, especially if the construct of aggressiveness is to be measured as an outcome variable consisting of four domains: anger, hostility, physical aggression, and verbal aggression.

# Aim of study

The purpose of the study was to determine the relationship between anger, hostility, physical aggression, verbal aggression, and emotional forgiveness (positive emotional forgiveness and reduction of negative emotions). Based on previous research, we hypothesized that aggressive behaviors (hostility, anger, verbal aggression, physical aggression) would be negatively related to emotional forgiveness. In addition, due to the mainly cross-sectional nature of existing research in this research area, we conducted our study from a longitudinal perspective so that we could verify whether individual variables are related in the way proposed by the theories (Ho & Fung, 2011; McCullough et al., 2000).

#### **METHOD**

## Participants and procedure

The project, conducted with the approval of the university's ethics committee, consisted of a two-wave longitudinal study. Data were collected from 2022 to 2023 among juveniles referred by the family court to juvenile educational centers and probation centers. Data were analyzed from 366 participants aged 10-18 (M=15.18, SD=1.63) who completed questionnaires during two waves (T1-September 2022, T2-January/February 2023). Juvenile boys accounted for 56.3% of those surveyed. The procedure for both measurements consisted of completing questionnaires measuring emotional forgiveness and aggression. The survey unit lasted about  $10\,\text{min}$ . In order to guarantee anonymity, participants were asked to sign both questionnaires with an invented ID that did not identify the respondent. Consent to participate in the survey was obtained from the directors and managers of the centers, as well as from the parents and guardians of the juveniles. Each survey was attended by an appropriately trained psychologist or educator to clarify all issues related to the survey and the completion of the questionnaire.

## Measures

The Buss and Perry Aggression Questionnaire (BPAQ), as prepared by Siekierka (2005), was used to measure aggressive behavior (Buss & Perry, 1992). The questionnaire contains 29 statements formulated to measure four scales of aggression, that is, physical aggression (nine items, sample item: If someone hits me, I give it back), verbal aggression (five items, sample item: My friends say I'm a bit argumentative), anger (seven items, sample item: I am a very well-balanced person), and hostility (eight items, sample item: Sometimes I feel that everything is against me). For each statement, respondents are asked to indicate to what extent it is true for them, using a 5-point Likert scale (1—doesn't fit me at all, 2—doesn't fit me a little, 3—hard to say, 4—fits me a little, and 5—fits me completely). The reliability of the questionnaire, as measured by Cronbach's alpha coefficient for each subscale, is: physical aggression  $\alpha$  = .85, verbal aggression  $\alpha$  = .72, anger  $\alpha$  = .83, hostility  $\alpha$  = .77.

The Emotional Forgiveness Scale (EFS) developed by Hook et al. (2012) and adapted to the Polish context by Mróz et al. (2022) was employed to assess emotional forgiveness and the attainment of inner tranquility regarding a specific transgression. It is used to measure emotional forgiveness and peace of mind associated with a specific harm (Mróz et al., 2022). The EFS ( $\alpha$ =.75) comprises eight items that measure the presence of positive and pro-social emotions directed toward the offender and a reduction in negative emotions associated with the wrongdoer. The emotional forgiveness scale has two subscales: positive emotional forgiveness ( $\alpha$ =.79) and reduction of negative emotions ( $\alpha$ =.74). Participants indicate their agreement with each statement on a 5-point Likert scale, ranging from 1 ("extremely uncharacteristic") to 5 ("extremely characteristic"). Sample items from the scale include: "I no longer feel upset when I think of him or her" and "I feel sympathy toward him or her."

# Statistical analyses

Data analysis was conducted using IBM SPSS Statistics version 28 and IBM SPSS Amos version 28. The normality of the data distributions was assessed through the Kolmogorov–Smirnov test and visual inspection of distributions. Pearson's correlation analysis and path analysis were employed to examine the relationships between variables. The significance level was set at  $p \le .05$ . The goodness-of-fit indices employed in the path analysis included the comparative fit index (CFI) with a minimum desired value of .90, the root-mean-square error of approximation (RMSEA) with a maximum acceptable value of .08, standardized root mean residual (SRMR) with a maximum acceptable value of .08, and a statistically non-significant chi-squared test value (Byrne, 2016).

## RESULTS

The normality of distribution was assessed for all five variables at T1 and T2. None of the variables had skewness or kurtosis levels above 1, and visual inspection suggested normality. The means and values of correlation coefficients are shown in Table 1. Differences between girls and boys were also tested. Statistically significant results were obtained in the reduction of negative emotions (at T1 and T2), anger (at T1 and T2), hostility (at T1 and T2), and verbal aggression (at T1 and T2) (all t's(363) > 1.70; all p's < .05). Statistically significant differences were not observed in the presence of positive emotions toward the offender (at T1 and T2) and physical aggression (at T1 and T2) (all t's(363) < .99; all p's > .430).

We employed the path analysis with a maximum likelihood estimation approach to investigate whether the different dimensions of emotional forgiveness (positive emotional forgiveness and reduction of negative emotions toward the offender) could predict aggression (physical aggression, verbal aggression, anger, and hostility).

The full cross-lagged model was evaluated first. The model first considered stability paths from forgiveness (positive emotional forgiveness and reduction of negative emotions toward the offender) in T1 to forgiveness in T2 and aggression (physical aggression, verbal aggression, anger, and hostility) in T1 to aggression in T2. Second, cross paths between the two types of forgiveness (positive emotional forgiveness and reduction of negative emotions toward the offender) at T1 and forgiveness at T2 and between the dimensions of aggression at T1 and T2 were also included. Third, paths were drawn from forgiveness in T1 to aggression in T2 and from aggression in T1 to forgiveness in T2. The model proved to be an unacceptable fit to the data:  $\chi^2(_{16}) = 4.12$ , p < .001, CFI = .965, GFI = .972, RMSEA = .093, 90% CI [.070, .116], SRMR = .249.

For this reason, we decided to evaluate a partial cross-lagged model. In our analysis, we assessed a model in which paths were drawn from any emotional forgiveness (positive emotional forgiveness and reduction of negative emotions toward the offender) at T1 to aggression (physical aggression, verbal aggression, anger, and hostility) at T2. Sex was included as a covariate. We also included autoregressive paths and covariances between all variables. The analyzed model fit the data well,  $\chi^2(_2) = 2.50$ , p = .082, CFI = .995, GFI = .996, RMSEA = .061, 90% CI [.000, .131], SRMR = .041. Our analyses showed that reduction in negative emotions toward the offender at T1 was a significant predictor of anger ( $\beta = -.10$ ,  $\beta = .048$ ) and hostility ( $\beta = -.16$ ,  $\beta = .001$ ) at T2. The presence of positive emotions toward the offender proved to be a non-significant variable in the effect on aggression in all domains. Sex was a significant covariant for verbal aggression ( $\beta = -.11$ ,  $\beta = .030$ ), anger ( $\beta = -.14$ ,  $\beta = .005$ ), and hostility ( $\beta = -.10$ ,  $\beta = .047$ ) (see Figure 1).

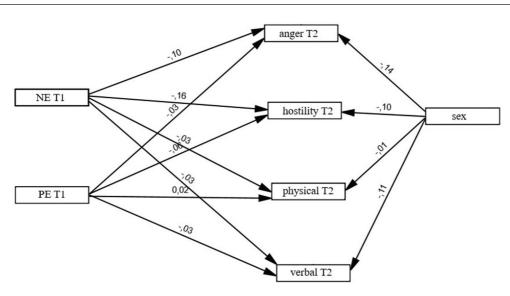
An alternative model that factored pathways of aggression (physical aggression, verbal aggression, anger, and hostility) at T1 into forgiveness (positive emotional forgiveness and reduction of negative emotions toward the offender) at T2 was an unacceptable fit to the data,  $\chi^2(1) = 10.45$ , p = .001, CFI = .983, GFI = .991, RMSEA = .161, 90% CI [.083, .255], SRMR = .764.

TABLE 1 Matrix of correlation.

	A T1 H T1		PA T1	VA T1	NE T1	PE T1	A T2	H T2	PA T2	VA T2	NE T2	PE T2
A T1	1											
H T1	.57**	I										
PA T1		.37***	I									
VA T1		.49***	.61***	I								
NE T1		30***	10*	14**	I							
PE T1		13**	01	03	*01.	I						
A T2	.46***	.31***	.37***	.29***	11*	04	I					
H T2	.38***		.27***	.31***	17***	07	***09.	I				
PA T2			.53***	.28***	03	.01	.54***	.40***	I			
	.33***		.32***	.41***	04	03	***65.	.55***	.48***	I		
			05	13**	.16**	*01.	19***	21***	12*	12*	Ι	
PE T2	00	09	01	05	.04	.25***	08	15**	09	07	.18***	I
M (SD)	M (SD) 2.84 (.78) 3.20 (.81) 2.74 (.86)	3.20 (.81)	2.74 (.86)	3.24 (.75)	11.28 (3.76)	9.10 (5.50)	2.86 (.79)	3.07 (.85)	2.75 (.88)	3.20 (.75)	10.97 (3.88)	9.58 (5.53)

Abbreviations: A, anger, H, hostility; NE, reduction of negative emotions toward the offender; PA, physical aggression; PE, presence of positive emotions toward the offender; T1, first measurement; T2, second measurement; VA, verbal aggression. 17350888, D. Dawnbaded from thtps://onlinelibury.wiley.com/doi/10.1111/jfcj.12737 by Kulobische Universitat Eichstath-gloskadt, Wiley Online Library on [13.012025]. See the Terms and Conditions (https://onlinelibury.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Cerative Commons. Lienea

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



**FIGURE 1** Dimensions of emotional forgiveness as predictors of aggression in a longitudinal perspective. PE, presence of positive emotions toward the offender; NE, reduction of negative emotions toward the offender; T1, first measurement; T2, second measurement.

## **DISCUSSION**

The present two-wave longitudinal study examined the relationship of anger, hostility, physical aggression, verbal aggression, and the ability to emotionally forgive. In addition, given the initial confirmation of this relationship and the cross-sectional nature of previous reports, we wanted to provide empirical evidence that the ability to emotionally forgive determines aggression in the juvenile group. The present results show partial support for the main hypothesis. Not all dimensions of aggression are significantly related to the capacity for emotional forgiveness. A reduction in negative emotions toward the perpetrator was found to be a significant predictor of hostility and anger. The effect was medium for anger and large for hostility (Orth et al., 2024). It should also be pointed out that the effects obtained apply to a vulnerable population of maladaptive juveniles, where overall effects tend to be lower than in other populations (Ghamari Givi et al., 2014; Moore, 1993). In contrast, the presence of positive emotions toward the offender was found to be a non-significant variable for aggression in all domains. Moreover, in line with our assumptions, sex also proved to be significantly associated with anger, hostility, and verbal aggression, but no longer with physical aggression. Generalizing, our results are part of the consensus in the literature in this area. Buss and Perry (1992) indicate that men generally report higher scores in levels of physical aggression, verbal aggression, and hostility compared to women.

Hostility is a cognitive component of aggression (Buss & Perry, 1992). In the adopted model, hostility was found to be negatively related to the reduction of negative emotions toward the offender. According to the forgiveness process model, hostility appears at the appraisal stage rather than the secondary appraisal of the situation; that is, it precedes the appearance of anger. Additionally, this is a stage where other factors, that is, injustice gap/threat to interpersonal harmony, dialectical thinking, and causal attribution, are also relevant. Hostility may indicate enhanced threat detection and hostile attribution bias, which are associated with traumatic experiences (McLaughlin et al., 2020), which seem relevant in terms of the adolescents studied (Ezell et al., 2018). In such a situation, according to the stress and coping model, assessing the situation as a gap/threat can activate various coping strategies, including emotional forgiveness, with the goal of achieving interpersonal harmony, which seems to explain this effect. In other words, in a situation of negativity toward others, individuals

may seek to inhibit their bitterness and increase their compassion in order to emotionally defuse this negatively stimulating situation, which will consequently lead to a decrease in hostility.

Research indicates that reducing negative emotions toward the offender can also negatively affect anger. Anger is an affective component associated with strong physiological arousal and emotional readiness to engage in aggressive behavior (Buss & Perry, 1992). In addition, it is a socially distancing emotion appearing in the first phase of the forgiveness process (Enright, 1996, 2019). The process of forgiveness involves a reassessment of a transgression, for which cognitive resources are needed and may be reduced in the case of negative physiological arousal. Indeed, anger is an emotion that "lowers inhibitions and produces a desire to retaliate" (Agnew & Bylica, 2011). On the other hand, the mere occurrence of anger seems to indicate low coping skills due to the antagonism present toward others and may result in maladaptive coping mechanisms such as unforgiveness.

### Limitations

Emotional forgiveness is a form of emotion regulation, that is, replacing negative emotions with positive, other-oriented ones (e.g., empathy, love) (Davis et al., 2015; Witvliet et al., 2011, 2020; Worthington et al., 2007), and our study extends this finding by showing that reducing negative emotions toward the abuser effectively reduces a person's ability to modify emotional reactions such as anger, but also hostility. It can be concluded that the reduction of negative emotions is a predictor of anger and hostility over time. Which implies that in the conditions of rehabilitation facilities, the formation of the ability to forgive can reduce aggressive behavior. In addition, interpretation of the results should be approached with caution, as this is the first project to show such results and is limited to socially maladjusted adolescents. In replication studies, it would be useful to include a control group to increase the relevance of the design. Our data comes from individuals' self-reports. Therefore, future research may include a behavioral measure of the relationship between aggression and forgiveness.

# **Practical implications**

The applications of the present study findings are that the implementation of training oriented toward the formation of forgiveness skills among juveniles might possibly reduce the affective and cognitive components of aggression, and consequently aggressive behavior and criminality. In addition, the implication that having hostility made someone aware of the dangerous situation which helped to trigger their coping mechanisms shows promise in teaching juveniles how to recognize their situations to help avoid the anger and therefore the aggressive behavior and criminality that come with it.

An example of such training is the possibility of using REACH Forgiveness training, which has already been tested among the Polish population (Skalski-Bednarz, 2024). The training is one of the most widely used (Worthington, 2020). Non-randomized and randomized studies have consistently shown the effectiveness of this method in reducing unforgiveness and increasing empathy, decisional, and emotional forgiveness (Kiefer et al., 2010). It is important to point out that the REACH intervention also promoted forgiveness regardless of culture (Kurniati et al., 2020).

## CONCLUSIONS

In conclusion, we report longitudinal associations between anger, physical aggression, hostility, verbal aggression, and emotional forgiveness. The results partially supported our hypothesis, in which anger and hostility showed a negative relationship with the reduction of negative emotions toward the abuser. In contrast, verbal aggression and physical aggression were not statistically significantly

related to the reduction of negative emotions. In the case of the presence of positive emotions toward the abuser, this variable was found to be unrelated to any of the aggression dimensions. This study adds to the current literature by supporting previously theorized relationships. It suggests the possibility of training forgiveness skills in juveniles, reducing aggressive and potentially delinquent behavior, especially in response to injustice and events that trigger anger and hostility. Future research is needed to determine whether this training can be effective according to the theory.

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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 Bialystok. Informed consent was obtained from all individual participants included in the study.

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