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Self-control and forgiveness. The mediating role of interpersonal emotion regulation

Samokontrola i przebaczenie. Mediacyjna rola interpersonalnej regulacji emocji

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Abstract

Introduction and objective: Forgiveness is a complex process that involves emotion regulation. Previous research shows that both self-control and emotion regulation are important for facilitating forgiveness. Interpersonal emotion regulation may also play a role in coping with experienced harm through forgiveness. However, prior studies have not tested whether regulation based on interpersonal, external mechanisms is relevant to forgiveness. The research presented here aims to fill this gap. **Materials and methods:** A group of 349 adults (287 female, 59 male, 3 other gender) were studied. The average age of the respondents was 30.4 years (SD = 11.8). Respondents completed four questionnaires: the Brief Self-Control Scale, the Interpersonal Emotion Regulation Questionnaire, the Decision to Forgive Scale, and the Emotional Forgiveness Scale. **Results:** The findings revealed a positive relationship between self-control and both decisional and emotional forgiveness. A negative relationship was observed between self-control and interpersonal emotion regulation, as well as between interpersonal emotion regulation and emotional forgiveness (specifically, the reduction of negative emotions). In addition, interpersonal emotion regulation mediated the relationship between self-control and negative emotion reduction, though self-control attenuated the negative effect of interpersonal emotion regulation on forgiveness. **Conclusions:** The data obtained in the study indicate that self-control is a positive predictor of forgiveness, while interpersonal emotion regulation negatively predicts it. These results suggest that forgiveness depends more on internal (self-control) regulatory mechanisms than on external factors (interpersonal emotion regulation).

Keywords: self-control, forgiveness, interpersonal emotion regulation

Streszczenie

Wprowadzenie i cel: Przebaczenie angażuje proces regulacji emocji. Dotychczasowe badania wskazują, że zarówno samokontrola, jak i regulacja emocji mają znaczenie w przebaczaniu. Interpersonalna regulacja emocji może mieć również znaczenie w radzeniu sobie z doświadczoną krzywdą poprzez przebaczenie. Dotychczasowe badania nie sprawdzały, czy regulacja oparta na interpersonalnych, zewnętrznych mechanizmach ma znaczenie w przebaczaniu. Prezentowane badania wypełniają tę lukę. Materiał i metody: Przebadano grupę 349 osób dorosłych (287 wskazało płeć żeńską, 59 – płeć męską, a trzy – inną). Średni wiek badanych wynosił 30,4 roku (SD=11,8). Respondenci wypełniali cztery kwestionariusze: Skróconą Skalę Samokontroli, Kwestionariusz Interpersonalnej Regulacji Emocji, Skalę Przebaczenia Decyzyjnego i Skalę Przebaczenie Emocjonalnego. Wyniki: Wyniki wskazały na pozytywne relacje między samokontrolą a przebaczeniem decyzyjnym i emocjonalnym. Ujawniono negatywną relację między samokontrolą a interpersonalną regulacją emocji oraz interpersonalną regulacją emocji a przebaczeniem emocjonalnym – redukcją negatywnych emocji. Dodatkowo interpersonalna regulacja emocji pośredniczyła w związku między samokontrolą a redukcją negatywnych emocji, jednak w taki sposób, że samokontrola osłabiała negatywne działanie interpersonalnej regulacji emocji na przebaczenie. Wnioski: Uzyskane dane wskazują, że samokontrola jest pozytywnym, a interpersonalna regulacja emocji – negatywnym predyktorem przebaczenia. Wyniki wskazują, że przebaczenie zależy bardziej od wewnętrznych (samoregulacja) mechanizmów regulacyjnych niż zewnętrznych (interpersonalnej regulacji emocji).

Słowa kluczowe: samokontrola, przebaczenie, interpersonalna regulacja emocji

INTRODUCTION

Experiencing harm from another person requires activating various mechanisms to cope with the difficult situation. One way to manage such an experience is through forgiveness (Chi et al., 2019; Kaleta and Mróz, 2021; Worthington and Scherer, 2004). Forgiveness is commonly associated with emotions and involves the need to regulate one's emotions towards the person who committed the offense. However, to our knowledge, no research has specifically examined the importance of interpersonal emotion regulation (IER) in the process of forgiveness. This study explores the mediating role of interpersonal emotion regulation between self-control and forgiveness.

Self-control

Self-control may play a significant role in coping with the difficult situation of experienced harm (Burnette et al., 2014). The connection between self-control and forgiveness is based on, among other factors, the interdependence theory concept of transforming motivation (Kelley and Thibaut, 1978). Self-control can inhibit the desire to retaliate for wrongdoing done, which can be a visceral impulse (Finkel and Campbell, 2001). Most research indicates that self-control encourages more constructive solutions and promotes forgiveness. However, some studies have found that the relationship between self-control and forgiveness is either non-existent (Gover et al., 2011) or negative (Miley and Spinella, 2006).

Previous studies have also identified variables that may mediate this relationship between self-control and forgiveness. A study by Balliet et al. (2011) showed a stronger connection between self-control and forgiveness in pro-self than pro-social individuals. Respondents with low self-control and high pro-social orientation were more forgiving than those with low self-control and high pro-self orientation. However, pro-social individuals with high self-control had the same level of forgiveness as those with high pro-self orientation and high self-control. This outcome may be explained by the fact that it is natural for those with a prosocial orientation to seek harmony in relationships, and forgiveness.

Interpersonal emotion regulation

IER is a critical and commonly utilised form of regulating emotions (Hofmann et al., 2016; Williams et al., 2018) IER refers to individuals' attempts to regulate the emotions of others and can be categorised as either intrinsic vs. extrinsic or response-dependent vs. response-independent regulation. The concept of intrinsic interpersonal regulation involves individuals regulating their own emotions in social interactions, while extrinsic emotion regulation involves individuals regulating the emotions of others (Zaki and Williams, 2013). Response-dependent regulation requires specific responses

from others, while response-independent processes do not rely on a specific reaction from others; simply expressing emotions verbally can be enough to regulate one's own emotions.

Like intrapersonal emotion regulation, IER is concerned with goal-directed attempts to regulate emotions using specific methods. However, in contrast to intrapersonal regulation emotion, IER needs the presence of others (Williams et al., 2018).

IER can play a supportive role in dealing with interpersonal harm. Previous studies suggest a connection between co-rumination and forgiveness (Wenzel et al., 2023). This indicates that sharing emotions, similar to IER, may be important for the forgiveness of experienced harm.

Forgiveness

Forgiveness has been described as an intrapersonal process of changing attitudes toward an offender – involving cognitions, emotions, and behavioural tendencies – on a continuum ranging from ill-will to kindness (Forster et al., 2020; Worthington and Cowden, 2017). Worthington emphasises two components of interpersonal forgiveness: decisional forgiveness and emotional forgiveness (Worthington et al., 2007). Exline et al. (2003) point out that decisional and emotional forgiveness are two aspects of the same experience, with no inherent order between them, nor a greater cognitive aspect compared to the other.

Decisional forgiveness can be motivated by the need to perceive the offender as a valuable person and to maintain the relationship or, in the context of collectivism, by the need to preserve and improve team harmony (Chi et al., 2019; Hook et al., 2012; Skalski-Bednarz and Toussaint, 2024; Skalski-Bednarz et al., 2024).

Emotional forgiveness involves replacing negative affect with positive, other-oriented emotions, and thus may be associated with even more positive effects on distress and well-being than decisional forgiveness (Kaleta and Mróz, 2021; Mróz et al., 2023, 2024; Worthington et al., 2007).

In line with the emotional replacement hypothesis, forgiveness involves the contrast between positive and negative emotions (Worthington and Wade, 1999). However, these emotional changes do not occur naturally or effortlessly. The process of forgiveness typically requires strong self-regulation or emotion regulation (Ho et al., 2020).

AIM OF THE STUDY

Based on the literature review on the relationship between self-control, emotion regulation, and forgiveness (Ho et al., 2020; Worthington and Scherer, 2004), this study has two objectives. The first is to examine the relationship between self-control, IER, and forgiveness. The second goal is to evaluate the mediating role of IER between self-control and forgiveness (decisional and emotional). It is hypothesised that higher levels of self-control will be associated with higher levels of forgiveness (decisional and emotional) through higher IER.

MATERIALS AND METHODS

Participants

A sample of 349 adult participants from Poland was used. Female respondents accounted for 82.2% (n = 287) of the sample, male 16.9% (n = 59), and three (0.9%) participants identified as other genders. The subjects' age ranged from 18 to 81 years, with a mean of 30.4 (SD = 11.8).

Regarding the level of education, 1.4% of the sample had completed primary education, 54.2% had completed secondary education, and 44.4% had a university degree. Participation in the study was voluntary, with no remuneration offered. All procedures performed in studies involving human participants were in accordance with the 1964 Helsinki Declaration and its later amendments, or comparable ethical standards.

Research tools

- 1. Self-control. The Polish version of the Brief Self-Control Scale (Pilarska and Baumeister, 2018; Tangney et al., 2018) was used. The scale includes 13 items, with responses given on a five-point scale from 1 ("not at all like me") to 5 ("very much like me"). In the present study, Cronbach's α was 0.83. Example items include: "People would say that I have iron self-discipline" and "I often act without thinking through all the alternatives".
- 2. Interpersonal emotion regulation. The Polish version of the Interpersonal Emotion Regulation Questionnaire (IERQ) (Grzywna et al., 2020; Hofmann et al., 2016) was used. The IERQ measures the regulation of emotions through interactions or relationships with other people. The questionnaire consists of 20 questions and contains four subscales: Enhancing Positive Affect, Perspective Taking, Soothing, and Social Modelling. In the present study, the Cronbach's α was 0.88. A five-point Likert scale was used, ranging from 1 ("definitely untrue") to 5 ("definitely true").

3. Forgiveness. Two measurements were used: the Decision to Forgive Scale (DTFS) and the Emotional Forgiveness Scale (EFS). DTFS (Davis et al., 2015; Mróz et al., 2022) consists of five items (e.g. "I made a commitment to forgive him or her") rated on a five-point Likert scale (1 – "strongly disagree" to 5 – "strongly agree"). In the present study, Cronbach's α for DTFS was 0.85. EFS (Hook et al., 2012; Mróz et al., 2022) consists of eight items (e.g. "I feel sympathy toward him or her") rated on a five-point Likert scale (1 – "strongly disagree" to 5 – "strongly agree"). Four items measure positive emotions toward the offender (EFS-PP), and four items measure reduced negative emotions toward the offender (EFS-RN). For the current sample, Cronbach's α coefficient for the EFS ranged between 0.73 and 0.79.

Statistical analysis

Pearson's zero-order correlations were calculated using IBM SPSS Statistics 26. A mediation model was then tested using JAMOVI. Statistical significance was set at p < 0.05, and when the 95% confidence intervals for an indirect or moderated effect did not include zero, the effect was considered statistically significant (MacKinnon et al., 2004). Fit indices for acceptably-fitting latent models included χ^2 , root mean square error of approximation – RSMEA (<0.08), standardised root mean square – SRMR (<0.08), Tucker–Lewis index – TLI (>0.90), and comparative fit index – CFI (>0.90).

RESULTS

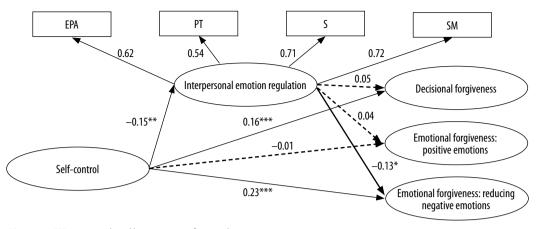
Correlations

The results of the correlational estimates are shown in Tab. 1. Self-control showed an inverse correlation with enhancing positive affect, soothing, and general IER. Self-control was positively related to decisional forgiveness, reduced negative emotions, and general emotional forgiveness. Soothing,

	1	2	3	4	5	6	7	8	9
1. Self-control	-								
2. Enhancing positive affect	-0.11*	-							
3. Perspective taking	-0.03	0.16**	-						
4. Soothing	-0.19***	0.38***	0.43***	_					
5. Social modelling	-0.06	0.43***	0.41***	0.47***	-				
6. Interpersonal emotion regulation	-0.14**	0.63***	0.68***	0.82***	0.78***	-			
7. Decisional forgiveness	0.15**	0.05	0.07	-0.02	0.01	0.03	-		
8. Emotional forgiveness – PPE	-0.01	0.05	-0.03	0.03	0.07	0.04	0.53***	-	
9. Emotional forgiveness – RNE	0.24***	-0.09	-0.08	-0.16**	-0.12*	-0.16**	0.39***	0.10	-
10. Emotional forgiveness	0.14**	-0.02	-0.08	-0.08	-0.02	-0.07	0.62***	0.77***	0.70***

^{*} p < 0.05; ** p < 0.01; *** p < 0.001.

PPE – presence of positive emotions; **RNE** – reduction in negative emotions.



* p < 0.05; *** p < 0.01; **** p < 0.001; dotted line — non-significant path. **EPA** — enhancing positive affect; **PT** — perspective taking; **S** — soothing; **SM** — social modelling.

Fig. 1. The mediating role of IER in the relationship between self-control and forgiveness

social modelling, and IER were negatively correlated with reduced negative emotions – emotional forgiveness.

Correlation between variables

Mediating role of interpersonal emotion regulation

It was hypothesised that IER would mediate the link between self-control and forgiveness. The structural equation model regarding the mediating role of IER (Enhancing Positive Affect, Perspective Taking, Soothing and Social Modelling) in the relationship between self-control and forgiveness (decisional forgiveness, and two dimension of emotional forgiveness – reduced negative emotions and present positive emotions) resulted in a good fit to the data: $\chi^2 = 527.27$; p < 0.001; RSMEA = 0.071; RMSEA CI: 0.046–0.098; SRMR = 0.034; TLI = 0.900; CFI = 0.946 (Fig. 1). Mediation analysis revealed a significant indirect effect (b = 0.072; 95% CI [0.002, 0.014]) of self-control on reduced negative through IER. The indirect effects of self-control on decisional forgiveness and the presence of positive emotions were nonsignificant (Tab. 2).

DISCUSSION

The relationship between self-control and decisional and emotional forgiveness was examined, taking into account the mediating role of IER. Although self-control was previously shown to be associated with forgiveness, no research has yet explained this link through IER. As IER involves the emotional regulation capacity, it aligns with the concept of forgiveness as a complex emotional-coping process (Worthington and Scherer, 2004). Thus, IER appears to be an appropriate concept to describe the way self-control may be linked to forgiveness.

In line with previous studies on the association between self-control and forgiveness (Balliet et al., 2011; Burnette et al., 2014), the current study confirmed that self-control may be a predictor of forgiveness. In the present sample, self-control was predictive of higher levels of both decisional and emotional forgiveness, though not the presence of positive emotions.

Second, self-control was found to be inversely associated with two IER styles and general IER. Although previous research has not focused on the relationship between self-control and IER, the results of the present study are surprising, particularly considering that self-control and emotion regulation share a high degree of conceptual overlap and emotion regulation is assumed to be one form of self-control (Paschke et al., 2016). For example, a higher level of self-control is associated with a lower tendency to share emotions with others for the purpose of increasing the feelings of happiness and seeking comfort and sympathy from others. It is possible that self-control encourages the use of more autonomous forms of emotion regulation (e.g. suppression) (Malik et al., 2015), while interpersonal strategies make it more difficult to control one's own behaviour.

A significant relationship was observed between IER and emotional forgiveness – reduced negative emotions. IER appeared to make it more difficult to reduce negative emotions toward the wrongdoer, which was an unexpected result. It was initially estimated that IER would support

Description	b	SE	Lower	Upper	β
Self-control ⇒ IER ⇒ Decisional forgiveness	-0.004	0.005	-0.012	0.004	-0.010
Self-control ⇒ IER ⇒ Presence of positive emotions	-0.004	0.004	-0.011	0.003	-0.010
Self-control ⇒ IER ⇒ Reduction in negative emotions	0.009	0.006	0.002	0.021	0.026

Tab. 2. Mediating paths between self-control and forgiveness via IER

forgiveness of others, but it turned out that seeking comfort and sympathy from others, as well as using social modelling to cope with the situation, were also negatively associated with reducing negative emotions toward the perpetrator. In addition, IER only mediated the relationship when reducing negative emotions was the dependent variable. Self-control was found to lower IER, which enabled emotional forgiveness at the level of reducing negative emotions. Previous research where emotion regulation was included as a mediator has shown that cognitive reappraisal plays a mediating role in self-regulation and the tendency to forgive. Individuals with greater skills in self-regulation used emotion regulation strategies based on cognitive re-evaluation with greater ease, which promoted forgiveness (Ho et al., 2020).

Individuals with high self-control spend a lot of mental energy on the very process of controlling their internal mechanisms, which may limit their ability to use the presence of others to regulate emotions. In addition, reducing other sources of regulation can be supportive of forgiveness. This can be explained by the Ironic process theory, which indicates that in a situation of overload the individual may not have the ability to use all resources (Dalgleish et al., 2009; Wegner, 1994).

The results indicate that forgiveness depends more on internal (self-control) regulatory mechanisms than on external ones (IER).

Several study limitations should be noted. First, the present study employed a cross-sectional design. Further studies should test the proposed mediation model with a laboratory experimental design or longitudinal design. Second, the self-report method was used, which means that the outcomes of this study might have been influenced by socially desirable response tendencies and retrospective reconstruction of prior events. Although reliable and valid tools were used to assess self-control, IER and forgiveness, employing more differentiated methods would provide a broader understanding of the relationships between the variables. Despite these limitations, an important strength of the current study is new knowledge about the regulation process of forgiveness. This research demonstrated that IER makes it more difficult to reduce negative emotions, while self-control diminishes the negative effects of IER and encourages reducing negative emotions toward the wrongdoer.

Conflict of interest

The authors do not report any financial or personal connections with other persons or organisations which might negatively affect the content of this publication and/or claim authorship rights to this publication.

Author contribution

Original concept of study; collection, recording and/or compilation of data; critical review of manuscript; final approval of manuscript: JM, REB. Analysis and interpretation of data; writing of manuscript: JM.

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