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The role of making a decision to forgive in the process of forgiveness: A longitudinal study

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Abstract

Forgiveness is a positive method of dealing with an offense that includes a decisional and an emotional phase. How these two types of forgiveness interact in the forgiveness process remains unclear. In this longitudinal study we focused on decisional forgiveness. We provided evidence of how decisional forgiveness occurs over time; whether it is a deliberate choice or not; and the influence of making a decision to forgive on the forgiveness motivations. A total of 191 undergraduate students completed measures of forgiveness after receiving an offense and four more times over approximately two weeks (i.e. 2, 5, 8, and 12 days after the offense). Results indicated that decisional forgiveness is an early-phased step that occurred within the first two days after the offense; the decision to forgive was not conditioned by severity of the offense nor by the relationship with the offender; and that the decisional forgiveness predicted benevolence. Implications of how decisional forgiveness becomes an important step in the forgiveness process are discussed.

Keywords Decisional forgiveness · Forgiveness motivations · Interpersonal transgressions · Longitudinal Study

Introduction

Any discussion about the forgiveness process is always complex. This is mainly because, although researchers seem to agree that forgiveness is a positive method of dealing with an offense that principally benefits the victim (Wade & Worthington, 2005), there is still no universally-accepted definition of forgiveness. Although definitions differ, there is a general agreement to view forgiveness as a process of temporal change in which the victims reduce their negative feelings and motivations towards their offender and (perhaps) increase their positive ones (Fehr et al., 2010; McCullough et al., 1997).

Also, many authors (Tucker et al., 2015; Worthington, 2003; Worthington & Scherer, 2004) distinguish two types of forgiveness. When victims realize, at a cognitive level, the benefits of forgiving, they may engage in decisional forgiveness (e.g., Davis et al., 2015; Worthington, et al., 2007). Decisional forgiveness is defined as a deliberate commitment to make an effort to achieve total forgiveness by vowing to act differently toward an offender (Davis et al., 2015). Victims might also experience emotional forgiveness, i.e. the replacement of negative emotions (e.g., anger, resentment, hostility) with positive ones like empathy, love or compassion, or the affective state that reflects the extent to which offenses no longer affect the victims in a negative way, indicating that they are ready to move on (Worthington, et al., 2007).

Although decisional and emotional forgiveness are related, they are considered to be distinct subcomponents

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of the forgiveness process (Lichtenfeld et al., 2015) with different consequences (Hook et al., 2009). While decisional forgiveness has the potential to lead to emotional and behavioral change, emotional forgiveness is more concerned with health because of its strong connection to overcoming negative affect and stress reactions (Worthington, 2007).

It remains unclear how these two types of forgiveness interact in the forgiveness process. Many model of forgiveness have been put forward in the literature. At least eight of them state that forgiveness entails at some point a decision to forgive (Donnelly, 1982; Enright & The Human Development Study Group, 1991, 1996; Fitzgibbons, 1986; Luskin, 2001; Malcom & Greenberg, 2000; Pettitt, 1987; Worthington, 1998; Worthington, 2001). Some authors view decisional forgiveness as the first step towards achieving total forgiveness (e.g. Mróz et al., 2020; Cavalcanti et al., 2019). However, others (Davis et al., 2015; Worthington et al., 2007), although they consider that it is important that the decision occurs early in the process of forgiveness, do not identify it as the initial step.

Within empirical research into the process of forgiveness, there has been a considerable amount of investigation into the emotional process (i.e., Toussaint et al., 2016; McCullough et al., 2010; Wohl & McGrath, 2007) and few studies have focused on decisional forgiveness (Kurniati et al., 2020; Mróz et al., 2020; Chloe & Davis, 2020; Major et al., 2020). This study seeks to reduce the gap by increasing knowledge of decisional forgiveness. Specifically, we aim to shed light on three questions:

How Does Decisional Forgiveness Occur?

From a theoretical perspective, some authors have defined the decision to forgive as something that happens in a moment (Choe & Davis, 2020). It makes sense to think that this decision implies a "yes or no" statement, i.e. that the victim decides to commit or not commit to try to act in a benevolent way toward the offender. However, when developing measures to assess decisional forgiveness, authors have considered that the decision to forgive can be increased or strengthened over time (Davis et al., 2015). In this study we explore empirically how decisional forgiveness occurs: whether it happens instantaneously and is then maintained, or if the decision develops in intensity over time?

Is Decisional Forgiveness a Free Act?

Interpersonal and situational factors such as the quality of the relationship with the offender, the receipt of an apology or the severity of the offense have been demonstrated to have an effect on forgiveness in specific situations (Fehr et al., 2010). Also, the personal variables of the victim such as religious beliefs (Davis et al., 2013) or cultural differences (Hook et al., 2009) may affect the forgiveness process. However, when explicitly differentiating between decisional and emotional forgiveness, this association became unclear. Recoder et al., (2019) found that while previous relationship with the offender has an effect on motivations for forgiveness, it does not have any influence on decisional forgiveness. Similarly, when trying to find predictors of decisional forgiveness, Choe and Davis (2020) found that their religious commitment does not predict individuals' decisions to forgive. Given that decisional forgiveness is a deliberate commitment it seems plausible that it remains free from influences. We sought to evaluate this statement.

How Does Decisional Forgiveness Interact with Other Forgiveness Motivations?

Following the hypothesis of decisional forgiveness as the first step of the forgiveness process, Knutson et al. (2008) investigated the validity of Enright and Fitzgibbons' model of the forgiveness process by asking people to place the 21 different steps in the order they occur, in their view, when a person forgives. They found that participants rated the commitment to forgive, which included a decision to forgive, as the most important item. Participants also placed the decisional phase earlier in the process compared to the Enright (1991) and Fitzgibbons' (1986) proposed sequence, which placed the decision to forgive in positions 11/20 and 3/5 respectively.

Recently, Choe and Davis (2020) have attempted to study the effect of decisional forgiveness as a predictor of emotional forgiveness in a longitudinal-retrospective way. They instructed participants to recall an offense and asked them to record measurements of emotional forgiveness at three different points in time, based on their recollection of how they were feeling when the offense occurred. The results indicated that higher levels of decisional forgiveness reduced the rhythm of change in emotional forgiveness. Two points must be made here. Firstly, while it was worthwhile to seek to measure forgiveness as a function of change over time (i.e., longitudinally), retrospective methods are not always reliable and it could be difficult to recall how one was feeling three weeks ago. Secondly, although emotional forgiveness was measured three times, decisional forgiveness was assessed only at the time the offense occurred, and thus it was not possible to establish how it develops over time.

The Present Study

Decisional forgiveness has been discussed for years. However, very little is known about this construct. The objective of the present study is to increase the knowledge of how decisional forgiveness occurs, which variables influence

it, and what effects it has on other forgiveness motivations (i.e. avoidance, revenge, and benevolence). Specifically, we aim to (1) study how decisional forgiveness might occur over time (i.e., instantaneously or longitudinally); (2) study the influence of interpersonal factors (previous relationships with the offender and painfulness of the offense) on decisional forgiveness in order to explore whether it is a deliberate choice or not; (3) study the influence of making a decision to forgive on the forgiveness motivations over time.

To explore the possibility of decisional forgiveness as a process, we defined a simple linear model, (McCullough et al., 2003), with an intercept indicating the initial values (i.e., first point in time) of the dimensions and a slope representing the amount of change over time. The same strategy was followed to define the trajectories of forgiveness motivations. For many people, forgiveness is a progressive experience that builds on early gains until it is complete. We expect to find a reduction in the negative dimensions of the TRIM-18 (i.e., avoidance and revenge) and an increase in the positive dimension (i.e., benevolence) and decisional forgiveness. However, in general, forgiveness might be experienced quickly at first and then the rate of increase might slow (see McCullough et al.'s (2010) power curve). Thus, the possibility of such a quadratic model to define decisional forgiveness and TRIM-18 dimensions will also be explored.

In a second step, we studied the influence of the painfulness of the offense and the previous relationship with the offender as predictors of change in making a decision to forgive, with the objective of exploring whether decisional forgiveness, defined as a more deliberate than emotional act, is less dependent on the degree of offense.

Finally, we aimed to explore the influence of making a decision to forgive just after experiencing an offense on the three forgiveness motivations as measured by TRIM-18. We expected decisional forgiveness to accelerate the pace of change on the three dimensions.

Method

Participants

Participants were $N = 191$ undergraduate students (71.9% female, 28.1% male; $M = 23.91$ years, $SD = 9.47$ years) from a Spanish ($N = 110$) and a German ($N = 81$) university. Students came from the degree programs of Psychology (42.8%), Medicine (21.4%), Dentistry (18.7%), Physiotherapy (10.2%) and Nursing (7.0%). The majority of the sample were from Spain (44.7%) and Germany (37.9%), 7.58% came from France and the remaining 9.85% came from other countries (i.e., Albania, Angola, Belarus, Bulgaria, Colombia, Ecuador, Italy, Korea, Panama, Russia, Serbia, Ukraine). After the initial completion of the protocol, most participants (71.7%) reported offenses from the day before and only a few (28.3%) reported transgressions perceived the same day. Participants who completed all five repeated measures received a €10 voucher for a bookstore.

Measures

Participants provided demographic information. They then completed the measurements of the variables described below. German students completed them in English and students from Spain completed the Spanish versions which had previously been validated.

Decisional Forgiveness *Decision to Forgive Scale* (Davis et al., 2015; *psychometric data for the Spanish version, DTFS-S,* Recoder et al., 2019) The DTFS-S has five items (e.g., *My choice is to forgive him or her*) rated using a 5-point response scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores ranged from 5 to 25; higher scores indicated stronger agreement that a decision to forgive had been made. Scores on the DTFS were related to lower levels of existential distress. Cronbach's alphas in the original and the Spanish adaptation were 0.92 and 0.92, respectively. Alphas from the 5 time points of the present study ranged from 0.88 to 0.90.

Forgiveness *Transgression-Related Interpersonal Motivations Inventory (TRIM-18;* McCullough et al., 2006*; psychometric data for the Spanish version, TRIM-18-S,* Fernández-Capo et al., 2017). The TRIM-18-S assesses revenge (5 items; e.g., *I'll make him/her pay*), avoidance (7 items; e.g., *I am trying to keep as much distance between us as possible*), and benevolence (6 items; e.g., *Even though his/her actions hurt me, I have goodwill for him/her*) motivations following an offense. Participants wrote a short summary about the hurtful transgression and then rated their motivations toward the offender by indicating their agreement with each item using a 5-point response scale (1 = *strongly disagree* to 5 = *strongly agree*). Higher scores indicate a higher motivation. Cronbach's alphas from the original scale (TRIM-18) were above 0.85 for each of the three subscales and for the TRIM-18-S (Fernández-Capo et al., 2017), alphas were between 0.71 and 0.81. In our sample, alphas from the 5 time points ranged from 0.92 to 0.96 in avoidance, from 0.80 to 0.88 in revenge, and from 0.86 to 0.94 in benevolence.

Offense-Specific Variables Participants provided a description of the offense and information about the offender. They also reported when the offense occurred, if they received an apology and how painful it was by answering a single

question using a 6-point response scale from 0 = *Not painful* to 6 = *Worst pain I have ever felt*. Participants reported whether they had received an apology from their offender.

Closeness to the Offender Previous and current relational closeness to the offender was assessed answering, "On a scale from 0 to 6, please indicate how close you were (are) to the person who hurt you before the offense (right now)" (0 = *Not at all* to 6 = *Extremely close*; Tsang et al., 2006).

Procedure

This study received approval from the Ethics Committee of the university. We recruited participants through psychology courses. We attended these courses and expressed our interest in surveying people who had been recently hurt or transgressed; we explicitly told them that they should have felt transgressed the same day or the day before. After that, we sent weekly email reminders and whenever participants felt offended, they were able to participate in the study through an email link. Information about when did the offense happen was collected for controlling the inclusion of only recent offenses. Participants first gave informed consent and then completed the protocol for the first time. Then, they were re-contacted four more times over approximately two weeks (i.e. after 2, 5, 8, and 12 days) after the offense to complete all the steps again with regard to the original offense.

Data Analysis

The SPSS Statistical Package was used to provide a descriptive analysis including means and standard deviations of demographic information and of all the main variables at the five time points. Also, independent-samples t-tests were used to check for differences on the forgiveness dimensions between Spanish and German students at time 1.

M*plus* version 6 (Muthén & Muthén, 1998–2011) was used to apply structural equation modeling techniques to define the trajectories of decisional forgiveness and the three dimensions of the TRIM-18 (i.e., avoidance, revenge, and benevolence). To evaluate the model fit to the data, we used Chi-square (χ^2), which is sensitive to sample size (desired *ns* or $\chi^2/df < 3$), comparative fit index (CFI), the Tucker-Lewis Index (TLI), the root mean square error of approximation (RMSEA; < 0.08), and the standardized root mean square residual (SRMR; < 0.08). According to Hu and Bentler (1999), values of CFI and TLI ≥ 0.95, SRMR ≤ 0.08 and RMSEA ≤ 0.06 imply a good fitting model. However, a CFI and TLI ≥ 0.90 is considered acceptable and an RMSEA ≤ 0.08 is accepted as a reasonable error of approximation.

To examine within-person changes in decisional forgiveness and in the three dimensions of the TRIM-18, we employed latent growth curve modeling (LGCM) using the MLR estimator. LGCM allowed the observation of two different parameters of change. Firstly, the starting values for baseline measures of each construct were assessed through the estimation of the mean latent intercept. Secondly, the amount of change over time for each construct was assessed by the estimation of the mean slope. We also estimated the variance of individual intercept and slope values, which allows the examination of intra-subject changes (i.e., intercept and slope variances). Figure 1 shows an example of the LGCM model tested on DTFS.

We studied the influence of the degree of perceived painfulness of the offense and the pre-offense quality of the relationship with the offender on making a decision. We modeled both variables as predictors of change in the decision-to-forgive trajectory. Figure 2 shows an example of the tested model.

Lastly, to test the effect of decisional forgiveness on the three major dimensions of forgiveness, we regressed the decision to forgive at time 1 (T1) on the estimated slopes of each construct. In Fig. 3, we depict the model of benevolence as an example. We added the decision to forgive at T1 as an observed variable and a regression path between the slope and the new variable. We also defined a correlation between the intercept and decisional forgiveness; we chose a correlation instead of a regression path because information was collected at the same point in time and thus it is not possible to establish causality. We also tested the model in reverse, i.e. we defined TRIM-18 dimensions as predictors of change of decisional forgiveness to see whether they had a predictive effect.

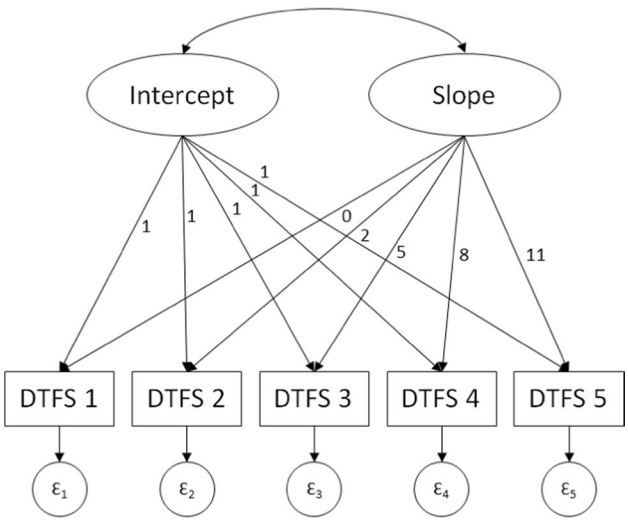

Fig. 1 Latent growth curve model of DTFS. Factor loadings represent the amount of days since the offense occurred

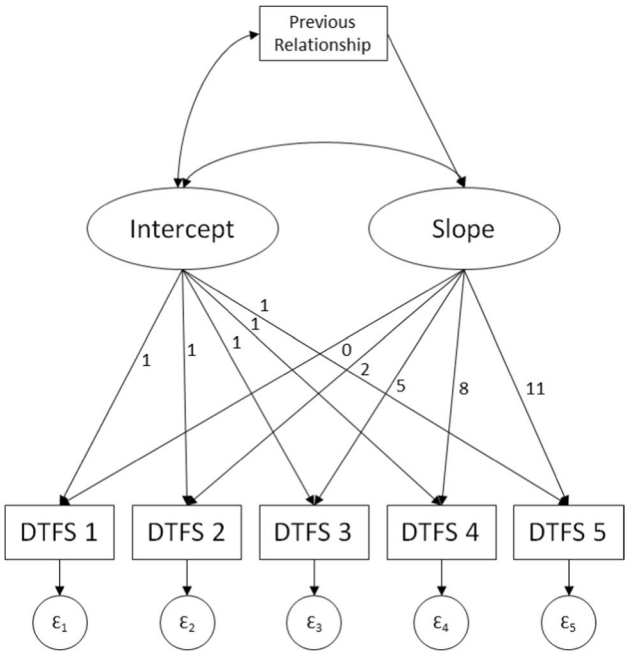

Fig. 2 Latent growth curve model of DTFS with previous relationship with the offender as predictor of change over time. factor loadings represent the amount of days since the offense occurred

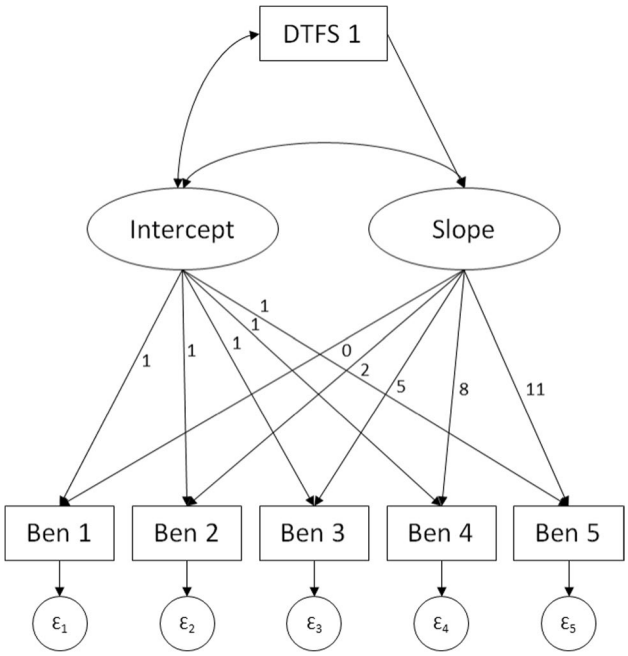

Fig. 3 Latent growth curve model of benevolence with DTFS predicting change over time. Factor loadings represent the amount of days since the offense occurred

Results

Descriptive Statistics

In Table 1, we show means and standard deviations for all measures at the five time points.

Types of Offense Most participants felt transgressed by a friend (40.8%) followed by their partner (12.6%) i.e. their boyfriend, girlfriend, husband, or wife. Participants also reported transgressions by siblings (9.9%), a colleague from university or work (7.3%), their parents (6.3%), an unknown person (6.3%), their boss (2.6%), or "others" (6.8%). Four participants (2.1%) did not give information about the offender. In general, the sample reported a moderate degree of painfulness ($M = 3.46$, $SD = 1.47$).

Apology and Relationship with the Offender Only 27.3% of the sample received an apology from their offender; the remaining 72.7% did not. With regard to the quality of the previous and current relationship with the offender, people felt closer to their offender before ($M = 4.14$, $SD = 1.80$) than after ($M = 3.14$, $SD = 2.03$) the offense occurred.

Decisional Forgiveness Over Time

Independent samples t-tests to check if there were differences on the initial levels of the forgiveness dimensions between Spanish and German students indicated that the scores on the four dimensions did not differ between groups (see Table 2), and thus, we proceeded with the analyses using all the data together.

Tables 3 and 4 present the goodness-of-fit indices of the LGCM model tested and the estimated values of the parameters of the model respectively. Also, Fig. 4 shows the spaghetti plots with the trajectories of each participant and the sample mean. The intercept mean describes the average starting point, and the variance explains the individual variability at the starting point at the beginning of the study. Initial levels of decisional forgiveness were significantly greater than zero (i.e. intercept mean) and also differences among its starting levels were observed (i.e. intercept variance). Significant average changes were found ($B = 0.11$, $p < 0.01$) indicating that decisional forgiveness tends to increase over the 12 days following the offense. No individual differences in changes of decisional forgiveness were found.

We also studied the possibility of a curvilinear model to define decisional forgiveness. To do so, we added a third

Table 1 Means and standard deviations for major study variables, assessments (1–5)

	Time 1 (N = 182)	Time 2 (N = 98)	Time 3 (N = 77)	Time 4 (N = 71)	Time 5 (N = 84)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Avoidance	19.05 (7.27)	16.38 (7.17)	16.68 (7.35)	16.41 (7.01)	15.83 (7.49)
Revenge	9.21 (3.64)	8.08 (3.45)	8.42 (3.50)	8.24 (3.26)	8.05 (3.50)
Benevolence	20.82 (5.22)	22.05 (5.25)	21.86 (5.82)	22.10 (5.97)	22.33 (5.33)
DTFS	17.60 (4.32)	18.91 (4.19)	18.61 (4.37)	18.39 (4.54)	18.75 (4.63)

Table 2 Independent samples t-tests to assess differences between Spanish and German students on the four forgiveness dimensions

	Spanish (N = 110)	German (N = 81)		
	Mean (SD)	Mean (SD)	t (df)	*p*
Avoidance	18.91 (7.27)	19.16 (6.89)	.224 (189)	.823
Revenge	8.79 (3.22)	9.62 (3.28)	1.64 (189)	.103
Benevolence	21.11 (5.29)	20.28 (4.77)	-1.05 (189)	.295
DTFS	18.02 (4.30)	16.83 (4.22)	-1.78 (189)	.077

parameter represented by the squared values on the time variable (i.e. 0, 2, 5, 8, 11). However, the estimated quadratic term was not statistically significant ($ps > 0.05$).

Predictors of Decisional Forgiveness

Following the same model pattern used in the previous section, we explored the role of painfulness of the offense and the previous relationship with the offender in the decision to forgive. The model results can be found in Table 4. The painfulness model indicated a good fit with the data, with a non-significant Chi-square; the covariate between painfulness and the intercept was significant ($r = -0.34$, $p < 0.01$) however, the path between painfulness and the slope of

Table 3 Goodness-of-fit indices of the different models tested

Model	χ^2	df	CFI	TLI	RMSEA	SRMR	BIC	AIC
LGCM Models								
DTFS	18.750*	10	.924	.924	.070	.057	2722.27	2690.29
Avoidance[a]	21.696*	11	.928	.934	.072	.071	3129.13	3100.15
Revenge	24.108*	10	.900	.900	.087	.058	2515.94	2483.74
Benevolence	22.018*	10	.910	.910	.081	.105	2969.77	2937.57
Predictors of DTFS								
Painfulness	21.012	14	.953	.949	.051	.053	3378.36	3336.22
Previous Relationship	21.311	14	.952	.949	.052	.054	3470.35	3428.14
DTFS as predictor of								
Avoidance	30.201*	14	.930	.925	.079	.071	4096.49	4054.63
Revenge	25.843*	13	.932	.921	.073	.054	3523.16	3478.08
Benevolence	22.577*	13	.958	.951	.063	.088	3861.84	3816.76

χ^2: Chi-square; df: degrees of freedom; CFI: Comparative Fit Index; TLI: Tucker-Lewis Index; RMSEA: Root Mean Square Error of Approximation; SRMR: Standardized Root Mean Squared Residual; BIC: Bayesian Information Criterion; AIC: Akaike Information Criterion. LGCM: Latent Growth Curve Model. All χ^2 were < 3

[a]*The residual variance of avoidance at time 5 was constrained to 0 for model identification*

Table 4 Intercept and slope means and variances of the linear latent growth models

	Intercept				**Slope**			
	Mean	***p***	**Variance**	***p***	**Mean**	***p***	**Variance**	***p***
DTFS	17.92	< .001	11.63	< .001	.11	.006	.06	.150
Avoidance	18.59	< .001	43.86	< .001	-.25	< .001	.23	.018
Revenge	8.88	< .001	9.56	< .001	-.08	.014	.07	.002
Benevolence	21.00	< .001	21.15	< .001	.16	.001	.17	.002

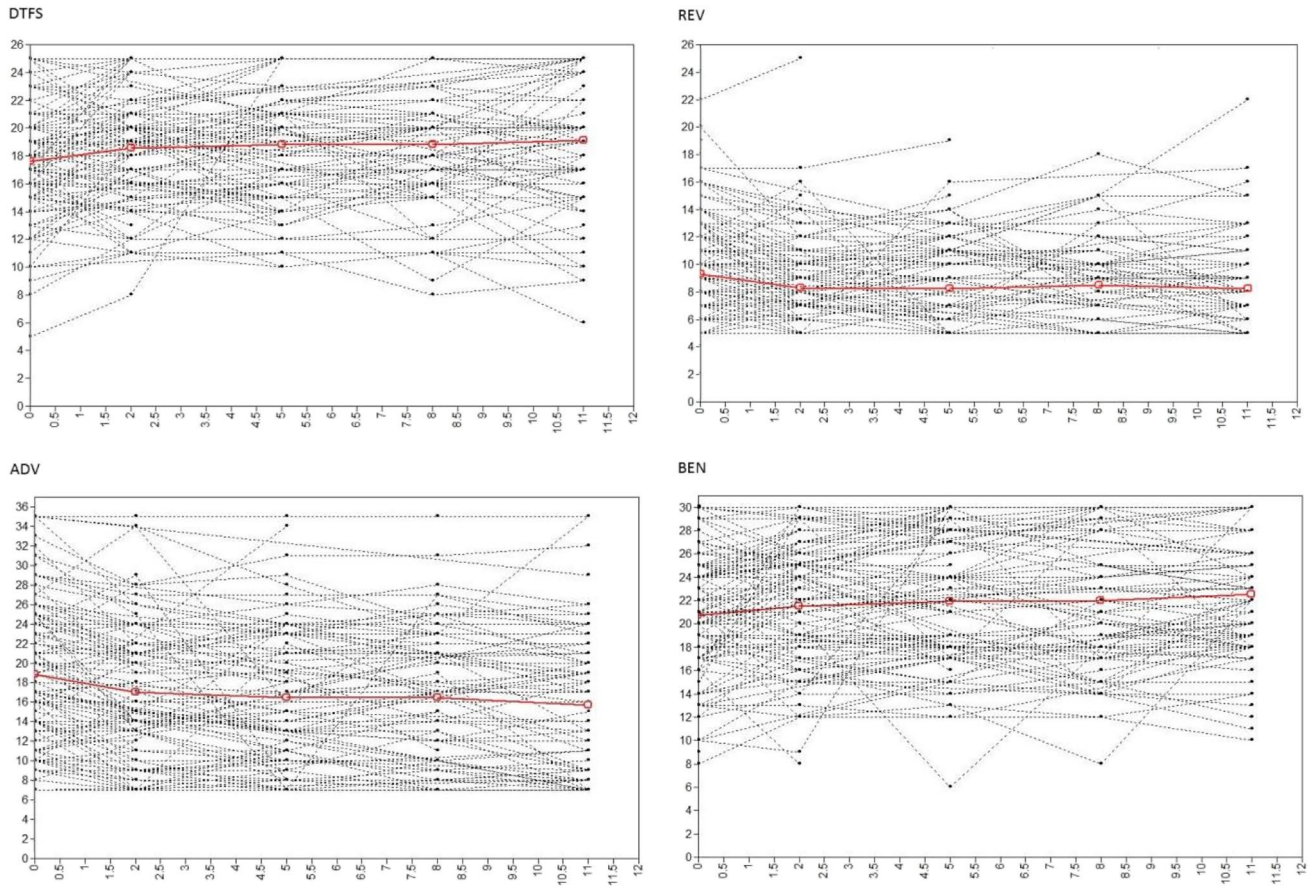

Fig. 4 Spaghetti plots showing the individual trajectories and the sample mean for each forgiveness dimension

the decisional forgiveness trajectory was not significant (β = 0.26, $p = 0.07$). With regarding to the previous closeness-of-the-relationship model, the results were similar. The model fitted the data well, the correlation between previous relationship and the intercept was significant ($r = 0.37$, $p < 0.01$) but the path between the previous relationship and the slope of decisional forgiveness was not (β = -0.004, $p = 0.98$).

Influence of Decisional Forgiveness on Forgiveness Motivations

In order to test the effects of decisional forgiveness on forgiveness motivations, we first defined the longitudinal trajectory of each motivation. The results of the models can be found in Tables 2 and 3. The initial levels of the participants in the TRIM dimensions were significantly greater than zero (i.e., intercept mean) and also differences between their starting levels were observed (i.e., intercept variance) in the three constructs. Significant average changes were also detected on all the dimensions, indicating that, on average, avoidance ($B = -0.25$, $p < 0.01$) and revenge ($B = -0.08$, $p = 0.014$) levels decreased linearly over the 12 days after receiving an offense and benevolence ($B = 0.16$, $p < 0.01$) increased. As an example of interpretation, a representative participant initially had an avoidance score of 18.59 that decreased at a rate of 0.25 scale units per each time period. Additionally, significant individual differences in changes of avoidance ($s^2 = 0.23$, $p < 0.01$), revenge ($s^2 = 0.07$, $p < 0.01$), and benevolence ($s^2 = 0.17$, $p < 0.01$) were found.

We also studied the possibility of a curvilinear model to define the trajectories of the TRIM dimensions, but again the estimated quadratic terms for all the models were not statistically significant ($ps > 0.05$).

We tested the possibility of decisional forgiveness at t1 as a predictor of change on the latent factors from the latent growth curve linear models of the TRIM-18 dimensions. Model fit indices can be found in Table 3. The correlation between decisional forgiveness and the avoidance intercept was negative and significant ($r = -0.65$, $p < 0.01$); however, the regression path was only marginally significant ($\beta = 0.25$, $p = 0.06$). Similar results were found in the revenge model. The correlation between the intercept and

decisional forgiveness was significant ($r = -0.50$, $p < 0.01$), but the regression path was not ($\beta = 0.21$, $p = 0.07$). In the case of benevolence, both, the correlation between the intercept and decisional forgiveness ($r = 0.83$, $p < 0.01$) and the regression path ($\beta = -0.33$, $p < 0.01$), were significant.

To explore whether TRIM dimensions had an effect on the decisional forgiveness trajectory, we tested the model in the other direction, i.e. we tested whether the TRIM-18 dimensions at t1 had a significant effect on the pace of change of making a decision to forgive. The results indicated a good fit of the model to the data, $\chi^2(20) = 35.041$, $p < 0.05$; CFI = 0.94; TLI = 0.93; RMSEA (90% C.I) = 0.06 (0.03-0.09); and SRMR = 0.06. The intercept of the decisional forgiveness trajectory correlated significantly with avoidance ($r = -0.66$), revenge ($r = -0.46$), and benevolence ($r = 0.83$). On the other hand, the effects of the TRIM-18 dimensions on the slope were not significant (i.e., avoidance $\beta = 0.06$, $p = 0.73$; revenge $\beta = 0.09$, $p = 0.58$; and benevolence $\beta = -0.28$, $p = 0.19$).

Discussion

Forgiveness is a process of temporal change in which the victims reduce their negative feelings and motivations toward their offender and (perhaps) increase their positive ones (Fehr et al., 2010; McCullough et al., 1997). In the present study, we aimed to report information about (1) the trajectory of the decisional forgiveness and also the trajectories of the TRIM-18 dimensions, (2) how decisional forgiveness relates to offender and offense variables, and (3) how a decision to forgive influences the changes on those dimensions.

Trajectory of Decisional Forgiveness and TRIM-18 Motivations

We created two different possible models (i.e., a linear and a quadratic) to explore how decisional forgiveness occurs. The quadratic term was not significant, while the linear model explained the trajectory better (Muthén, 2009). Results showed that the strength of one's decision to forgive tended to increase linearly over time, however when observing the trajectories in Fig. 4 it was possible to see that the major change occurred during the first two days and then was maintained over time. There were inter-individual differences in starting values; however, we did not find variance among participants on the amount of change (i.e., slope). These observations suggest that a decision to forgive might be a once-and-for-all-time act, occurring instantaneously and not longitudinally (Choe & David, 2020).

According to McCullough et al. (2003) the negative dimensions of forgiveness seem to be reduced over time. In both models, we found significant intercepts and negative slopes indicating that the values decreased significantly from one time to another. This is in line with many definitions of forgiveness that established that forgiveness implies reduction of the negativity (e.g., Bright and Exline, 2011; Thompson and Korsgaard, 2019; Worthington, 2019). On the other hand, in contrast to what McCullough et al. (2003) found, our results revealed a significant intercept and a positive significant slope indicating that benevolence motivations tend to be increased over time.

We specifically examined within-subject and between-subject variations of the DTFS and the TRIM-18 dimensions. We found that there was inter-individual variation (i.e., variation between people) on the initial levels of decisional forgiveness, as well as avoidance, revenge, and benevolence (i.e. the intercepts) and also in the extent of change on each of the TRIM-18 dimensions (i.e. the slopes) but not on the decision to forgive, meaning that the decisional forgiveness levels increase equally between subjects.

Decision to Forgive and Interpersonal or Situational Factors

We tested whether the degree of painfulness perceived and the pre-offense relationship with the offender conditioned in some way the decision to forgive. The influence was not significant. Our results are in line with those of Choe and Davis (2020) and Recoder et al. (2019) who in their studies found decisional forgiveness to be free from the influences of religious commitment and the quality of the previous relationship. Altogether these results might suggest the possibility that a decision to forgive is open to everyone, no matter what happened or what the relationship with the offender was. Nor does it matter if the offender has asked for forgiveness. To decide to forgive seems to be an act of free will.

Role of the Decision to Forgive in the Forgiveness Process

Different models of forgiveness have suggested that it involves, at some point, a decision to forgive. Although changes have been found from the beginning of a transgression to the end, no one has empirically examined the role of a decision to forgive on the subsequent experience of forgiveness. In line with the findings of Knutson et al. (2008) who asked participants to rate the importance of each step (considering Enright's 21 steps), we hypothesized that a decision to forgive would be the first step towards achieving total forgiveness. Thus, we explicitly evaluated the role of one's decision to forgive after perceiving an offense (i.e., decisional forgiveness at time 1) as a predictor of change in the three dimensions of forgiveness measured by TRIM-18.

Although in our sample the results were not significant, it seems that, with severe offenses, decisional forgiveness could predict changes in avoidance, i.e. higher levels of decisional forgiveness could accelerate the reduction in avoidance levels, thus, making the person less avoidant faster. We thought that this could be due to a floor effect. Most participants already showed low levels of avoidance and revenge just after being offended. Thus, the amount of change (in avoidance and revenge) possible (due to the low base rate) or the possibility that one might still reduce the values for avoidance and revenge becomes more difficult. One plausible explanation for that is that the degree of painfulness of the reported offenses was quite modest; therefore, the impact on the person was not so great. However, further studies are needed to confirm this.

In addition, the making of a decision to forgive was a predictor of change in benevolence. However, higher levels of initial decisional forgiveness decreased the rate of change in benevolence. This is probably due to the high correlation between decisional forgiveness and benevolence at t1, which indicates that when the one increases, so does the other. Those who showed high levels of decisional forgiveness also presented high levels of benevolence, making it harder to keep on increasing the levels over time, and thus, benevolence had a slower rate of change. These results are in line with the findings of Choe and Davis (2020). They suggested that a plausible explanation could be that since people with higher initial levels of decisional forgiveness started also with higher initial levels of forgiveness motivations, and consequently, there is less space to grow. One possibility in this exploration is that for many minor events, forgiveness (decisions and benevolence motives) changes very rapidly. Reflection suggests that minor events might almost be forgotten within hours, and if the offense is very small, even minutes. McCullough et al. (2010) found, on their individual trajectories, that quite a few participants reduced their unforgiveness immediately. In our experimental protocol, we tried to recruit people on the same day that they experienced hurt, but, in reality, most people did not report their transgression until the second day. It is possible that many forgave in that period, resulting in high initial decisions to forgive and high forgiveness motives. If this is the case, it might place methodological restrictions on assessing what really happens after transgressions. People need to be assessed immediately after being offended to determine the true course of a process of forgiveness.

We also explored the role of the TRIM-18 dimensions at t1 as predictors of change in decisional forgiveness. We did not find a significant effect, indicating that avoidance, revenge, and benevolence motivations do not predict changes in decisional forgiveness.

Overall our results suggest that the decision to forgive is not affected by emotional readiness, and is independent of interpersonal and situational influence. Also, that this decision predicts benevolence. This is important because it might suggest that helping people to decide to forgive is an important step on the forgiveness continuum.

Limitations and Future Studies

This study had several limitations. Firstly, measurement of the main variables of the study used self-reports, these could be biased by social desirability. Therefore, future studies should consider the inclusion of other measures of forgiveness (i.e. behavioral and biological). Secondly, our sample only used university students. We collected information during the two weeks after receiving an offense, however, when investigating how forgiveness occurs in severe offenses, one should consider a more extended period of time (Freedman & Enright, 1996). Also, our sample was collected in two different countries and, although no significant differences were found, future studies should work with more homogeneous samples. Thirdly, our offenses only represented soft conflicts, which had been almost forgiven before the study started. Fourthly, and most important, results obtained in our study suggested that a Non-Linear Growth Model (NLGM) would explain better how decisional forgiveness occurs. Because sample size conditions for this model were not achieved, results yielded low power and unstable parameter estimates. Future studies should consider including higher samples and test NLGM to see whether they can explain better how decisional forgiveness occurs or not.

This is the first study that modeled decisional forgiveness over time. Moreover, in our study we have provided initial evidence of how a decision to forgive influences the motivations to forgive a transgressor. Decisional forgiveness could influence and accelerate forgiveness even though this relationship is not clear in our study. Therefore, in future studies, it would be interesting to explore the role of a decision to forgive in serious offenses (e.g. sexual abuse, mistreatment), to see whether the effects of making a decision to forgive are strengthened. In those cases, making a decision to forgive would probably be more difficult. However, if the results were similar or increased, an intervention focused on promoting a decision to forgive, would be of interest and might lead to a faster reduction of the avoidance and revenge motivations. It would also be interesting to study whether the association between decisional forgiveness and benevolence motivations would be as high in severe offenses as it was in our study. This would provide more knowledge about the positive dimension of forgiveness and the role that decisional forgiveness plays in the process of forgiveness (starting with a reduction in unforgiveness (avoidance and revenge) and moving onto forgiveness (benevolence).

In the present study, we provide a microscope into the role of the decision to forgive in the forgiveness process.

The decision to forgive seems to be a key step in reaching complete forgiveness.

Conflict of Interests

On behalf of all authors, the corresponding author states that there is no conflict of interest.

Data Availability The datasets analyzed during the current study are available from the corresponding author on reasonable request.

References

Bright, D. S., & Exline, J. J. (2011). Forgiveness at four levels: Intrapersonal, relational, organizational, and collective-group. *Handbook of positive organizational scholarship*, 244-259. https://doi.org/10.1093/oxfordhb/9780199734610.013.0019

Cavalcanti, T. M., de Holanda Coelho, G. L., Rezende, A. T., Vione, K. C., & Gouveia, V. V. (2019). Decisional and emotional forgiveness scales: Psychometric validity and correlates with personality and vengeance. *Applied Research in Quality of Life, 14*(5), 1247–1264. https://doi.org/10.1007/s11482-018-9653-9

Choe, E., & Davis, D. E. (2020). Heeding the call from McCullough: Is religion related to retrospective trends in forgiveness over time? *Journal of Psychology and Theology, 48*(2), 131–141. https://doi.org/10.1177/0091647120912463

Davis, D. E., Hook, J. N., Van Tongeren, D. R., DeBlaere, C., Rice, K. G., & Worthington, E. L., Jr. (2015). Making a decision to forgive. *Journal of Counseling Psychology, 62*(2), 280–288. https://doi.org/10.1037/cou0000054

Davis, D. E., Worthington, E. L., Jr., Hook, J. N., & Hill, P. C. (2013). Research on religion/spirituality and forgiveness: A meta-analytic review. *Psychology of Religion and Spirituality, 5*, 233–241. https://doi.org/10.1037/a0033637

Donnelly, D. (1982). *Putting forgiveness into practice*. Argus Communications.

Enright, R. D., & The Human Development Study Group. (1991). The moral development of forgiveness. In W. Kurtines & J. Gewirtz (Eds.), *Handbook of moral behavior and development*, (Vol.1; pp.123–152). Erlbaum.

Enright, R., & The Human Development Group. (1996). Counseling within the forgiveness triad: On forgiving, receiving forgiveness, and self-forgiveness. *Counseling and Values, 40,* 107–126.

Fehr, R., Gelfand, M. J., & Nag, M. (2010). The road to forgiveness: A meta-analytic synthesis of its situational and dispositional correlates. *Psychological Bulletin, 136*, 894–914. https://doi.org/10.1037/a0019993

Fernández-Capo, M., Recoder, S., Gómez-Benito, J., Gámiz, M., Gual-García, P., Díez, P., & Worthington, E. L., Jr. (2017). Exploring the dimensionality and the psychometric properties of the TRIM-18 in the Spanish context. *Anales De Psicologia, 33*(3), 548–555. https://doi.org/10.6018/analesps.33.2.264461

Fitzgibbons, R. P. (1986). The cognitive and emotive uses of forgiveness in the treatment of anger. *Psychotherapy: Theory, Research, Practice, Training, 23*(4), 629. https://doi.org/10.1037/h0085667

Freedman, S. R., & Enright, R. D. (1996). Forgiveness as an intervention goal with incest survivors. *Journal of Consulting and Clinical Psychology, 64*(5), 983. https://doi.org/10.1037/0022-006X.64.5.983

Hook, J. N., Worthington, E. L., Jr., & Utsey, S. O. (2009). Collectivism, forgiveness, and social harmony. *Counseling Psychologist, 37*(6), 786–820. https://doi.org/10.1177/0011000008326546

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1–55. https://doi.org/10.1080/10705519909540118

Knutson, J., Enright, R., & Garbers, B. (2008). Validating the developmental pathway of forgiveness. *Journal of Counseling & Development, 86*(2), 193–199. https://doi.org/10.1002/j.1556-6678.2008.tb00497.x

Kurniati, N. M. T., Worthington, E. L., Jr., Widyarini, N., Citra, A. F., & Dwiwardani, C. (2020). Does forgiving in a collectivistic culture affect only decisions to forgive and not emotions? REACH forgiveness collectivistic in Indonesia. *International Journal of Psychology, 55*(5), 861–870. https://doi.org/10.1002/ijop.12648

Lichtenfeld, S., Buechner, V. L., Maier, M. A., & Fernández-Capo, M. (2015). Forgive and forget: Differences between decisional and emotional forgiveness. *PLoS ONE, 10*(5), e0125561. https://doi.org/10.1371/journal.pone.0125561

Luskin, F. M. (2001). *Forgive for good: A proven prescription for health and happiness*. Harper.

Major, J. L., Wade, N. G., & Brenner, R. E. (2020). Self-Construal and Forgiveness Revisited: Replication and Extension. *Counseling and Values, 65*(2), 170–188.

Malcolm, W. M., & Greenberg, L. S. (2000). Forgiveness as a process of change in individual psychotherapy. *Forgiveness: Theory, Research, and Practice*, 179–202.

McCullough, M. E., Fincham, F. D., & Tsang, J.-A. (2003). Forgiveness, forbearance, and time: The temporal unfolding of transgression-related interpersonal motivations. *Journal of Personality and Social Psychology, 84*, 540–557. https://doi.org/10.1037/0022-3514.84.3.540

McCullough, M. E., Luna, L. R., Berry, J. W., Tabak, B. A., & Bono, G. (2010). On the form and function of forgiving: Modeling the time-forgiveness relationships and testing the valuable relationships hypothesis. *Emotion, 10*(3), 358–376. https://doi.org/10.1037/a0019349

McCullough, M. E., Root, L. M., & Cohen, A. D. (2006). Writing about the benefits of an interpersonal transgression facilitates forgiveness. *Journal of Consulting and Clinical Psychology, 74*, 887–897. https://doi.org/10.1037/0022-006X.74.5.887

McCullough, M. E., Worthington, E. L., Jr., & Rachal, K. C. (1997). Interpersonal forgiving in close relationships. *Journal of Personality and Social Psychology, 73*(2), 321. https://doi.org/10.1037/0022-3514.73.2.321

Mróz, J., Kaleta, K., & Sołtys, E. (2020). Decision to forgive scale and emotional forgiveness scale in a polish sample. *Current Psychology*, 1-9. https://doi.org/10.1007/s12144-020-00838-6

Muthén, L. K. (2009, June 4). Decide linear or quadratic for GMM model. Statmodel website: http://www.statmodel.com/discussion/messages/13/4350.html?1515613029

Muthén, L. K., & Muthén, B. O. (1998–2011). *Mplus user's guide, sixth ed*. Muthén & Muthén.

Pettitt, G. A. (1987). Forgiveness: A teachable skill for creating and maintaining health. *New Zealand Medical Journal, 25*, 180–182.

Recoder, S., Gámiz, M., Worthington, E., Davis, D., & Fernández-Capo, M. (2019). Decisional forgiveness across Spanish and American samples: Translation, validation, and measurement invariance of the Decision to Forgive Scale. *Current Psychology*. https://doi.org/10.1007/s12144-019-00368-w

Thompson, B. S., & Korsgaard, M. A. (2019). Relational identification and forgiveness: Facilitating relationship resilience. *Journal*

of Business and Psychology, 34(2), 153–167. https://doi.org/10.1007/s10869-018-9533-1

Toussaint, L., Shields, G. S., Dorn, G., & Slavich, G. M. (2016). Effects of lifetime stress exposure on mental and physical health in young adulthood: How stress degrades and forgiveness protects health. *Journal of Health Psychology, 21*(6), 1004–1014. https://doi.org/10.1177/1359105314544132

Tsang, J., McCullough, M. E., & Fincham, F. D. (2006). The longitudinal association between forgiveness and relationship closeness and commitment. *Journal of Social and Clinical Psychology, 25*, 448–472. https://doi.org/10.1521/jscp.2006.25.4.448

Tucker, J. R., Bitman, R. L., Wade, N. G., & Cornish, M. A. (2015). Defining forgiveness: Historical roots, contemporary research, and key considerations for health outcomes. In *Forgiveness and Health* (pp. 13–28). Springer, Dordrecht. https://doi.org/10.1007/978-94-017-9993-5_2

Wade, N. G., & Worthington, E. L., Jr. (2005). In search of a common core: A content analysis of interventions to promote forgiveness. *Psychotherapy: Theory, research, practice, training, 42*(2), 160. https://doi.org/10.1037/0033-3204.42.2.160

Wohl, M. J., & McGrath, A. L. (2007). The perception of time heals all wounds: Temporal distance affects willingness to forgive following an interpersonal transgression. *Personality and Social Psychology Bulletin, 33*(7), 1023–1035. https://doi.org/10.1177/0146167207301021

Worthington, E. L. Jr. (1998). The pyramid model of forgiveness: Some interdisciplinary speculations about unforgiveness and the promotion of forgiveness. *Dimensions of forgiveness: Psychological research and theological perspectives*, 107–137.

Worthington, E. L. Jr. (2001). *Five steps to forgiveness: The art and science of forgiving*. Crown.

Worthington, E. L., Jr. (2003). *Forgiving and Reconciling: Bridges to Wholeness and Hope*. InterVarsity Press.

Worthington, E. L., Jr. (2007). *Handbook of forgiveness*. Routledge.

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/10.1080/08870440420001966674

Worthington, E. L., Jr., Witvliet, C. V. O., Pietrini, P., & Miller, A. J. (2007). Forgiveness, health, and well-being: A review of evidence for emotional versus decisional forgiveness, dispositional forgivingness, and reduced unforgiveness. *Journal of Behavioral Medicine, 30*(4), 291–302. https://doi.org/10.1007/s10865-007-9105-8