Personality and Individual Differences 248 (2026) 113479

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Rivalry negatively predicts forgiveness: Polish adaptation of the Trait Forgiveness Scale and longitudinal associations with the narcissistic admiration and rivalry concept

Sebastian Binyamin Skalski-Bednarz [a,b,*], Loren L. Toussaint [c], Paweł Dębski [b,e], Karol Konaszewski [d]

[a] Katholische Universität Eichstätt-Ingolstadt, Faculty of Philosophy and Education, Eichstätt, Germany
[b] Humanitas University, Institute of Psychology, Sosnowiec, Poland
[c] Luther College, Department of Psychology, Decorah, IA, USA
[d] University of Białystok, Faculty of Education, Białystok, Poland
[e] Clinical Department of Psychiatry, Medical Faculty in Zabrze, Medical University of Silesia in Katowice, Tarnowskie Góry, Poland

ARTICLE INFO

Keywords:
Narcissism
Trait forgiveness
Admiration
Rivalry
Longitudinal study

ABSTRACT

Narcissism, a core component of the Dark Tetrad, is known for its antagonistic social manifestations, yet its bifurcation into admiration and rivalry provides a more refined lens on interpersonal functioning. This study investigates how these dimensions relate to trait forgiveness—a dispositional tendency to respond to interpersonal transgressions with benevolence—over time. A three-wave cross-lagged panel model spanning three-month intervals was employed with a non-clinical Polish sample (N = 170). Prior to hypothesis testing, the Trait Forgiveness Scale (TFS) was adapted and psychometrically validated in a separate Polish-speaking sample (N = 386), demonstrating satisfactory internal consistency and providing evidence of convergent validity. Longitudinal results showed that narcissistic rivalry consistently predicted lower trait forgiveness, establishing it as a stable relational risk factor. Narcissistic admiration, while not predictive of forgiveness, was associated with an increase in rivalry over time. These findings underscore the divergent social pathways of narcissistic subdimensions, highlighting rivalry's obstructive role in conciliatory behavior and the complex temporal dynamics between admiration and antagonism. The study also contributes a culturally adapted forgiveness measure suitable for Polish-speaking populations.

1. Introduction

The Dark Tetrad—comprising subclinical psychopathy, Machiavellianism, grandiose narcissism, and sadism—has traditionally been framed as a constellation of socially aversive traits characterized by emotional coldness, exploitation, and interpersonal dysfunction (Furnham et al., 2013; Paulhus, 2014). However, some studies suggest that narcissism may be uniquely motivated by affiliative needs and a heightened drive for social connectedness (Grieve, 2023; Zeigler-Hill et al., 2008). While psychopathy and sadism are typically associated with a diminished need for communion and negatively related to affiliation motives (Jonason & Ferrell, 2016; Rauthmann & Kolar, 2013), narcissistic individuals seem to pursue social bonds as a means of securing admiration and external validation (Pincus et al., 2009; Rohmann et al., 2012). Grieve (2023) found that narcissism significantly and positively predicted the importance individuals place on forming social relationships, suggesting that narcissism may be associated with an increased orientation toward social affiliation. This orientation toward social connection—especially evident in narcissism and grounded in validation-seeking—invites further exploration into its psychological correlates, including the mechanisms that support or repair interpersonal closeness. Among these mechanisms, forgiveness plays a foundational role (Webb et al., 2013). Forgiveness facilitates reconciliation, reduces interpersonal tension, and is essential for maintaining and repairing social bonds (Fincham, 2019; Finkel et al., 2002; Skalski-Bednarz, Toussaint, Konaszewski, & Surzykiewicz, 2024a, 2024b;

* Corresponding author at: Katholische Universität Eichstätt-Ingolstadt, Faculty of Philosophy and Education, Luitpoldstraße 32, 85071, Eichstätt, Germany.
E-mail addresses: sebastian.skalski@ku.de (S.B. Skalski-Bednarz), touslo01@luther.edu (L.L. Toussaint), pdebski@sum.edu.pl (P. Dębski), k.konaszewski@uwb.edu.pl (K. Konaszewski).

https://doi.org/10.1016/j.paid.2025.113479
Received 18 April 2025; Received in revised form 3 July 2025; Accepted 22 September 2025

Toussaint, 2022; Worthington, 2006). It can help de-escalate conflict (Fincham et al., 2004; Worthington & Scherer, 2004), foster perceptions of trust and warmth (Strelan et al., 2017), and may serve narcissistic individuals as a relational strategy to preserve or enhance their social capital (Exline et al., 2004). Importantly, forgiveness has also been linked to a range of salutary mental health outcomes. As posited in the stress-and-coping model of forgiveness (Strelan, 2020; Worthington & Scherer, 2004), the process of forgiving may buffer against the emotional toll of interpersonal transgressions, reducing symptoms of anxiety and depression, and enhancing overall psychological well-being (Skalski Bednarz et al., 2024; Toussaint & Webb, 2005; Webb & Toussaint, 2020).

Forgiveness is commonly defined as the replacement of negative affect, cognition, and behavior toward a transgressor with more positive responses, and can be conceptualized both as a situational emotion-regulation process (state) and as a dispositional tendency (trait) reflecting a stable conciliatory orientation (Berry et al., 2005; Rye et al., 2001). Although narcissism is frequently viewed as incompatible with forgiveness—due to its links with entitlement, low empathy, and ego-defensive motives (Exline et al., 2004)—empirical findings remain mixed. Some studies report negative associations (Besser & Zeigler-Hill, 2010; Fatfouta et al., 2015, 2017; Kluwer et al., 2020), while others find no relation or even modestly positive effects when controlling for overlapping dark traits such as Machiavellianism or psychopathy (Brown, 2004; Giammarco & Vernon, 2014). Notably, a recent longitudinal study by Skalski-Bednarz et al. (Skalski-Bednarz, Toussaint, Konaszewski, & Surzykiewicz, 2024b) demonstrated that although narcissism was weakly negatively correlated with forgiveness at each time point, it did not predict subsequent changes in forgiveness when modeled alongside the Big Five personality traits in a two-wave design.

These discrepancies in results may stem from the tendency to conceptualize narcissism in broad or multidimensional terms, which can conflate distinct psychological processes and obscure key motivational mechanisms that shape interpersonal behavior (Back et al., 2013; Miller et al., 2011). For instance, Fatfouta et al. (2017), in a cross-sectional study, employed a multifaceted model of narcissism to investigate its associations with forgiveness, underscoring the importance of distinguishing between psychologically distinct expressions of the trait. In line with this approach, the present study adopts the *Narcissistic Admiration and Rivalry Concept* (NARC) developed by Back et al. (Back et al., 2013), which delineates two independent motivational strategies aimed at maintaining a grandiose self-image: admiration and rivalry. *Admiration* reflects assertive self-enhancement through charm and fantasies of uniqueness, whereas *rivalry* entails defensive dominance and devaluation of others to protect status (Back et al., 2013; Rogoza et al., 2016). These dimensions show distinct associations with interpersonal functioning—admiration tends to correlate with extraversion, social vitality, and positive affect, while rivalry is linked to low agreeableness, interpersonal conflict, and hostility (Rogoza et al., 2016; Wurst et al., 2017). This differentiation offers a more precise framework for understanding how narcissistic traits may shape relational responses, including forgiveness.

Given this dual structure, we expect that rivalry and admiration will be differentially associated with forgiveness. Rivalry falls within the broader domain of antagonistic narcissism and has consistently been linked to vengeful, hostile, and defensive reactions to interpersonal provocation (Back et al., 2013; Fatfouta et al., 2015; Reidy et al., 2008). Individuals high in rivalry tend to interpret transgressions as threats to their social superiority and respond with anger, rejection, or social exclusion. These patterns are consistent with meta-analytic findings showing that entitlement—a core feature of antagonistic narcissism—predicts destructive interpersonal behavior following provocation (Rasmussen, 2016). Accordingly, it is more likely that rivalry will be negatively associated with forgiveness. In contrast, admiration may promote forgiveness when such behavior aligns with narcissistic goals of self-enhancement and social validation (Luo et al., 2014; Morf & Rhodewalt, 2001; Wurst et al., 2017). Research on agentic narcissism—a broader construct encompassing admiration—indicates a higher likelihood of engaging in cooperative responses to conflict (Fatfouta et al., 2017; Kandler, 2014). Forgiveness, in this context, may function less as an empathic gesture and more as a strategic behavior aimed at maintaining admiration, social harmony, or self-image (Paulhus & John, 1998).

In examining the links between narcissism and forgiveness, it is particularly informative to focus on the dispositional level of forgiveness, as it reflects individuals' general tendencies in resolving interpersonal transgressions—an area likely shaped by relatively stable personality traits such as narcissism. Trait forgiveness captures consistent differences in the capacity to replace negative emotions, thoughts, and motivations with more conciliatory responses (Berry et al., 2005). In this sense, we may speak of a "forgiving personality"—one characterized by a general orientation toward benevolence in the face of interpersonal harm. Building on the longitudinal work of Skalski-Bednarz, Toussaint, Konaszewski, and Surzykiewicz (2024b)—which, despite its temporal scope, examined episodic forgiveness and employed a unidimensional model of narcissism—this project seeks to advance understanding by incorporating a more differentiated conceptualization. Importantly, although some previous studies have provided more nuanced perspectives on narcissism, they have predominantly relied on cross-sectional data (e.g., Fatfouta et al., 2017), which limits the ability to determine directional effects over time. At the same time, recent research acknowledges that personality traits, while generally stable, may exhibit developmental plasticity under certain conditions (Bleidorn et al., 2021; Bleidorn et al., 2022).

To date, only two instruments for measuring dispositional forgiveness have undergone formal adaptation for Polish populations: the Heartland Forgiveness Scale (HFS) (Mróz et al., 2016) and the Toussaint Forgiveness Scale (TouFS) (Charzyńska & Heszen, 2013). While both demonstrate relatively acceptable reliability, they also exhibit certain limitations. The Polish version of the HFS diverges from its original factorial structure and introduces separate positive–negative dimensions, which may complicate interpretability (Mróz et al., 2016). The Polish TouFS, on the other hand, includes only a brief five-item subscale for forgiveness of others. To address these challenges, we employed a newly adapted Polish version of the Trait Forgiveness Scale (TFS) developed by Berry et al. (2005) for use in the Polish context in the present study. The TFS conceptualizes forgivingness as a unidimensional, stable disposition toward interpersonal benevolence. Comprising 10 items, the TFS captures the affective, cognitive, and motivational components of dispositional forgiveness across a range of everyday interpersonal contexts. Original validation research has established the TFS's strong internal consistency and convergent validity (Berry et al., 2005). TFS scores are positively associated with agreeableness, empathy, and extraversion, and negatively with neuroticism, hostility, and vengeful rumination. These associations align with theoretical frameworks such as the Big Five personality model (John, 1990), McAdams's (1994) intimacy–power model, and the interpersonal circumplex (Kiesler, 1983), supporting the notion that trait forgivingness reflects a prosocial, affiliative interpersonal orientation. Accordingly, the TFS offers a theoretically grounded and psychometrically robust instrument for examining trait forgiveness—particularly in the context of narcissistically influenced interpersonal functioning.

1.1. Current study

In the present study, we examined the longitudinal associations between narcissism and forgiveness using a three-wave cross-lagged panel model (CLPM). As a preparatory step, we conducted a Polish adaptation of the TFS (Berry et al., 2005). The main hypothesis was that narcissistic admiration would positively, and rivalry negatively, predict later levels of trait forgiveness. In addition, we retained exploratory cross-lagged paths between narcissistic dimensions (i.e., admiration and rivalry),

given their conceptual relatedness and previous evidence of modest intercorrelations (Back et al., 2013; Fatfouta et al., 2015). To assess the convergent validity of the adapted TFS, we expected it to correlate positively with dispositional forgiveness as measured by the TouFS, including its subscales for forgiveness of others, self, and forgiveness by God (intercorrelations among these dimensions are consistently reported in prior studies (Charzyńska & Heszen, 2013; Toussaint et al., 2001)). We also predicted positive associations with state forgiveness and psychological well-being, and negative associations with depressiveness and anxiety.

2. Materials and methods

2.1. Participants and procedure

Both studies recruited participants from the general adult population in Poland using the Prolific platform. Prolific is a crowdsourcing platform designed for academic research, which enables access to demographically diverse and pre-screened participants. In both studies, data collection was conducted online using Qualtrics. The research protocol was approved by the ethics committee of the authors' affiliated institution, and all participants provided informed consent prior to participation. All data were fully anonymized before analysis. Data were collected throughout 2024.

Study 1 (validation study) involved a one-time survey, completed by 386 individuals (64 % female; age range: 18–68 years, $M_{age} = 33.15$, $SD = 9.47$). Most participants identified as cisgender women (61.4 %) or cisgender men (34.5 %), with a small proportion identifying as transgender. A detailed demographic profile of the sample is presented in Table 1. The study, conducted in March 2024, evaluated a newly adapted Polish version of the TFS alongside other validated instruments assessing state forgiveness, alternative approaches to dispositional forgiveness (including forgiveness of self, others, and forgiveness as perceived from God), subjective stress levels, depressive symptoms, and psychological well-being. Participants also rated their general level of religiousness (assessed with a single item: "How religious do you consider yourself?", rated on a 5-point scale; 1 = *not at all*, 5 = *extremely*) and completed a demographic questionnaire. The entire survey took approximately 30 min to complete, and participants received £5 for their time.

Study 2 followed a three-wave longitudinal design, with each wave spaced three months apart (June, September, and December). The initial sample consisted of 202 individuals, of whom 170 completed all three waves ($M_{age} = 38.22$, $SD = 9.12$; 67.1 % female), resulting in a retention rate of 84 %. This sample size is consistent with prior longitudinal CLPM studies and sufficient for estimating the model parameters (cf. Kline, 2016; Wolf et al., 2013). Moreover, analyses revealed no significant differences on any baseline psychological measures between participants who dropped out and those who remained, suggesting that attrition did not systematically bias the sample. A detailed demographic composition of the final cohort is also presented in Table 1. In longitudinal studies, Prolific supports participant tracking and follow-up through custom allowlists, ensuring that the same individuals are invited to subsequent study waves. In this study, all follow-up invitations were managed through the platform's internal system, overseen by Prolific. Importantly, at no stage did the researchers process or access any personally identifying data.

At each wave, participants completed the adapted measure of trait forgiveness and a multidimensional measure of narcissism, comprising the admiration and rivalry dimensions. The first wave additionally included a sociodemographic questionnaire. Each wave took approximately 7 min to complete. Participants who completed all three waves received a total compensation of £15.

Table 1
Demographic characteristics of participants in study 1 and study 2.

Variable	Study 1 (N = 386)	Study 2 (N = 170)
Biological sex	64 %	67.1 %
Female		
Male	36 %	32.9 %
Gender identity	61.4 %	64.1 %
Cisgender woman		
Cisgender man	34.5 %	32.4 %
Transgender woman	2.1 %	1.2 %
Transgender man	2 %	2.3 %
Place of residence	28.2 %	31.2 %
Rural/small town (⟨20*k*)		
Medium-sized city (20−100*k*)	26.4 %	24.1 %
Large city (>100 k)	45.4 %	44.7 %
Marital status	51.6 %	48.8 %
Single		
In a relationship (married or living with a partner)	28.5 %	30.6 %
Married	17.1 %	17.6 %
Divorced or widowed	2.8 %	3 %
Religious affiliation	64.3 %	62.4 %
Catholic		
Orthodox	3.4 %	2.9 %
Jehovah's witness	1.6 %	1.2 %
Protestant	2.6 %	3.5 %
Other religion	2.1 %	2.3 %
No religious affiliation	26 %	27.7 %

2.2. Measures

2.2.1. Trait forgiveness

The TFS (Berry et al., 2005) was developed to assess a person's general tendency to forgive others across a broad range of interpersonal offenses. The 10-item version used in the present study represents a refined form of an earlier 15-item instrument initially employed in research on relationship quality and physiological stress (Berry & Worthington, 2001). Items reflect the cognitive, emotional, and behavioral facets of dispositional forgivingness and are phrased to capture self-perceived tendencies to respond with forgiveness rather than hostility. Representative items include: "I tend to get over it quickly when someone hurts my feelings" and "I try to forgive others even when they don't show remorse." The full list of items, in both Polish and English, is provided in Appendix 1. Participants responded to each statement using a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating greater trait forgivingness.

For cross-cultural application, the scale was translated into Polish following forward–backward translation procedures by a team of bilingual experts. The translated items were reviewed by native speakers for clarity and semantic equivalence, and minor revisions were made to enhance cultural appropriateness. The adaptation process adhered to international guidelines for psychological scale translation and cross-cultural validation (Sousa & Rojjanasrirat, 2011). The Polish version was subjected to psychometric evaluation, including pilot testing, and analyzed using both classical reliability indices and item response theory methods in the validation study (Study 1).

2.2.2. State forgiveness

State forgiveness was assessed using the Polish adaptation of the Rye Forgiveness Scale (RFS) (Rye et al., 2001), adapted by Skalski-Bednarz et al. (Skalski-Bednarz, Toussaint, & Dobrakowski, 2024). The scale includes 15 items that measure an individual's level of forgiveness toward a specific offender. It consists of two subscales: *absence of negative*, which reflects the reduction of negative affect such as anger or resentment (e.g., "I have been able to let go of my anger toward the person who wronged me"), and *presence of positive*, which captures the development of positive attitudes such as empathy and goodwill (e.g., "I wish for good things to happen to the person who wronged me"). Respondents rated their agreement with each statement using a 5-point response format ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). In Study 1,

internal consistency was acceptable: α = 0.85 for the total scale, α = 0.87 for the presence of positive subscale, and α = 0.8 for the absence of negative subscale.

2.2.3. Dispositional forgiveness

Dispositional forgiveness was also measured using the Polish version of the TouFS (Charzyńska & Heszen, 2013; Toussaint et al., 2001). This 9-item instrument assesses forgiveness across three dimensions: *forgiveness of others* (5 items), *self-forgiveness* (2 items), and perceived *forgiveness by God* (2 items). Sample items include: "I have forgiven those who have hurt me" (forgiveness of others) and "I find it hard to forgive myself for some of the things I have done wrong" (self-forgiveness, reverse-coded). Participants rated their agreement with each statement using a 5-point response scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating a greater tendency to forgive. In Study 1, internal consistency coefficients were α = 0.78 for forgiveness of others, α = 0.71 for self-forgiveness, and α = 0.93 for forgiveness by God.

2.2.4. Depressiveness

Depressive symptoms were assessed using the Polish version of the Patient Health Questionnaire (PHQ-9) (Kokoszka et al., 2016; Kroenke et al., 2001). The PHQ-9 consists of nine items reflecting DSM-IV criteria for depression. Respondents indicated the frequency of each symptom over the past two weeks using a 4-point response format (0 = *not at all*, 3 = *nearly every day*). Sample items include: "Little interest or pleasure in doing things" and "Feeling down, depressed, or hopeless." Internal consistency in Study 1 was high (α = 0.89).

2.2.5. Anxiety

Generalized anxiety symptoms were measured with the Polish version of the Generalized Anxiety Disorder-7 scale (GAD-7) (Basińska & Kwissa-Gajewska, 2023; Spitzer et al., 2006). The GAD-7 includes seven items assessing anxiety severity during the preceding two weeks. Responses were provided on a 4-point frequency format (0 = *not at all*, 3 = *nearly every day*). Sample items include: "Not being able to stop or control worrying" and "Feeling nervous, anxious, or on edge." The GAD-7 demonstrated satisfactory internal consistency in Study 1 (α = 0.85).

2.2.6. Well-Being

Psychological well-being was measured using the World Health Organization Five Well-Being Index (WHO-5) (Topp et al., 2015), adapted into Polish by Cichoń et al. (2020). The scale includes five items capturing positive affective states over the last two weeks. Items were rated on a 6-point frequency response format ranging from 0 (*at no time*) to 5 (*all of the time*). Sample items include: "I have felt active and vigorous" and "I have felt cheerful and in good spirits." The WHO-5 showed good reliability in Study 1 (α = 0.88).

2.2.7. Narcissistic admiration and rivalry

In Study 2, narcissistic tendencies were measured using the Narcissistic Admiration and Rivalry Questionnaire (NARQ) (Back et al., 2013), in the Polish version developed by Rogoza et al. (2016). The instrument comprises 18 items assessing two dimensions: *admiration* (reflecting grandiosity and self-enhancement) and *rivalry* (capturing antagonistic self-protection). Respondents rated their agreement with each statement on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Example items include: "I will someday be famous" (admiration) and "I want my rivals to fail" (rivalry). Both subscales demonstrated good internal consistency in this study (see Table 4 for α coefficients).

2.3. Statistical analysis

All statistical analyses were conducted using JASP (version 0.19) and Jamovi (version 2.4.7). In Study 1, classical psychometric evaluation included descriptive statistics, internal consistency (Cronbach's α and McDonald's ω), item-rest correlations, and confirmatory factor analysis (CFA). Additionally, item response theory (IRT) modeling was performed using the Partial Credit Model (PCM) (Masters, 1982) to assess category functioning and latent trait coverage, which is appropriate for polytomous (Likert-type) data.

CFA models were estimated using the maximum likelihood (ML) estimation method. Model fit was evaluated using multiple indices: chi-square (χ^2), comparative fit index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA) with 90 % confidence intervals and test of close fit (*p*-close), standardized root mean square residual (SRMR), and goodness-of-fit index (GFI). Following widely accepted guidelines (Byrne, 2016), model fit was considered acceptable when the CFI, TLI, and GFI values were ≥ 0.90, the RMSEA was ≤0.08, and the SRMR was ≤0.08.

To further examine the construct validity of the TFS, as well as to explore bivariate associations between variables in Study 2, Pearson correlation coefficients (*r*) were computed. In both studies, skewness and kurtosis values were also reported to assess the distributional properties of the data and to determine the suitability of parametric testing (i.e., approximate normality). In Study 1, item-rest correlations were additionally examined to assess the discriminatory power of individual items. Also in Study 1, differences across sociodemographic groups (e.g., gender, religious affiliation, residence) were analyzed using one-way ANOVAs. As none of the effects reached statistical significance, no post hoc comparisons were conducted.

In Study 2, structural equation modeling (SEM) with ML estimation was used to test a CLPM (Kline, 2016). The model included autoregressive and cross-lagged paths between constructs across three time points. Model fit was evaluated using the same indices and thresholds as in Study 1. All model parameters were interpreted using standardized beta coefficients (β), standard errors (SE), and corresponding *p*-values. To improve model clarity and minimize potential overparameterization, residual covariances were constrained to be equal across waves where theoretically justified. Additionally, stability and cross-lagged paths were freely estimated to allow full testing of directional hypotheses.

No data transformations were applied beyond standard normalization procedures used for sten score conversion. Missing data were minimal due to the structure of the online survey platforms and were handled using listwise deletion. All statistical tests were two-tailed, and results were considered statistically significant at $p < .05$, unless otherwise specified.

3. Results

3.1. Study 1 – Validation of the trait forgiveness scale

3.1.1. Data adequacy for factor analysis

Prior to conducting the CFA, the adequacy of the data was assessed. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.824, with no individual Measure of Sampling Adequacy (MSA) values falling below 0.769, indicating that the data were suitable for factor analysis. Furthermore, Bartlett's test of sphericity was significant, $\chi^2_{(45)} = 1120.11$, $p < .001$, confirming that the correlation matrix significantly differed from the identity matrix and supporting the appropriateness of proceeding with factor analysis.

3.1.2. Confirmatory factor analysis

Descriptive statistics, item–rest correlations, and standardized factor loadings for each item are presented in Table 2. All item–rest correlations were ≥ 0.4, which meets recommended psychometric standards for internal discrimination (DeVellis, 2016).

A CFA was conducted to evaluate the construct validity of the TFS scale and to verify whether the factorial structure replicated that of the original instrument, consisting of 10 items loading onto a single latent factor. The tested one-factor model demonstrated good fit to the data: $\chi^2_{(35)} = 47.26$, $p = .073$, CFI = 0.954, TLI = 0.929, RMSEA = 0.067 (90 %

Table 2
Descriptive statistics, item–rest correlations, and standardized factor loadings for each item of the trait forgiveness scale ($N = 386$).

Item	*M* (*SD*)	Item-rest correlation	Standardized loading
Item 1 r	3.71 (1.41)	0.48***	0.50***
Item 2	3.51 (1.23)	0.44***	0.56***
Item 3 r	3.82 (1.31)	0.47***	0.47***
Item 4	3.08 (1.28)	0.63***	0.75***
Item 5	3.16 (1.25)	0.62***	0.68***
Item 6 r	4.07 (1.07)	0.42***	0.41***
Item 7 r	3.49 (1.32)	0.40***	0.42***
Item 8 r	2.61 (1.45)	0.47***	0.52***
Item 9	3.31 (1.2)	0.49***	0.59***
Item 10	3.96 (1.08)	0.61***	0.70***

r revised.
*** $p < .001$.

CI [0.049, 0.085], $p = .056$), SRMR = 0.043, and GFI = 0.994. All standardized factor loadings were statistically significant and exceeded 0.41, indicating that each item contributed meaningfully to the underlying construct.

These results confirm that the factorial structure of the adapted version is consistent with the original model and that the scale performs well as a unidimensional instrument. Importantly, no item needed to be removed, and no model modifications were required to achieve satisfactory fit indices.

3.1.3. Reliability

The internal consistency of the scale was supported by both McDonald's omega and Cronbach's alpha. Specifically, omega was estimated at $\omega = 0.82$ (90 % CI [0.80, 0.84]) and alpha at $\alpha = 0.82$ (90 % CI [0.80, 0.84]), both indicating acceptable reliability.

3.1.4. Partial credit model fit

To further evaluate the psychometric properties of the scale, an IRT analysis was conducted using PCM. The model demonstrated acceptable person reliability (analogous to internal consistency in Classical Test Theory), with a value of 0.79, $p < .001$, indicating that the scale reliably differentiates between individuals across the latent trait continuum.

Model fit was further evaluated by comparing the PCM to a more restrictive Rating Scale Model (RSM), which assumes equal category thresholds across items. A likelihood ratio test revealed that the PCM provided a significantly better fit to the data than the RSM: $\chi^2_{(36)} = 177$, $p < .001$. This result suggests that the thresholds between response categories differ across items, justifying the flexibility allowed by the PCM.

3.1.4.1. Item characteristics. All 10 items were calibrated under the PCM. The item difficulty (location) parameters ranged from −2.42 (Item 6) to −1.11 (Item 8), indicating that the items vary slightly in how likely respondents are to endorse higher response categories, but all fall within a relatively moderate range. This distribution reflects a balanced spread of item difficulty across the latent trait. The estimated threshold parameters were logically ordered and showed no category disordering, supporting the proper functioning of the Likert response scale.

3.1.4.2. Test Information and measurement precision. The Test Information Function (TIF) indicated that the scale provides the most reliable measurement for individuals with trait levels in the range of approximately −2 to +2, which corresponds to the central portion of the latent continuum. This suggests the scale is best suited for use in non-clinical or general population samples, where most individuals fall within this central trait range.

3.1.5. Convergent validity

To further assess the validity of the TFS, correlations were examined between its scores and a set of theoretically related psychological constructs (descriptive statistics are presented in Table 3). As predicted, TFS was positively associated with state forgiveness ($r = 0.29$, $p < .001$), dispositional forgiveness for others ($r = 0.42$, $p < .001$), dispositional self-forgiveness ($r = 0.20$, $p < .001$), and perceived forgiveness by God ($r = 0.30$, $p < .001$).

Furthermore, TFS correlated positively with psychological well-being indicators, including the presence of positive affect ($r = 0.33$, $p < .001$) and general well-being (WHO-5; $r = 0.21$, $p < .001$). As expected, TFS was negatively associated with depressive symptoms (PHQ-9; $r = -0.29$, $p < .001$) and generalized anxiety (GAD-7; $r = -0.30$, $p < .001$), aligning with theoretical assumptions that forgiveness is inversely related to psychological distress. Taken together, these associations provide evidence for the convergent and concurrent validity of the TFS.

3.1.6. Sociodemographic analyses

We also examined whether trait forgiveness, as measured by the TFS, varied as a function of sociodemographic variables. Neither sex, age, nor general religiousness was significantly correlated with TFS scores ($ps > 0.05$), suggesting that these factors were not meaningfully associated with trait forgiveness. Additionally, no significant group differences in TFS were observed across gender, place of residence, marital status, or religious affiliation, indicating that trait forgiveness appears to be relatively stable across these demographic categories ($ps > 0.05$).

3.1.7. Preliminary norms

To facilitate interpretation of the TFS, raw scores were transformed into the sten scale using standard psychometric procedures. This transformation assumes a mean (*M*) of 5.5 and a standard deviation (*SD*) of 2, allowing for the classification of results into normalized categories. According to conventional interpretation, sten scores from 1 to 4 indicate low trait forgiveness, scores from 5 to 6 represent an average level, and scores from 7 to 10 reflect high trait forgiveness. Given the absence of significant sociodemographic differences in TFS scores, the resulting norms can be considered applicable to the general adult population. The provisional sten norms for the Polish version of the TFS are presented in Appendix 2.

Table 3
Descriptive statistics and intercorrelations between the TFS and external measures ($N = 386$).

Variable	*M* (*SD*)	Skewness	Kurtosis	*r*
Trait forgiveness (TFS)	31.26 (5.61)	−0.82	0.98	–
State forgiveness (RFS)	52.79 (10.81)	−0.54	−0.13	0.29***
Presence of positive	39.22 (8.29)	−0.66	−0.53	0.33***
Absence of negative	13.57 (4.28)	0.16	−0.19	0.39***
Dispositional self-forgiveness (TouFS)	6.86 (2.45)	−0.4	−0.92	0.20***
Dispositional forgiveness for others (TouFS)	18.3 (4.55)	−0.59	−0.54	0.42***
Forgiveness by God (TouFS)	6.65 (1.81)	−0.24	−0.03	0.24***
Depressiveness (PHQ-9)	8.33 (5.67)	0.4	−0.84	−0.29***
Anxiety (GAD-7)	1.72 (0.54)	−0.47	0.92	−0.3***
Well-Being (WHO-5)	15.18 (4.83)	−0.05	−0.43	0.21***
Sex (0 = female, 1 = male)				0.09
Age	33.15 (9.47)	0.55	−0.23	0.03
Religiousness	3.92 (2.71)	0.59	−0.76	0.05

*** $p < .001$.

3.2. Study 2 – Narcissistic dimensions as predictors of trait forgiveness

In Study 2, we investigated the longitudinal associations between narcissism—conceptualized in its two core dimensions, admiration and rivalry—and trait forgiveness using a three-wave cross-lagged panel design. Descriptive statistics and correlations are presented in Table 4. As expected, each variable exhibited strong autoregressive stability over time, with successive wave-to-wave correlations consistently at or above $r = 0.58$ ($p < .001$). Across all three waves, rivalry was consistently and significantly negatively associated with trait forgiveness, with effects ranging from moderate to strong in magnitude. In contrast, admiration was not significantly correlated with trait forgiveness at any time point. Significant positive correlations between admiration and rivalry were observed only at T2 and T3. Additionally, neither sex nor age showed significant correlations with any of the main psychological constructs ($p > .05$).

3.2.1. Cross-lagged panel model

In the next step, we employed SEM to examine the longitudinal associations between trait forgiveness, admiration, and rivalry. This was tested using a three-wave cross-lagged panel design (see Fig. 1), which allowed us to assess the directional effects between constructs over time while controlling for prior levels of each variable. The model included autoregressive paths and contemporaneous covariances among all variables at Time (T)1, T2, and T3. Although these covariances—as well as the residual variances—are not visualized in the path diagram for the sake of clarity, their corresponding estimates are reported in Appendix 3.

The analysis revealed that higher levels of rivalry at T1 were significantly associated with lower levels of trait forgiveness at T2 ($\beta = -0.11$, $p = .031$). This effect persisted from T2 to T3 ($\beta = -0.10$, $p = .046$), indicating that rivalry consistently predicted reduced trait forgiveness across time points. In contrast, admiration did not significantly predict trait forgiveness at either time point (T1 → T2: $\beta = -0.03$, $p = .543$; T2 → T3: $\beta = -0.07$, $p = .211$). Likewise, trait forgiveness did not significantly predict subsequent levels of admiration (T1 → T2: $\beta = 0.01$, $p = .898$; T2 → T3: $\beta = 0.02$, $p = .702$) or rivalry (T1 → T2: $\beta = -0.01$, $p = .908$; T2 → T3: $\beta = 0.01$, $p = .885$), providing no evidence for reciprocal or bidirectional effects.

Most cross-lagged paths between admiration and rivalry were also non-significant. Specifically, admiration at T1 did not predict rivalry at T2 ($\beta = 0.02$, $p = .7$), nor did rivalry at T1 predict admiration at T2 ($\beta = 0.08$, $p = .191$). Similarly, rivalry at T2 did not significantly predict admiration at T3 ($\beta = 0.07$, $p = .175$). However, there was one notable exception: a statistically significant cross-lagged effect from admiration at T2 to rivalry at T3 ($\beta = 0.31$, $p < .001$), suggesting that earlier levels of admiration may prospectively contribute to increases in rivalry over time.

Overall, the findings support a primarily unidirectional relationship, in which elevated levels of rivalry undermine the capacity for trait forgiveness over time, whereas forgiveness does not appear to reduce narcissistic traits. In addition, the data point to a delayed directional link between admiration and rivalry. Model fit indices indicated a satisfactory fit: $\chi^2_{(6)} = 12.31$, $p = .055$; GFI = 0.991; RMSEA = 0.051 (90 % CI [0.041, 0.07]); CFI = 0.96; SRMR = 0.028.

4. Discussion

This study examined the longitudinal relationships between narcissistic admiration and rivalry and trait forgiveness, using a newly adapted Polish version of the TFS. The findings clearly supported the hypothesis that rivalry negatively predicts dispositional forgiveness over time. Admiration, in contrast, was not a significant predictor, providing new insight into the divergent social functioning of narcissistic subtypes. In the first phase of the study, we also confirmed the reliability and construct validity of the Polish TFS, which demonstrated a coherent unidimensional structure and appropriate associations with related traits.

As predicted, rivalry was associated with lower levels of trait forgiveness over time, with a small effect. This finding supports theoretical and empirical accounts of rivalry as a defensive and antagonistic form of narcissism, characterized by ego-protection, devaluation of others, and interpersonal hostility (Back et al., 2013; Fatfouta et al., 2015). Individuals high in rivalry may interpret interpersonal transgressions as threats to self-worth, favoring punitive or distancing strategies rather than reconciliation. These results align with prior evidence linking antagonistic traits to reduced prosociality and greater retaliatory tendencies (Hepp & Niedtfeld, 2022; Reidy et al., 2008; Wurst et al., 2017). Furthermore, as suggested by Skalski-Bednarz (2024), individuals prone to rivalry and aggression may lack access to more adaptive interpersonal strategies—such as forgiveness—as conceptualized in inhibitory models like the I^3 Theory (Slotter & Finkel, 2011). Our longitudinal findings contribute to this line of reasoning by showing that these maladaptive tendencies are not only present but remain stable

Table 4
Descriptive statistics and correlations in a three-wave longitudinal study of trait forgiveness, admiration, and rivalry ($N = 170$).

Variable	α	*M* (*SD*)	Skewness	Kurtosis	1.	2.	3.	4.	5.	6.	7.	8.	9.
1, Trait forgiveness T1	0.83	34.94 (7.9)	−0.44	−0.51									
2. Trait forgiveness T2	0.83	34.06 (7.47)	−0.24	−0.92	0.78***								
3. Trait forgiveness T3	0.81	34.57 (8.01)	−0.38	−0.45	0.87***	0.83***							
4. Admiration T1	0.86	30.64 (10.13)	−0.01	−0.93	0.06	0.11	0.11						
5. Admiration T2	0.84	31.15 (9.76)	−0.07	−0.95	0.08	0.07	0.1	0.76***					
6. Admiration T3	0.85	31.47 (9.44)	−0.38	0.17	0.14	0.04	0.03	0.58***	0.81***				
7. Rivalry T1	0.84	19.53 (8.13)	0.82	0.05	−0.51***	−0.44***	−0.54***	−0.02	−0.03	0.06			
8. Rivalry T2	0.85	20.98 (8.53)	0.68	−0.46	−0.41***	−0.46***	−0.43***	−0.08	0.01	0.02	0.74***		
9. Rivalry T3	0.84	20.47 (8.73)	0.88	0.68	−0.34***	−0.46***	−0.39***	−0.11	−0.39***	0.3***	0.61***	0.66***	0.8***
Sex (0 = female, 1 = male)				0.01	0.03	0.02	0.04	−0.03	−0.02	−0.01	−0.05	−0.04	−0.03
Age		38.22 (9.12)	0.7	−0.31	0.02	0.01	−0.03	−0.02	−0.01	−0.01	−0.01	−0.03	−0.07

*** $p < .001$.

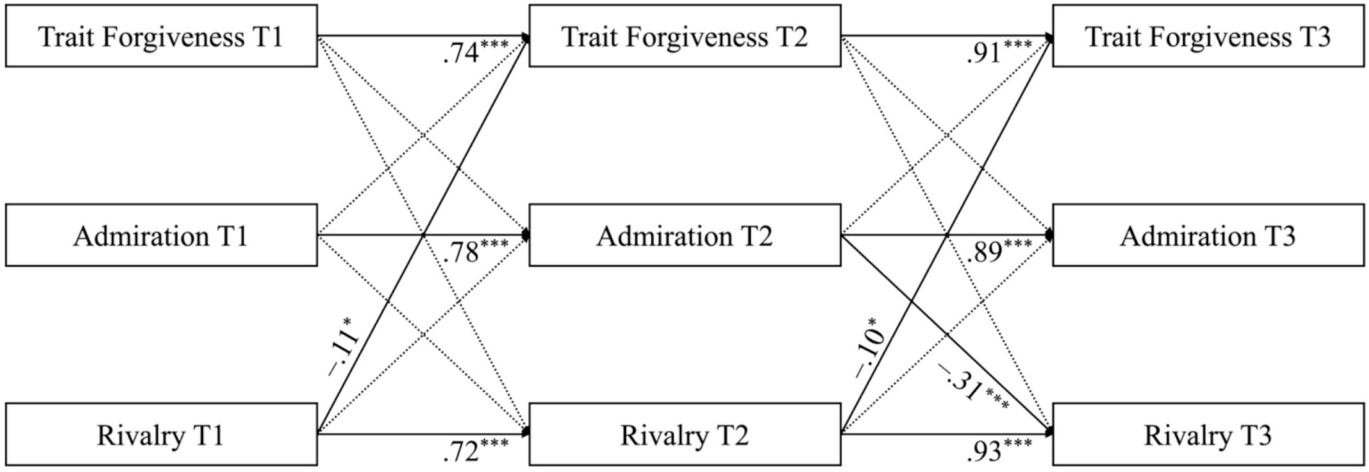

Fig. 1. Cross-lagged panel model path diagram: Analyzing the longitudinal associations between trait forgiveness, Admiration, and rivalry across three waves, T = time, *p < .05, ***p < .001 (N = 170).

over time, reinforcing the role of rivalry in undermining interpersonal functioning.

Contrary to expectations, admiration did not significantly predict trait forgiveness over time. Although it is theoretically associated with self-enhancement motives and the pursuit of social validation (Morf & Rhodewalt, 2001; Rogoza et al., 2016), our findings suggest that admiration may not exert a stable influence on forgiving dispositions. While the association was non-significant in our study, its direction and magnitude were comparable to those reported by Fatfouta et al. (2017), who found similarly weak but statistically significant correlations between admiration and self-reported forgiveness—likely a function of their large sample size. In a subsequent phase of their research, Fatfouta et al. (2017) broadened the conceptual scope by modeling agentic narcissism as a latent construct that included admiration, grandiosity, and charm within a cross-sectional SEM framework; again, the observed associations with forgiveness were modest. In contrast to previous studies, our research was grounded in the NARC framework (Back et al., 2013) conceptualizing admiration as a distinct, theoretically grounded facet of narcissism, assessed independently from broader agentic constructs. However, our findings did not support a longitudinal association between admiration and trait forgiveness, which—given the methodological and conceptual differences—may suggest that the previously reported cross-sectional effects by Fatfouta et al. (2017), while noteworthy, were somewhat overstated. This interpretation aligns with growing evidence from longitudinal research indicating that associations between personality traits and forgiveness, though frequently observed in cross-sectional studies, often weaken or fail to persist over time (Skalski-Bednarz, Toussaint, Konaszewski, & Surzykiewicz, 2024b).

Furthermore, a plausible explanation for the lack of a significant longitudinal effect observed in this study is that individuals high in admiration may construct a self-image centered on strength, autonomy, and superiority—core features of the admiration dimension of narcissism (Back et al., 2013; Rogoza et al., 2016). Meanwhile, forgiveness is often culturally framed as a sign of softness or vulnerability (Raj & Wiltermuth, 2016). This incongruity may lead to cognitive dissonance, making it less likely for individuals high in admiration to adopt a forgiving identity. However, it is unlikely that such individuals consistently reject forgiveness altogether. In certain contexts, particularly those involving social or reputational motives, they may choose to forgive when it serves their self-enhancement goals. For instance, Geng et al. (Geng et al., 2025) found that narcissistic individuals were more likely to engage in episodic forgiveness—especially by suppressing revenge impulses—when forgiveness contributed to greater relational satisfaction. These findings suggest that forgiveness can operate as an instrumental strategy rather than a moral imperative. Accordingly, while admiration may not predict a general trait of forgiveness, individuals high in admiration may still engage in forgiveness selectively, when it aligns with personally meaningful or status-relevant goals.

In our model, a delayed cross-lagged effect emerged, whereby higher admiration at T2 predicted increased rivalry at T3, with a small effect. This link was not present in the earlier T1–T2 interval, suggesting a temporal specificity. Although admiration and rivalry are theoretically independent, prior studies have reported small but consistent positive correlations between them (Back, 2018). Our results extend this correlational evidence by demonstrating that admiration may prospectively contribute to the development of rivalry over time. This pattern aligns with dynamic conceptualizations of narcissism (Morf & Rhodewalt, 2001), according to which individuals shift between self-promotional and self-protective strategies depending on contextual affordances and external feedback. When admiration-driven efforts fail to secure desired recognition, they may gradually give way to more defensive, antagonistic responses. Such findings highlight the fluidity of narcissistic functioning and suggest that rivalry may, in some cases, emerge as a downstream consequence of frustrated admiration. This interpretation is further supported by theoretical models positing that when agentic narcissists encounter obstacles to their grandiose aspirations or suffer setbacks, they may shift toward antagonism as a defensive maneuver (Krizan & Herlache, 2017).

4.1. Trait Forgiveness Scale

As part of the present project, we also adapted the TFS to the Polish context. The scale demonstrated satisfactory psychometric properties, including a coherent unidimensional structure and evidence of convergent validity. As expected, TFS scores correlated positively with dimensions of forgiveness assessed dispositionally by the TouFS (an alternative measure of dispositional forgiveness)—particularly forgiveness of others, but also forgiveness of self and forgiveness perceived as granted by God—as well as episodic forgiveness measured by the RFS. Additionally, consistent with stress-and-coping frameworks (Strelan, 2020; Worthington & Scherer, 2004), TFS scores were positively associated with well-being and negatively related to depression and anxiety. These findings support the TFS as a valid and culturally appropriate instrument for assessing dispositional forgiveness in the Polish population and underscore the relevance of forgiveness as a resource for psychological health. Although absolute test–retest reliability was not measured in Study 1, data from the longitudinal sample in Study 2 provide evidence of temporal stability. Trait forgiveness showed high rank-order stability across three waves (*r*s = 0.78–0.87), consistent with

its theoretical status as a relatively stable personality disposition. Given that the scale reflects stable individual differences in forgiveness, we also emphasize the value of establishing normative data to facilitate its use in both applied and research contexts.

4.2. Limitations and future directions

Although the CLPM used in this study enabled the examination of temporal precedence, it operated on observed variables and did not require testing for measurement invariance over time. Nonetheless, future research using latent longitudinal frameworks such as the RI-CLPM or cross-lagged SEM could enhance confidence in the structural stability of the constructs across measurement points (Lawson et al., 2021; Mulder & Hamaker, 2021).

Several limitations should nonetheless be acknowledged. First, while the longitudinal design supports directional inference, it cannot fully establish causality in the absence of experimental manipulation. Second, the exclusive reliance on self-report measures may have introduced shared method variance and susceptibility to social desirability bias, particularly when assessing socially sensitive constructs like narcissism. Prior work has shown that narcissistic traits may be underreported or distorted in self-assessment due to ego-protective mechanisms and impression management tendencies (Paulhus & Vazire, 2007). Incorporating peer reports, behavioral data, or implicit measures could offer a more comprehensive assessment of narcissistic functioning and its interpersonal consequences (see, e.g., Barry et al., 2017; Heinze et al., 2020).

Furthermore, the present study examined narcissism as a dimensional personality trait within a non-clinical population. While this approach aligns with contemporary trait-based models, it limits generalizability to clinical forms of narcissism, such as narcissistic personality disorder (NPD). The mechanisms driving forgiveness in individuals with pathological narcissism—marked by more severe interpersonal dysfunction and emotional dysregulation—may differ meaningfully from those observed in community samples. Future research should test whether the observed associations, particularly the inhibitory role of rivalry, replicate in clinical contexts.

Future studies may also expand on the contextual moderators of the admiration–forgiveness link. Although admiration did not predict forgiveness in the current study, it is possible that under specific conditions—such as when forgiveness offers a route to relational gains or status maintenance—individuals high in admiration may choose to forgive instrumentally. Experimental manipulations involving social incentives or reputational outcomes may help clarify these conditional pathways.

4.3. Practical implications

The findings of this study carry several practical implications, particularly for forgiveness-based interventions within non-clinical populations. Given the observed negative longitudinal relationship between narcissistic rivalry and trait forgiveness, forgiveness education programs—such as the REACH Forgiveness intervention (Worthington, 2020)—may benefit from tailoring their approach when working with individuals high in narcissistic rivalry. The REACH model helps participants process transgressions by Recalling the hurt, Empathizing with the offender, offering an Altruistic gift of forgiveness, Committing to forgive, and Holding onto forgiveness. It has been shown to effectively reduce distress and improve well-being, but its effectiveness may be limited among individuals who are dispositionally prone to antagonistic and retaliatory responses (Skalski-Bednarz, 2024; Worthington, 2023).

To enhance the efficacy of such programs, it may be beneficial to incorporate techniques aimed at reducing narcissistic rivalry prior to or alongside forgiveness training. Research by Thomaes et al. (2009) suggests that buttressing self-esteem through affirmation of core personal values can temporarily reduce narcissistic aggression—a behavior closely tied to rivalry. Specifically, when individuals high in narcissistic traits were encouraged to reflect on values important to them, their hostile reactions following ego threats were significantly reduced. Translating such techniques into forgiveness interventions may help diminish the defensive and ego-protective tendencies that hinder conciliatory behavior.

5. Conclusions

This study provides longitudinal evidence that narcissistic rivalry, but not admiration, significantly predicts lower levels of trait forgiveness over time. These findings support the view that rivalry—a dimension marked by interpersonal hostility and defensiveness—acts as a stable barrier to conciliatory tendencies. In contrast, admiration did not show a stable association, suggesting that trait forgiveness may not align with the self-regulatory goals typical of this narcissistic dimension. Additionally, the study validated the Polish adaptation of the TFS, demonstrating strong psychometric properties and meaningful associations with related constructs. By integrating a longitudinal framework and refined measures, this research offers valuable insight into the interpersonal implications of narcissistic tendencies and advances the assessment of forgiveness in Polish-speaking populations.

CRediT authorship contribution statement

Sebastian Binyamin Skalski-Bednarz: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Loren L. Toussaint:** Writing – review & editing, Methodology, Investigation. **Paweł Dębski:** Writing – review & editing, Data curation. **Karol Konaszewski:** Writing – review & editing, Investigation.

Consent to participate

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

Ethics approval

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 (approval no. 2/6/23, June 15, 2023).

Funding

This research was supported by the International Visegrad Fund under Grant No. 52410344, awarded to S.B.S.-B. as part of a visiting professorship at Ilia State University in Tbilisi, Georgia, during which this manuscript was prepared. Open Access funding was enabled and organized by Projekt DEAL.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Appendix 1

Items of the trait forgiveness scale – Polish version

1 Bliscy prawdopodobnie uważają, że zbyt długo chowam urazę [People close to me probably think I hold a grudge too long.]
2 Potrafię przebaczyć przyjacielowi niemal wszystko [I can forgive a friend for almost anything.]
3 Jeśli ktoś mnie źle traktuje, odpłacam mu tym samym [If someone treats me badly, I treat him or her the same.]
4 Staram się przebaczać, nawet gdy ktoś nie czuje się winny swojego postępowania [I try to forgive others even when they don't feel guilty for what they did.]
5 Zazwyczaj potrafię przebaczyć i zapomnieć zniewagę [I can usually forgive and forget an insult.]
6 Czuję się zraniony w wielu bliskich relacjach [I feel bitter about many of my relationships.]
7 Nawet po przebaczeniu wciąż wracają do mnie wspomnienia, które budzą urazę [Even after I forgive someone, things often come back to me that I resent.]
8 Są rzeczy, których nie potrafiłbym przebaczyć, nawet bliskiej osobie [There are some things for which I could never forgive even a loved one.]
9 Zawsze przebaczałem tym, którzy mnie skrzywdzili [I have always forgiven those who have hurt me.]
10 Uważam siebie za osobę skłonną do przebaczania [I am a forgiving person.]

Items adapted and translated from Berry et al. (2005). Forgivingness, vengeful rumination, and affective traits. *Journal of Personality, 73*(1), 183–225. doi:https://doi.org/10.1111/j.1467-6494.2004.00308.x. Used with permission for academic and research purposes.

Appendix 2

Provisional Sten Norms for the Polish Version of the Trait Forgiveness Scale (N = 386).

Raw score	Sten
5–20	1
21–22	2
23–25	3
26–28	4
29–31	5
32–34	6
35–36	7
37–39	8
40–42	9
43–50	10

Appendix 3

Standardized Residual Variances and Contemporaneous Covariances From the Cross-Lagged Panel Model ($N = 170$).

Variable	Standardized estimation
Residual variances	
Trait forgiveness T2	0.38***
Admiration T2	0.4***
Rivalry T2	0.48***
Trait forgiveness T1	0.72***
Admiration T1	0.73***
Rivalry T1	0.61***
Residual covariances	
Trait forgiveness T1 – admiration T1	0.06
Trait forgiveness T1 – rivalry T1	−0.51***
Admiration1 – rivalry T1	−0.02
Trait forgiveness T2 – admiration T2	−0.28***
Trait forgiveness T2 – rivalry T2	−0.31***
Admiration T2 – rivalry T2	0.03

*** $p < .001$.

Data availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

References

Back, M. D. (2018). The narcissistic admiration and rivalry concept. In A. D. Hermann, A. B. Brunell, & J. D. Foster (Eds.), *Handbook of trait narcissism* (pp. 57–67). Cham: Springer.

Back, M. D., Küfner, A. C. P., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. A. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology, 105*(6), 1013–1037. https://doi.org/10.1037/a0034431

Barry, C. T., Lui, J. H. L., Lee-Rowland, L. M., & Moran, E. V. (2017). Adolescent communal narcissism and peer perceptions. *Journal of Personality, 85*(6), 782–792. https://doi.org/10.1111/jopy.12287

Basińska, B. A., & Kwissa-Gajewska, Z. (2023). Psychometric properties of the Polish version of the Generalized Anxiety Disorder Scale (GAD-7) in a non-clinical sample of employees during pandemic crisis. *International Journal of Occupational Medicine and Environmental Health, 36*(4), 493–504. https://doi.org/10.13075/ijomeh.1896.02104

Berry, J. W., & Worthington, E. L. (2001). Forgivingness, relationship quality, stress while imagining relationship events, and physical and mental health. *Journal of Counseling Psychology, 48*(4), 447–455. https://doi.org/10.1037/0022-0167.48.4.447

Berry, J. W., Worthington, E. L., O'Connor, L. E., Parrott, L., & Wade, N. G. (2005). Forgivingness, vengeful rumination, and affective traits. *Journal of Personality, 73*(1), 183–226. https://doi.org/10.1111/j.1467-6494.2004.00308.x

Besser, A., & Zeigler-Hill, V. (2010). The influence of pathological narcissism on emotional and motivational responses to negative events: The roles of visibility and concern about humiliation. *Journal of Research in Personality, 44*(4), 520–534. https://doi.org/10.1016/j.jrp.2010.06.006

Bleidorn, W., Hopwood, C. J., Back, M. D., Denissen, J. J. A., Hennecke, M., Hill, P. L., … Zimmermann, J. (2021). Personality trait stability and change. *Personality Science, 2*(1), Article e6009. https://doi.org/10.5964/ps.6009

Bleidorn, W., Schwaba, T., Zheng, A., Hopwood, C. J., Sosa, S. S., Roberts, B. W., & Briley, D. A. (2022). Personality stability and change: A meta-analysis of longitudinal studies. *Psychological Bulletin, 148*(7–8), 588–619. https://doi.org/10.1037/bul0000358

Brown, R. P. (2004). Vengeance is mine: Narcissism, vengeance, and the tendency to forgive. *Journal of Research in Personality, 38*(6), 576–584. https://doi.org/10.1016/j.jrp.2003.10.003

Byrne, B. M. (2016). In Ed (Ed.), *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Routledge.

Charzyńska, E., & Heszen, I. (2013). Zdolnosc do wybaczania i jej pomiar przy pomocy polskiej adaptacji Skali Wybaczania LL Toussainta. DR Williamsa, MA Musicka i SA Everson. The capacity to forgive and its measurement with the Polish adaptation of The Forgiveness Scale LL Toussaint, D. R. Williams, MA Musick and SA Eversonj *Przeglgd Psychologiczny, 56*(4), 423–446.

Cichoń, E., Kiejna, A., Kokoszka, A., Gondek, T., Rajba, B., Lloyd, C. E., & Sartorius, N. (2020). Validation of the polish version of WHO-5 as a screening instrument for depression in adults with diabetes. *Diabetes Research and Clinical Practice, 159*. https://doi.org/10.1016/J.DIABRES.2019.107970

DeVellis, R. F. (2016). *Scale development: Theory and applications. 21*. Sage Publications.

Exline, J. J., Bushman, B. J., Baumeister, R. F., Keith Campbell, W., & Finkel, E. J. (2004). Too proud to let go: Narcissistic entitlement as a barrier to forgiveness. *Journal of Personality and Social Psychology, 87*(6), 894–912. https://doi.org/10.1037/0022-3514.87.6.894

Fatfouta, R., Gerlach, T. M., Schröder-Abé, M., & Merkl, A. (2015). Narcissism and lack of interpersonal forgiveness: The mediating role of state anger, state rumination, and state empathy. *Personality and Individual Differences, 75*, 36–40. https://doi.org/10.1016/J.PAID.2014.10.051

Fatfouta, R., Zeigler-Hill, V., & Schröder-Abé, M. (2017). I'm merciful, am I not? Facets of narcissism and forgiveness revisited. *Journal of Research in Personality, 70*, 166–173. https://doi.org/10.1016/j.jrp.2017.07.007

Fincham, F. D. (2019). Forgiveness in couple and family therapy. In *Encyclopedia of couple and family therapy* (pp. 1202–1208). Springer International Publishing. https://doi.org/10.1007/978-3-319-49425-8_531.

Fincham, F. D., Beach, S. R. H., & Davila, J. (2004). Forgiveness and conflict resolution in marriage. *Journal of Family Psychology, 18*(1), 72–81. https://doi.org/10.1037/0893-3200.18.1.72

Finkel, E. J., Rusbult, C. E., Kumashiro, M., & Hannon, P. A. (2002). Dealing with betrayal in close relationships: Does commitment promote forgiveness? *Journal of Personality and Social Psychology, 82*(6), 956–974. https://doi.org/10.1037/0022-3514.82.6.956

Furnham, A., Richards, S. C., & Paulhus, D. L. (2013). The dark triad of personality: A 10 year review. *Social and Personality Psychology Compass, 7*(3), 199–216. https://doi.org/10.1111/spc3.12018

Geng, Y., Cheng, Z., Shi, L., Zhan, T., Hu, Z., & Jin, W. (2025). Dark triad and interpersonal forgiveness: The mediating role of interpersonal relationship satisfaction. *Behavioral Science, 15*(2), 237. https://doi.org/10.3390/bs15020237

Giammarco, E. A., & Vernon, P. A. (2014). Vengeance and the dark triad: The role of empathy and perspective taking in trait forgivingness. *Personality and Individual Differences, 67*, 23–29. https://doi.org/10.1016/j.paid.2014.02.010

Grieve, R. (2023). Socially aversive dark traits and the drive for social connectedness. *Personality and Individual Differences, 202*, Article 111962. https://doi.org/10.1016/j.paid.2022.111962

Heinze, P. E., Fatfouta, R., & Schröder-Abé, M. (2020). Validation of an implicit measure of antagonistic narcissism. *Journal of Research in Personality, 88*, Article 103993. https://doi.org/10.1016/j.jrp.2020.103993

Hepp, J., & Niedtfeld, I. (2022). Prosociality in personality disorders: Status quo and research agenda. *Current Opinion in Psychology, 44*, 208–214. https://doi.org/10.1016/j.copsyc.2021.09.013

John, O. P. (1990). The "big five" factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 66–100). Guilford Press.

Jonason, P. K., & Ferrell, J. D. (2016). Looking under the hood: The psychogenic motivational foundations of the dark triad. *Personality and Individual Differences, 94*, 324–331. https://doi.org/10.1016/j.paid.2016.01.039

Kandler, C. (2014). Personality development between nature and nurture. *Personality and Individual Differences, 60*, S81–S82. https://doi.org/10.1016/j.paid.2013.12.002

Kiesler, D. J. (1983). The 1982 interpersonal circle: A taxonomy for complementarity in human transactions. *Psychological Review, 90*(3), 185–214. https://doi.org/10.1037/0033-295X.90.3.185

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). New York, NY: Guilford Press.

Kluwer, E. S., Van Der Wal, R. C., Visser, M., & Finkenauer, C. (2020). *Predictors of forgiveness among divorced parents*. https://doi.org/10.1037/fam0000799.supp

Kokoszka, A., Jastrzębski, A., & Obrębski, M. (2016). Psychometric properties of the polish version of patient health Questionnaire-9. *Psychiatria, 13*(4), 187–193.

Krizan, Z., & Herlache, A. D. (2017). The narcissism Spectrum model: A synthetic view of narcissistic personality. *Personality and Social Psychology Review, 22*(1), 3–31. https://doi.org/10.1177/1088868316685018

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9. *Journal of General Internal Medicine, 16*(9), 606–613. https://doi.org/10.1046/J.1525-1497.2001.016009606.X

Lawson, K. M., Atherton, O. E., & Robins, R. W. (2021). The structure of adolescent temperament and associations with psychological functioning: A replication and extension of Snyder et al. (2015). *Journal of Personality and Social Psychology, 121*(5). https://doi.org/10.1037/pspp0000380. e19–e39.

Luo, Y. L. L., Cai, H., Sedikides, C., & Song, H. (2014). Distinguishing communal narcissism from agentic narcissism: A behavior genetics analysis on the agency–communion model of narcissism. *Journal of Research in Personality, 49*, 52–58. https://doi.org/10.1016/j.jrp.2014.01.001

Masters, G. N. (1982). A Rasch model for partial credit scoring. *Psychometrika, 47*(2), 149–174. https://doi.org/10.1007/BF02296272

McAdams, D. P. (1994). *The person: An introduction to personality psychology*. Harcourt Brace College Publishers.

Miller, J. D., Hoffman, B. J., Gaughan, E. T., Gentile, B., Maples, J., & Keith Campbell, W. (2011). Grandiose and vulnerable narcissism: A Nomological network analysis. *Journal of Personality, 79*(5), 1013–1042. https://doi.org/10.1111/j.1467-6494.2010.00711.x

Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry, 12*(4), 177–196. https://doi.org/10.1207/S15327965PLI1204_1

Mróz, J., Kaleta, K., & Guzewicz, M. (2016). Polska adaptacja Skali Przebaczenia – Heartland forgiveness scale [polish adaptation of the forgiveness scale - heartland forgiveness scale]. *Przegląd Psychologiczny, 59*(4), 387–402.

Mulder, J. D., & Hamaker, E. L. (2021). Three extensions of the random intercept cross-lagged panel model. *Structural Equation Modeling: A Multidisciplinary Journal, 28*(4), 638–648. https://doi.org/10.1080/10705511.2020.1784738

Paulhus, D. L. (2014). Toward a taxonomy of dark personalities. *Current Directions in Psychological Science, 23*(6), 421–426. https://doi.org/10.1177/0963721414547737

Paulhus, D. L., & John, O. P. (1998). Egoistic and moralistic biases in self-perception: The interplay of self-deceptive styles with basic traits and motives. *Journal of Personality, 66*(6), 1025–1060. https://doi.org/10.1111/1467-6494.00041

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 224–239). Guilford Press.

Pincus, A. L., Ansell, E. B., Pimentel, C. A., Cain, N. M., Wright, A. G. C., & Levy, K. N. (2009). Initial construction and validation of the pathological narcissism inventory. *Psychological Assessment, 21*(3), 365–379. https://doi.org/10.1037/a0016530

Raj, M., & Wiltermuth, S. S. (2016). Barriers to forgiveness. *Social and Personality Psychology Compass, 10*(11), 679–690. https://doi.org/10.1111/spc3.12290

Rasmussen, K. (2016). Entitled vengeance: A meta-analysis relating narcissism to provoked aggression. *Aggressive Behavior, 42*(4), 362–379. https://doi.org/10.1002/ab.21632

Rauthmann, J. F., & Kolar, G. P. (2013). Positioning the dark triad in the interpersonal circumplex: The friendly-dominant narcissist, hostile-submissive Machiavellian, and hostile-dominant psychopath? *Personality and Individual Differences, 54*(5), 622–627. https://doi.org/10.1016/j.paid.2012.11.021

Reidy, D. E., Zeichner, A., Foster, J. D., & Martinez, M. A. (2008). Effects of narcissistic entitlement and exploitativeness on human physical aggression. *Personality and Individual Differences, 44*(4), 865–875. https://doi.org/10.1016/j.paid.2007.10.015

Rogoza, R., Rogoza, M., & Wyszyńska, P. (2016). Polska adaptacja modelu narcystycznego podziwu i rywalizacji. *Polskie Forum Psychologiczne, 21*(3), 410–431.

Rohmann, E., Neumann, E., Herner, M. J., & Bierhoff, H.-W. (2012). Grandiose and vulnerable narcissism. *European Psychologist, 17*(4), 279–290. https://doi.org/10.1027/1016-9040/a000100

Rye, M. S., Loiacono, D. M., Folck, C. D., Olszewski, B. T., Heim, T. A., & Madia, B. P. (2001). Evaluation of the psychometric properties of two forgiveness scales. *Current Psychology, 20*(3), 260–277. https://doi.org/10.1007/S12144-001-1011-6/METRICS

Skalski Bednarz, S. B., Toussaint, L. L., Webb, J. R., & Krok, D. (2024). Forgiveness of others and health: A review of key models and implications. *Humanitas Pedagogika I Psychologia, 2*(30), 221–244. https://doi.org/10.5604/01.3001.0054.9768

Skalski-Bednarz, S. B. (2024). Effects of Christian REACH forgiveness intervention to reduce aggressiveness in adolescents with conduct disorder. *Psychology in the Schools*. https://doi.org/10.1002/pits.23161

Skalski-Bednarz, S. B., Toussaint, L. L., & Dobrakowski, P. (2024). Forgiveness in Poland: Rye forgiveness scale adaptation and its longitudinal impact on mental health in HIV-positive individuals. *Journal of Clinical Psychology, 81*(3), 145–157. https://doi.org/10.1002/jclp.23757

Skalski-Bednarz, S. B., Toussaint, L. L., Konaszewski, K., & Surzykiewicz, J. (2024a). Episodic forgiveness in young American adults and its pathways to distress by health, outlook, spirituality, aggression, and social support. *Health Psychology Report, 13*(3), 236–249. https://doi.org/10.5114/hpr/185739

Skalski-Bednarz, S. B., Toussaint, L. L., Konaszewski, K., & Surzykiewicz, J. (2024b). Personality traits as predictors of forgiveness and gratitude/awe: A two-wave longitudinal study. *Current Psychology*. https://doi.org/10.1007/s12144-024-06768-x

Slotter, E. B., & Finkel, E. J. (2011). I3 theory: Instigating, impelling, and inhibiting factors in aggression. In P. R. Shaver, & M. Mikulincer (Eds.), *Human aggression and violence: Causes, manifestations, and consequences* (pp. 35–52). American Psychological Association.

Sousa, V. D., & Rojjanasrirat, W. (2011). Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: A clear and user-friendly guideline. *Journal of Evaluation in Clinical Practice, 17*(2), 268–274. https://doi.org/10.1111/J.1365-2753.2010.01434.X

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder. *Archives of Internal Medicine, 166*(10), 1092. https://doi.org/10.1001/archinte.166.10.1092

Strelan, P. (2020). The stress-and-coping model of forgiveness: Theory, research, and the potential of dyadic coping. In J. E. L. Worthington, & N. G. Wade (Eds.), *Handbook of forgiveness* (2nd ed., pp. 63–73). Routledge/Taylor & Francis Group.

Strelan, P., Karremans, J. C., & Krieg, J. (2017). What determines forgiveness in close relationships? The role of post-transgression trust. *British Journal of Social Psychology, 56*(1), 161–180. https://doi.org/10.1111/bjso.12173

Thomaes, S., Bushman, B. J., Castro, B. O.d., Cohen, G. L., & Denissen, J. J. A. (2009). Reducing narcissistic aggression by buttressing self-esteem: An experimental field study. *Psychological Science, 20*(12), 1536–1542. https://doi.org/10.1111/j.1467-9280.2009.02478.x

Topp, C. W., Østergaard, S. D., Søndergaard, S., & Bech, P. (2015). The WHO-5 well-being index: A systematic review of the literature. *Psychotherapy and Psychosomatics, 84*(3), 167–176. https://doi.org/10.1159/000376585

Toussaint, L. (2022). Forgiveness and flourishing. *Spiritual Care, 11*(4), 313–320. https://doi.org/10.1515/spircare-2022-0042

Toussaint, L., & Webb, J. R. (2005). Theoretical and empirical connections between forgiveness, mental health, and well-being. In J. E. L. Worthington (Ed.), *Handbook of forgiveness* (pp. 349–362). Routledge.

Toussaint, L. L., Williams, D. R., Musick, M. A., & Everson, S. A. (2001). Forgiveness and health: Age differences in a U.S. probability sample. *Journal of Adult Development, 8*(4), 249–257. https://doi.org/10.1023/A:1011394629736

Webb, J. R., & Toussaint, L. L. (2020). Forgiveness, well-being, and mental health. In E. L. Worthington, & N. G. Wade (Eds.), *Handbook of forgiveness* (2nd ed., pp. 188–197). Routledge.

Webb, J. R., Hirsch, J. K., Visser, P. L., & Brewer, K. G. (2013). Forgiveness and health: Assessing the mediating effect of health behavior, social support, and interpersonal functioning. *The Journal of Psychology, 147*(5), 391–414. https://doi.org/10.1080/00223980.2012.700964

Wolf, E. J., Harrington, K. M., Clark, S. L., & Miller, M. W. (2013). Sample size requirements for structural equation models: An evaluation of power, bias, and solution propriety. *Educational and Psychological Measurement, 73*(6), 913–934. https://doi.org/10.1177/0013164413495237

Worthington, E. L., .J. (2006). *Forgiveness and reconciliation: Theory and application.* Routledge/Taylor & Francis Group.

Worthington, E. L. (2020). An update of the REACH forgiveness model to promote forgiveness. In E. L. Worthington, & G. N. Wade (Eds.), *An update of the REACH forgiveness model to promote forgiveness, in Handbook of Forgiveness* (2nd ed., pp. 277–287). Routledge. https://doi.org/10.4324/9781351123341-26.

Worthington, E. L., .J. (2023). REACH forgiveness in couple, group, and individual psychotherapy. In P. S. Richards, G. E. K. Allen, & D. K. Judd (Eds.), *Handbook of spiritually integrated psychotherapies* (pp. 365–380). American Psychological Association.

Worthington, E. L., & Scherer, M. (2004). Forgiveness is an emotion-focused coping strategy that can reduce health risks and promote health resilience: Theory, review, and hypotheses. *Psychology & Health, 19*(3), 385–405. https://doi.org/10.1080/0887044042000196674

Wurst, S. N., Gerlach, T. M., Dufner, M., Rauthmann, J. F., Grosz, M. P., Küfner, A. C. P., … Back, M. D. (2017). Narcissism and romantic relationships: The differential impact of narcissistic admiration and rivalry. *Journal of Personality and Social Psychology, 112*(2), 280–306. https://doi.org/10.1037/pspp0000113

Zeigler-Hill, V., Clark, C. B., & Pickard, J. D. (2008). Narcissistic subtypes and contingent self-esteem: Do all Narcissists Base their self-esteem on the same domains? *Journal of Personality, 76*(4), 753–774. https://doi.org/10.1111/j.1467-6494.2008.00503.x