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Tesis doctoral

## THE PATHWAY OF FORGIVENESS: UNRAVELING THE ROLE OF ONE'S DECISION TO FORGIVE

Silvia Recoder Fernández

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**THE PATHWAY OF FORGIVENESS: UNRAVELING THE ROLE OF ONE'S  
DECISION TO FORGIVE**

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*A l'avia i la Merche*



*“If we really want to love,  
we must learn how to forgive”*

Mother Theresa

*“Forgiveness does not change the past,  
but it does enlarge the future”*

Paul Boese

*“Let us forgive each other –  
only then we will live in peace”*

Leo Nikolaevich Tolstoy



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## **ABSTRACT**

Past research has suggested the potential benefits of forgiveness to overcome the negative consequences of experiencing interpersonal hurts. More specifically, forgiveness has been found to be very linked with health and well-being. Making a decision to forgive could be considered a permanent form of forgiving, however, no studies have examined how decisional forgiveness influences the whole process of forgiveness. The main objective of this dissertation is to study the role of making a decision to forgive in the forgiveness process. To achieve this objective, I present three different studies. First, I present a systematic review of all the existing methods to assess forgiveness. Second, I provide a translation and validation of the Decision to Forgive Scale (DTFS) into Spanish. Third, I run a longitudinal study about how a decision to forgive influences the three major dimensions of forgiveness (i.e., avoidance, revenge, and benevolence) and how it is related to health and well-being variables. Results indicated that the Spanish version of the DTFS is a valid and reliable measure that can be used in clinical context and for research purposes. Also, the decision to forgive was found to be a predictor of change of the three major dimensions of the TRIM-18, principally of the benevolence dimension. These results suggest that developing interventions focused on decisional forgiveness may facilitate the reduction of the negative dimension of forgiveness and increase the positive one faster than others focused on emotional forgiveness.

**KEYWORDS:** Forgiveness, Systematic Review, Assessment, Longitudinal Study, Decision to Forgive.



## RESUMEN

Estudios previos han sugerido que el perdón conlleva beneficios importantes para superar las consecuencias negativas de experimentar daños interpersonales. Específicamente, se ha encontrado asociación entre el perdón y la salud y el bienestar. La decisión de perdón se podría considerar una forma permanente de perdonar, sin embargo, ningún estudio ha examinado cómo el perdón decisional influye en el proceso completo de perdón. El objetivo principal de esta tesis es averiguar la influencia de la decisión de perdón en el proceso de perdón total. Para cumplir con el objetivo, se presentan tres estudios. Primero, se presenta una revisión sistemática sobre todas las medidas que existen para evaluar el perdón. Segundo, se expone la traducción y validación de la *Decision to Forgive Scale (DTFS)* al español. Tercero, se lleva a cabo un estudio longitudinal sobre cómo tomar la decisión de perdonar influye en las tres dimensiones principales del perdón (evitación, venganza y benevolencia), y cómo ésta se asocia con variables de salud y bienestar. Los resultados sugieren que la versión española de la DTFS es una escala fiable y válida que se puede usar tanto en contexto clínico como en investigación. Además, los resultados indican que la decisión de perdón es un buen predictor de cambio de las tres dimensiones del TRIM-18, especialmente de la subescala de benevolencia. Los resultados sugieren que desarrollar intervenciones de perdón focalizadas en la decisión de perdonar facilitarán que la reducción de la dimensión negativa del perdón y el incremento de la positiva sean más rápidas respecto a otras centradas en el perdón emocional.

**PALABRAS CLAVE:** Perdón, Revisión Sistemática, Evaluación, Estudio Longitudinal, Decisión de Perdón.



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## STATEMENT OF THE PROBLEM

In the following dissertation I present a review of the literature suggesting that forgiveness is a relevant topic in psychology very linked to people's health. Consequently, a variety of measures have been developed for its assessment. Although previously published reviews of some measures of forgiveness exist (e.g., McCullough et al., 2000; Worthington et al., 2015), all are selective and have been published as chapters in edited books. Prior reviews do not provide an overview of available measures, nor do they assess the quality of data supporting each type of measurement. In addition, the strength of evidence supporting the construct validity of forgiveness has not been systematically investigated. It is not clear which measure should be used in each context. How many measures of forgiveness exist? Do they work in the same way? Which measure is better?

Because decisional forgiveness is considered a key step within total forgiveness, having a psychometrically sound instrument to assess it is basic. Davis et al. (2015) developed the Decision to Forgive Scale (DTFS), which demonstrated good psychometric properties. However, a big problem emerges when we want to assess decisional forgiveness in countries where English is not spoken fluently. What do we do if we want to assess forgiveness in the Spanish context? Having an assessment tool in Spanish will allow researchers to explore the relationship between making a decision to forgive and a forgiveness effort involving changes in motivation, emotion, and relationship. Furthermore, having an assessment tool in Spanish will allow clinical researchers to design and evaluate the efficacy of specific interventions to facilitate decisional forgiveness in populations that speak Spanish but do not speak English well enough to comprehend the nuances captured in English-language measures of forgiveness.

The reader will figure through this manuscript that different models of the forgiveness process have been proposed. These models vary widely in the number of steps and experiences that define the forgiveness process; however, the decision to forgive seems to be present in many of them and in the early steps. Neblett (1974) stated that the decision to forgive is the crux to achieve total forgiveness, and although different models have been empirically tested (e.g., Enright & The Human Development

Study Group, 1991; Worthington, 2001) no one has studied specifically its role in the forgiveness process. Does it really influence that much?

## **PART I. THEORETICAL FRAMEWORK**

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## CHAPTER I

### THE FORGIVENESS CONCEPT

Although there is no universally accepted definition of forgiveness, researchers seem to agree that forgiveness is a positive method of dealing with an offense that has benefits principally on the victim (Wade & Worthington, 2005). It is central to healthy human functioning (for reviews, see Toussaint, Worthington, & Williams, 2015) and might be one of the most important processes in restoring interpersonal relationships after conflict (Karremans & Van Lange, 2008; Toussaint & Webb, 2005; Tsang, McCullough, & Fincham, 2006). However, forgiveness is not always a good option. According to Gabriels and Strelan (2017) forgiveness can be a risky undertaking, and a non-adaptive response in some cases (e.g., exploitative partners).

Forgiveness is usually complex. It is especially difficult when harm is severe and offenders are unrepentant. Multiple characteristics of the forgiver, the transgressor, the relationship and the offense affect whether forgiveness is experienced (for a review, see Fehr, Gelfand, & Nag, 2010).

In the following sections I provide a definition of what forgiveness is and what is not. In addition, I seek to explain different types and classifications of forgiveness.

#### **1.1. Forgiveness definition**

Forgiveness is complex and is not easy to define. Just by taking a look at the literature we can find many different definitions and although, until today, no universal definition of forgiveness has been provided, it is possible to identify some core elements across the multiple definitions.

Descriptions of forgiveness have included affective, cognitive, motivational, and (sometimes) behavioral components (Miceli & Castelfranchi, 2011). It is generally accepted that when a person forgives, his or her emotions and motivations (McCullough et al., 1998; Worthington, 2006), cognition (Enright & Fitzgibbons, 2014), physiological responses (Lawler et al., 2003), behavioral intentions (Exline, Worthington, Hill, & McCullough, 2003), and (perhaps) behaviors toward the offender (Enright & Fitzgibbons, 2014; McCullough, Fincham, & Tsang, 2003; McCullough, Luna, Berry, Tabak, & Bono, 2010) become less negative and more positive over time.

Some authors emphasize the experience of positive affect toward the transgressor as a critical part of complete forgiveness (Enright & Fitzgibbons, 2014; Subkoviak, Enright, Wu, & Gassin, 1995; Worthington, 2006). Others (e.g., Gassin & Enright, 1995) highlight forgiveness as the reduction of negative responses to offense.

It is said that there are as many forgiveness definitions as studies about it. However, the most popular or common definitions in the field are presented in the following lines.

North (1987) defines forgiveness as a process of foregoing victim's right to feel resentment and anger against the offender, and feeling benevolence and compassion instead, recognizing that the transgressor has no right to this. Subsequently, Enright and The Human Development Study Group (1991) complemented North's proposal and defined forgiveness as the change of negative affect, behavior, and judgement into positive ones as a response to a deep and unfair hurt.

Worthington (2005) also defines forgiveness as the reduction of negative thoughts, emotions and behaviours towards the offender and, in some cases, the increase of positive feelings towards the transgressor. He observed that when strangers or people in non-valued relationships offend, victims focus on reducing the negative and once no negative feelings are evident, forgiveness is considered complete. However, in valued, continuing relationships, victims focus on both, first reducing the negative feelings to near zero, and then (if possible) increasing some net positive feelings for the valued person. Only after reaching some net positively valenced relationship do victims consider forgiveness complete.

On the other hand, there seems to be more agreement on what forgiveness is not than on what it is. As Worthington, Witvliet, Pietrini, and Miller (2007) pointed out, forgiveness is not the same as pardoning (release from punishment), justifying (give a reason why; Enright & Fitzgibbons, 2014), condoning (accept that the other behavior was legitimate), exonerating (stating that the offender is not guilty), excusing (the offender gives reasons of why he or she offended the victim), forgetting (eliminate the awareness of the hurt; Cehajic, Brown, & Castano, 2008), forbearing (control oneself when provoked), nor reconciling (reestablishing the relationship with the offender; Enright, 2001; Worthington, 2005).

## 1.2 Types of forgiveness

Baumeister, Exline and Sommer (1998) differentiated two types of forgiveness based on its orientation: *interpersonal* and *intrapersonal forgiveness*. They stated that forgiveness is at least an intrapersonal process but not necessarily an interpersonal one. *Intrapersonal forgiveness* focuses on the victim and the change on his or her emotions, behaviors, and cognition until achieving a sense of well-being. This intrapersonal forgiveness might (or might not) lead to *interpersonal forgiveness* (focused on the other) where the offender become aware that the victim no longer holds a grudge (Bartholomaeus & Strelan, 2016).

Another debate is related to which dimensions are included in the forgiveness process. Three major forms have been identified when talking about forgiveness: *emotion*, *cognition*, and *behaviour* (Lawler-Row, Scott, Raines, Edlis-Matityahou, & Moore, 2007). However not all researchers agree with this. While some emphasize the importance of the affective (e.g., Hargrave & Sells, 1997) or the emotional (Worthington & Wade, 1999) dimension, others argue the relevance of the cognitive form (e.g., Luskin, 2003). Linked to these forms, appears another conflict on whether forgiveness involves a *positive* and a *negative* dimension. Many authors seem to agree that forgiveness implies the reduction of negative feelings, cognitions and behaviours toward the offender (negative dimension), nonetheless some others stated that forgiveness also implies a positive dimension where the victims reestablish their negative attitudes and feeling towards the offender for positive ones (e.g., desire the best to them; Subkoviak et al., 1995).

According to the forms of forgiveness presented above, is it possible to distinguish two types of forgiveness. When victims realize, at a cognitive level, about the benefits of forgiving, they may engage in *decisional forgiveness* (e.g., Davis et al., 2015; Worthington, Witvliet, et al., 2007). *Decisional forgiveness* is defined as a behavioral intention to renounce to get even and to consider the offender as a person of value (Exline, Worthington, Hill, & McCullough, 2003). After making a conscious choice, victims might also experience *emotional forgiveness*, that is, the replacement of negative emotions (e.g., anger, resentment, hostility) with positive ones like empathy, love or compassion. Or as the affective state that reflects the extent to which offenses no

longer affect negatively the victims indicating that they are ready to move on (Worthington, Witvliet, et al., 2007).

Finally, considering the specificity with which forgiveness can be assessed, McCullough and Worthington (1999) identify three types of forgiveness. At the lowest level of specificity, they identified *dispositional forgivingness* as a trait of the person that reflects its general disposition to forgive offenses. In a more specific level, they defined *episodic forgiveness* as the response to a particular offense. Finally, they defined *dyadic forgiveness* as an intermediate level that refers to the general disposition to forgive within a specific relationship.

## **CHAPTER II**

### **ASSESSMENT OF FORGIVENESS**

Due to different conceptualizations and because the study of forgiveness has grown, numerous measures have been developed to assess several types and aspects of forgiveness. McCullough, Hoyt, and Rachal (2000) classified some of the available instruments along three dimensions. First, specificity with which forgiveness is assessed includes dispositional (i.e., a stable personality trait), episodic (i.e., linked to a particular event or offense), and dyadic forgiveness (i.e., unique offenses that occur within that relationship). Second, the direction of measurement involves granting (as a victim) or seeking (as an offender) forgiveness, or both (as with self-forgiveness). Third, the methods of assessment include self-ratings, coding of behavioral observations, or physiological methods (i.e., chemical or psychophysiological).

Because one of the chapters (i.e., Chapter VI) presented in this dissertation offers an exhaustive review of the instruments that exist to assess forgiveness based on the classification presented above, I will not also review instruments here so that I do not burden the reader.



## CHAPTER III

### MODELS OF FORGIVENESS

According to the many possible definitions of forgiveness, numerous forgiveness models have been defined. All of them vary significantly in the extent to which they are derived from theoretical basis, are purely descriptive, or are useful for therapeutic or research practice.

Psychological models of forgiveness can be divided in four dimensions (Kaminer, Stein, Mbanga, & Zungu-Dirwayi, 2000): typological models, developmental models, models based on psychological theories, and task-stage or process models.

#### 3.1. Typological models

These models propose different typologies of forgiveness based on the critical features that distinguish them. Three different studies report information about these models.

Based on the degree of behavioral, emotional or attitudinal change toward the offender, Nelson (1992) distinguished three types of forgiveness: detached, limited, and full forgiveness. *Detached forgiveness* implies a reduction of the negative affect toward the offender but not the restoration of the relationship. *Limited forgiveness* involves the reduction of negative affect, but also a partial restoration of the relationship with the offender. Finally, *full forgiveness* requires the total cessation of negative affect toward the offender and the full restoration of the relationship with him.

Trainer (1981) also described three different types of forgiveness. The first type is *role-expected forgiveness* and is defined as the explicit manifestation of forgiveness accompanied by feelings of fear, resentment or anxiety. The second type is called *expedient forgiveness*, referring to a type forgiveness meant to another end and characterized by hostility and condescension. The third and last type is named *intrinsic forgiveness* and is defined as a change in feelings and attitudes toward the offender together with a behavioral expression of forgiveness.

Finally, Veenstra (1992) divided interpersonal forgiveness into six categories based on how it could be used or applied after receiving an offense: overlooking the



offense, excusing the offense, condoning the offense, pardoning the offense, releasing the offender for blame, and reestablishing trust with the offender.

### 3.2. Developmental models

Some authors used Kohlberg's Theory of moral development to describe the reasoning about forgiveness. These models argue that as individuals develop cognitive skills they become more empathetic and are able to take other's perspective and consequently, can accept them despite the hurts they generated in the past.

Kohlberg's Theory (1969, 1973, 1976) uses seven stages to define how reasoning about justice occurs. The first stage is called *punishment and obedience orientation* and implies that people with authority or with the permission to punish are the responsible for doing justice. Stage 2 states that justice is defined under the motto "if you help me, I will help you", that is, justice is based on a sense of reciprocity. Stage 2 is called *relativist justice*. The *good boy/good girl justice* (Stage 3) is based on the approval of others, and refers that justice is determined by the consensus of the group on what is right and what is wrong. Stage 4 (*law and order justice*) states that social laws determine justice. With the focus of maintaining social harmony, Stage 5 (*social contract orientation*), recognize that unjust laws exist and thus it is fair to work in the system for change. Stage 6 is *universal ethical principle orientation* and outlines that moral behavior and justice is based on individuals rights and thus is determined by conscience rather than by social laws. Finally, although empirical evidence was not reported, Kohlberg suggested a seventh stage called *transcendental morality* linking moral development regarding justice with religion.

Enright and colleagues (Enright, Gassin, & Wu, 1992; Enright & The Human Development Study Group, 1991; Enright, Santos, & Al-Mabuk, 1989) defined a six-stage model of reasoning regarding forgiveness, which was based on the first six stages of Kohlberg's theory. Stage 1 is *revengeful forgiveness* and makes reference to the thought of that forgiveness is not possible if you don't get even first with a punishment of a similar degree of severity. Stage 2 is *restitutional or compensational forgiveness* and refers to thinking that forgiveness only can happen if the offender gives an apology or if he/she is out of guilt. Stage 3 is *expectational forgiveness* and it is related to forgiveness due to social pressure. Stage 4 is *lawful expectational forgiveness* and implies that forgiveness occurs because of social, religious or moral pressure. Stage 5 is

*forgiveness as social harmony* and it makes reference to thinking that forgiveness restores social harmony and relationships. Finally, Sage 6 is *forgiveness as love* and it is associated to the idea that forgiveness is an act that promotes love and facilitates the reconciliation with the offender. Importantly, Enright's theorizing is not about forgiving. It is about reasoning regarding forgiving. One can reason in highly sophisticated ways about justice and still not act justly. Similarly, one might reason with sophistication about forgiving and not act on the reasoning by actually forgiving.

Similar to the model presented earlier, Nelson (1992) defined a 3-stage model characterized initially by feelings of victimization and desire of revenge (Stage 1: *preconsonance*) followed by a phase where the social norms are very present and the victim feels pressured to act as a good person (Stage 2: *consonance*) and ending with the recognition of the innate value of others, where forgiveness is motivated for the relationship with the offender itself rather than for social pressure or self-interest (Stage 3: *postconsonance*). Table 1 shows the association between Kohlberg's Theory and both the Enright and Nelson models.

**Table 1.** *Correspondence between Kohlberg's Theory stages and developmental models of forgiveness*

<b>Kohlberg's Theory of Moral Development</b>	<b>Enright</b>	<b>Nelson</b>
<b>Stage 1.</b> <i>Punishment and obedience orientation.</i>	<b>Stage 1.</b> <i>Revengeful forgiveness</i>	
<b>Stage 2.</b> <i>Relativist justice</i>	<b>Stage 2.</b> <i>Restitutional/compensational forgiveness</i>	<b>Stage 1.</b> <i>Preconsonance</i>
<b>Stage 3.</b> <i>Good boy/good girl justice</i>	<b>Stage 3.</b> <i>Expectational forgiveness</i>	
<b>Stage 4.</b> <i>Law and order justice</i>	<b>Stage 4.</b> <i>Lawful expectational forgiveness</i>	<b>Stage 2.</b> <i>Consonance</i>
<b>Stage 5.</b> <i>Social contract orientation</i>	<b>Stage 5.</b> <i>Forgiveness as social harmony</i>	
<b>Stage 6.</b> <i>Universal ethical principle orientation</i>	<b>Stage 6.</b> <i>Forgiveness as love</i>	<b>Stage 3.</b> <i>Postconsonance</i>
<b>Stage 7.</b> <i>Transcendental morality</i>		

*\*Adapted from McCullough & Worthington (1994)*

Spidell and Liberman (1981) also described a model based on Kohlberg's theory; however they focused on the developmental process of the offender not the offended, thus, Spidell and Liberman's model is not explained in this review. For more information about the model readers should refer to their original study.

### **3.3. Models based on psychological theories**

Some forgiveness models are derived or are based on existing psychological theories or schools. As cited in Kaminer et al. (2000), it is possible to find models derived from Jungian (Todd, 1985), existential (Pattison, 1965), psychoanalytic (Brandsma, 1982; Lapsey, 1966), object relations (Gartner, 1988; Pingleton, 1997; Vitz & Mango, 1997), personal construct (Smith, 1981), cognitive (Droll, 1984), and family systems (Hargrave, 1994) theories. Some of these perspectives are briefly presented below, however, due to the complexity of some theories, readers should refer to the parent theories for more complete information.

Psychoanalytic-based models conceptualize forgiveness as a violation of intrapsychic "contracts" that are developed in the early childhood. Individuals internalized what is good and what is bad from their parents' norms and when someone transgressed these rules they feel transgressed. Brandsma (1982) and Lapsey (1966) are examples of forgiveness models based on this theory.

Models based on object-relations theory understand forgiveness as a process of integration of the self-object representations, that is, the good and the bad aspects. The objective is to focus on the good thing of the offender so that anger and aggression toward the offender can be reduced. Gartner (1998), Pingleton (1997), and Vitz and Mango (1997) presented forgiveness models based on this theory.

Personal construct forgiveness models derive from Kelly's personal construct theory (1955). Kelly states that through the repetition of experiences, people develop different constructs. These constructs will influence how people react to different events or situations. When new constructs appear, do also new behavioral responses. Forgiveness models based on this theory, like Smith (1981), state the need to create new constructs in order to achieve the behavior of forgiveness.

### **3.4. Task-stage models**

Task-stage models try to identify and describe the different steps or stages that define the process of forgiveness. The different models proposed vary widely considering five dimensions (Strelan and Covic, 2006).

First, some models are religious-based and consequently include the role of God's forgiveness in the process; whereas, non-religious models do not consider God's forgiveness at all. Second, although some steps are common to the different proposed models (i.e. initial feelings of anger and hurt, negative affect and negative cognitive consequences, acknowledgment that previous strategies to dealing with hurt did not work, a decision to forgive, empathy towards the offender), the order proposed changes differs from one model to another. Third, it is not clear the transition from step to step and the degree to which affective, cognitive, and emotional dimensions are involved. Fourth, the majority of the models adopt an intraindividual perspective of the forgiveness process, focusing only on the perspective and the characteristics of the injured party, while a few consider its interpersonal nature and expand the focus not only to the victim but to the relationship itself. Fifth, there is a lack of consensus about what is the forgiveness end point.

Table 2 summarizes the different models proposed based on four of the five dimensions described above. (It was not possible to define the transition from one step to another.) However, due to extension and because of the aim of this dissertation, only the two more cited and common models (Akhtar & Barlow, 2016) will be explained in detail.

#### ***3.4.1. Enright and The Human Development Study Group model of forgiveness***

Enright and the Human Development Study Group (1991) defined 17 (that turned into 20; Enright & The Human Development Study Group, 1996) possible steps that a person who had experienced an offense might pass through before achieving total forgiveness. At the same time, these steps can be divided in seven major components: *Experiencing and awareness of negative psychological consequences, Need to resolve the conflict, Deciding among strategies, Forgiveness motive, Decision to forgive, Execution of internal forgiveness strategies, and Need for action.*

**Table 2.** *Different models of the forgiveness process*

<b>Model</b>	<b>Religiousness</b>	<b>Steps</b>	<b>Perspective Adopted</b>	<b>End Point</b>
Augsberger, 1981	Religious	Restore the attitude of love Release the painful past Reconstruct the relationship Reopen the future Reaffirm the relationship	Interindividual	Benevolent responses or attitudes toward the offender
Benson, 1992	Religious	Identify resentment and anger Compassion Accepting Jesus' forgiveness for the offender Behave altruistically toward the offender	Intraindividual	Benevolent responses or attitudes toward the offender
Brandsma, 1982	Religious	Re-experience the hurt Appreciate the reason for the offender's actions Evaluate expectation that they should have acted differently Give up one's anger	Intraindividual	Reducing negative attitudes, behavior and cognitions toward the offender
Coleman, 1989	Non-Religious	Identify the nature of the hurt Confronting Dialogue to understanding Forgiving Letting go of resentment	Intraindividual	Reducing negative attitudes, behavior and cognitions toward the offender
Cunningham, 1985	Religious	Judgement vs. denial Humility vs. humiliation Mutuality and negotiation Actual living out of forgiveness	Intraindividual	Benevolent responses or attitudes toward the offender
Donnelly, 1982	Religious	<b>Deciding to forgive</b> Remembering that true forgiveness is difficult Forgiving yourself Considering the consequences of non-forgiveness	Intraindividual	Benevolent responses or attitudes toward the offender

Enright & The Human Development Study Group, 1991, 1996	Non-religious	Examination of psychological defenses Confrontation of anger Admittance of shame Awareness of cathexis Awareness of cognitive rehearsal of the offense Possible comparison of self with the offender Realization that self may be permanently changed by the hurt A possibly altered “just world” view Insight that old resolution strategies are not working Willingness to consider forgiveness as an option <b>Commitment to forgive</b> Viewing the offender in context Empathy for the offender Awareness of compassion for the offender Acceptance of the pain of the offense Finding meaning in the forgiveness process Realization of the need to be forgiven in the past Realization that self is not alone Realization of possible new purpose in life Internal emotional release	Intraindividual	Benevolent responses or attitudes toward the offender
Fitzgibbons, 1986	Non-religious	Origins of the hurt Recreate hurtful situations <b>Decide to forgive</b> Identify hurt in own development Understand the motives of the offender Emotional forgiveness	Intraindividual	Reconciliation with the offender
Gordon & Baucom, 1998	Non-religious	Response to the initial impact Give a meaning to the event Move forward	Intraindividual	Reduction of negative affect, behavior and cognitions toward the offender
Hargrave, 1994; Hargrave & Sells, 1997	Non-religious	Insight Understanding Giving the opportunity for compensation Overt act of forgiving	Intraindividual	Reconciliation with the offender

Linn & Linn, 1978	Non-religious	Denial Anger Bargaining Depression Acceptance	Intraindividual	Reducing negative attitudes, behavior and cognitions toward the offender
Luskin, 2003	Non-religious	Identify your feelings <b>Commitment to forgive</b> Forgiveness doesn't imply reconciliation Perspective on what is happening Stress management Don't expect things from others Look for positive alternative ways instead of hurt Well lived life is the best revenge Remind yourself the heroic choice of forgiving	Intrapersonal	Reduction of negative thoughts, attitudes and behaviors.
Malcolm & Greenberg, 2000	Non-religious	Acceptance of strong emotions <b>Decision to forgive</b> Reframing Empathy and compassion Moving forward	Intraindividual	Resolution by forgiveness
Martin, 1953	Non-religious	Refusal to seek revenge Pardon Complaint Repentance Reestablishment of the relationship	Interindividual	Restoring the relationship
Menninger, 1996	Non-religious	Claiming the hurt Guilt Victim Anger Wholeness	Intraindividual	Reduction of negative affect, behavior and cognitions toward the offender
Pettitt, 1987	Non-religious	<b>Commitment to forgive</b> Adopting new perspectives Changing the images regarding the offense Accepting the offense Restoring vitality and love	Intraindividual	Reconciliation with the offender

Pingleton, 1997	Religious	Forgiveness from God Self-forgiveness Forgive the offender	Intraindividual	Benevolent responses or attitudes toward the offender
Pollard, 1998	Non-religious	Realization Recognition Reparation Restitution Resolution	Intraindividual	Reconciliation with the offender
Rosenak & Harnden, 1992	Religious	Hurt Anger Gather information Forgiveness (reframing, releasing, wishing the offender well)	Intraindividual	Benevolent responses or attitudes toward the offender
Smedes, 1984	Non-religious	Feeling hurt by the offender Hating the offender Remembering the pain of the offense Reestablish a relationship with the offender	Intraindividual	Reconciliation with the offender
Smedes, 1996	Non-religious	Rediscovering the humanity of the offender Surrender one's right to get even Revise one's feelings toward the offender	Intraindividual	Reduction of negative affect, behavior and cognitions toward the offender
Stanley, 1987	Religious	Forgiven by God Release the offender from the debt that is owed Accept the offender View the offender as a tool in our understanding of the grace of God Reconciliation with the offender	Intraindividual	Reconciliation with the offender
Worthington, 1998	Non-religious	Empathy Humility <b>Commitment</b>	Intrapersonal	Benevolent responses or attitudes toward the offender
Worthington, 2001	Non-religious	Recall the hurt Empathize with the offender Altruistic gift <b>Commit</b> Hold onto forgiveness	Intrapersonal	Benevolent responses or attitudes toward the offender



*Component 1: Experiencing and Awareness of Negative Psychological Consequences*

Seven different responses are possible when an offense is experienced. The first seven steps of the Enright's Model represent each of them. First, as a mechanism of defense, a variety of psychological defenses like repression appear to distance oneself from the pain experienced. A second possible response is to experiment anger toward the transgressor. A third response is shame, followed by an obsessive period where the victim focuses all his or her mental energy on the offender. Then, if the victim thinks constantly in the event, cognitive rehearsal may be manifested. Another possible reaction is to compare one's pain against the perceived better emotional state of the transgressor. If the injured party is not able to release the pain, he or she could start thinking that the world is unfair. The awareness of at least one of these possible responses from the offender will lead to a need for resolution.

*Component 2: Need for Resolution*

In order to solve the problem and forgive, the person must be able to identify his or her own internal reactions and to be sensitive to the injury that has experimented. Only if the victim identifies his or her own reactions and feelings against the offense will be able to find motivation to solve the problem.

*Component 3: Deciding Among Strategies*

Forgiveness is not the only possible option against an offense. One might contemplate the option of seeking justice fairly or to get even for what the transgressor has done, for example.

*Component 4: Forgiveness Motive*

One is more likely to choose the option of forgiveness if it exists and if one has a good motive to do so. Enright and colleagues identified different possible motives why people may choose the option of forgiveness like cultural conditioning, religious education, time since the offense happened or the degree of suffering.

*Component 5: Decision to Forgive*

They define the decision to forgive as the commitment or “*fidelity to the internal forgiveness strategies until change in self is realized*”.

*Component 6: Execution of Internal Forgiveness Strategies*

Different strategies to affront forgiveness could appear in the forgiveness process. Based on previous literature, Enright and The Human Development Study Group (1991) identify some of them like feeling empathy or compassion toward the offender, accepting the injustice, reducing the pain given or see oneself as imperfect or with the need of forgiveness from others in the past.

*Component 7: Need for Action*

There should be an awareness of a behavioral response toward the offender before forgiveness can occur.

**3.4.2. Pyramid model to REACH forgiveness**

Worthington (2001) developed a 5-stage intervention model of helping people to forgive under the name REACH Forgiveness. Every letter refers to a different step.

*R: Recall the hurt or offense*

The objective of this phase is to remember the hurt and to try to identify the different thoughts, behaviors and feelings that the offense has generated on the victim.

*E: Empathy*

On this step, the offended person is encouraged to develop or to build empathy toward the offender. He or she tries to imagine how the offender felt at the moment of the transgression and after the offense.

*A: Altruistic Gift*

On this stage, victims need to remember how they felt when they received forgiveness from others in the past. The objective is that the victim feels gratitude and humility and thus contemplates the option of giving forgiveness as an altruistic gift to his or her offender.

*C: Commitment to forgive*

After considering forgiveness as an option, the person makes a commitment to forgive.

*H: Hold onto forgiveness*

The commitment to forgive is directly linked to hold on to forgiveness or to maintain the advances or benefits achieved.

## CHAPTER IV

### MAKING A DECISION TO FORGIVE

In the previous chapter, I presented different models of forgiveness that currently exist. Some previous literature, also reviewed different process models of forgiveness with the objective of identifying commonalities across models (e.g., Wade, Hoyt, Kidwell, & Worthington, 2014; Walker, Gorsuch, & Tan, 2004). One idea highlighted in these reviews was that forgiveness usually entails, at some point, a decision to forgive the offender. As discussed in Chapter I, Worthington, Hook, Utsey, Williams, and Neil (2007) suggested that one's decision to forgive can be distinguished as a type of forgiveness that differs from emotional forgiveness.

Many models (e.g., Enright & Fitzgibbons, 2014; Greenberg, Warwar, & Malcolm, 2010) have identified a need to make a decision to forgive at some point in moving toward the resolution of an offense or injustice. Some models have taken a decision to forgive as the (theoretical) starting point for forgiving, whereas others locate this experience in the middle-end of the process. Neblett (1974) indicated that deciding to forgive is the crux of the entire process. Exline et al. (2003) reported that a conscious decision to release vengeance and bitterness is implied in the forgiveness process. Complementary, DiBlasio (2000) stated that people can choose whether to forgive or not because there is a separation from feelings and reason when making a decision to forgive. He explained that when victims realize that they can decide to forgive their offender even though they don't feel prepared to experience a change in emotions toward the offender, they continue with the decision.

#### **3.1. Definition of decision to forgive**

A decision to forgive implies a deliberate commitment to make an effort to achieve total forgiveness by vowing to act differently toward an offender (Davis et al., 2015). It is also defined as the cognitive letting go of need to revenge, bitterness and resentment (DiBlasio, 2000). However it still remains unclear what exactly happens when people make a decision to forgive and also which factors might influence a decision to forgive. Furthermore, the relationships between decisions to forgive and outcomes are not clear. Some people may decide to forgive and do so thoroughly. Some

others might never decide to forgive, or if they do, they commit to their decision only tentatively. Still others might decide to forgive and yet not be able to follow through to the experience. In addition, for some, a decision to forgive is a rational thought-out act. For others, the decision spontaneously occurs and the person might not even have logical and rational reasons for the change of heart. Decisions are not always rational. Most, in fact, are intuitive and are not even supported by a logical process (Heath & Heath, 2013).

It is important to state here that while some authors do not differentiate between decision to forgive and commitment to forgive (e.g., Enright & The Human Development Study Group, 1991), others define commitment to forgive as the compromise with the decision the victim has made of forgiving his or her offender (Worthington, 1998). It has also been defined as the fidelity to the internal forgiveness process until personal changes occur (Neblett, 1974). Neblett also stated that the intentions of the forgiver have an important influence on its commitment to forgive.

### **3.2. Nomological Network of Associations with Decisions to Forgive**

#### ***Self-construal.***

Decisions to forgive are embedded in and influenced by cultures, as Hook, Worthington, and Utsey (2009) theorized. Hook, Worthington, Utsey, Davis, and Burnette (2012) lent empirical support to the theorizing. In individualistic cultures people more often act independently from their collectives. They are often motivated more by their own interests than by the interests of in-group others, whereas people from collectivistic cultures are more often strongly connected with their in-group. They tend to behave more often by following collectivistic social norms that prescribe thinking, experiencing, and acting in ways that maintain the harmony of the group (Kurniati, Worthington, Poerwandari, Ginanjar, & Dwiwardani, 2017; Lin et al., 2014). Originally, it was thought that both types of self-construals were opposite (e.g., Taras et al., 2014) and mutually exclusive. However, as research accumulated, we know that even in individualistic cultures people are enmeshed in a web of collective networks and thus feel pulled toward some level of collectivism. People in collectivistic cultures also act as individuals in various circumstances. Thus, Taras et al. (2014) found that one could perceive oneself as individualistic, collectivistic, or both at the same time. Because people with a more collectivistic self-construal tend more often to understand

forgiveness within the context of at least considering reconciliation, relational repair, and social harmony, those people—on the average—show higher levels of decisional forgiveness than do people with a more individualistic self-construal (Hook et al., 2012).

***Motivations—avoidance, revenge, and benevolence.***

McCullough et al. (1998) identified two primary motivations associated with unforgiveness. One was to avoid the transgressor. Physical avoidance is not always possible. Often one must live with, work with, interact in the community with an offender, and physical avoidance is simply not possible. True, people can limit the contact with the offender to some degree, but might not be able to avoid contact completely. In addition, though, cognitive avoidance is another option. One might try to limit the amount of cognition related to the other person through distraction or some thought-control methods. However, rumination often occurs when emotions are raw, and cognitive avoidance is likely related to the level and content of ruminations. Berry, Worthington, O'Connor, Parrot, and Wade (2005) showed that people ruminated in different ways when offended. Some engaged in depressive rumination, thinking that they are helpless to control their thoughts or to manage their interactions with the offender. Some ruminations were anxious. People were concerned or actively worried that they would be injured further by the offender. Some ruminations were angry, and they tended to promote thoughts of schadenfreude or vengeance toward the offender. In general, decisions to forgive are negatively correlated with avoidance motivations.

Another motivation after a transgression might be vengeance. Whereas avoidance seeks to distance oneself from the offender, revenge motives seek to engage with and harm the offender—or at a minimum see some harm come to the person from another quarter. Vengeful motives seek to self-energize the victim to get even, get back at, hurt (seen as a reciprocation), or arrange for negative consequences to befall the offender. Or, vengeful motives can also wish for ill-fate to befall the offender so one can enjoy the pain of the offender. In general, decisions to forgive are negatively correlated with revenge motivations.

Another motivation—usually not appearing until some time delayed from a hurt or offense—is benevolence (McCullough et al., 2003; McCullough & Hoyt, 2002). As

people begin to experience emotional forgiveness, their motivations are transformed in tandem with their changing emotions. They begin to experience more benevolent motives toward the offender. The relationship between a decision to forgive and benevolent motivations is generally positive. As one makes a decision, one's emotions and benevolent motives become transformed. Or, as one experiences changed emotions and a rise in benevolent motives, one is more likely to make a decision to forgive if one has not already done so.

### ***Negative Emotions***

Making a decision to forgive is also associated with fewer and less intense negative (unforgiving) emotions (Berry et al., 2005) toward the offender. These emotions (like state anger) arise from and are maintained by rumination about the transgression. The content of the rumination will determine the type of emotion. For example, Berry et al. (2005) found that angry rumination led to anger (but not, surprisingly, to depression or anxiety), while fearful rumination led to anxiety. Sad rumination led to depression. The person usually seeks to cope with the unsettled emotions and motivations depending on the initial relationship and its value. Thus, the person might attempt to understand the offense by trying to see things from the offender's perspective empathically (McCullough et al., 1998). The decision to forgive might be causal, but just as easily the decision to forgive might be caused by the change in empathy or reduction in unforgiveness (i.e., avoidance and revenge). Or, some event could simply move each of the variables simultaneously toward a more positive situation and thus less intense negative emotion. In addition, a decision to forgive will likely be related to lower scores in state anger.

### ***Empathy***

The degree to which an offended person empathizes with the offender is likely related to the likelihood of making a decision to forgive. Empathy is also related to the reduction in unforgiveness and to the amount of total forgiveness experienced (McCullough et al., 1998), including emotional forgiveness, the reduction of avoidance and revenge motivations, and the experience of benevolence motivations. This can in turn affect the closeness of the relationship after the offense—but only to the degree that the offender is responsive. Relationship closeness depends on both parties.

### ***Mental health and Well-Being***

Also, decisions to forgive have been related to mental health and well-being variables (for a review, see Worthington, Griffin, & Provencher, 2018). These include less depression, less anxiety, and more satisfaction with life. The likely mediator connecting a decision to forgive with mental health and well-being is reduced rumination.

### **3.3. Empirical evidence supporting decisional forgiveness**

Worthington et al. (2007) claim that order of experiences interrelating emotional and decisional forgiveness varies widely when forgiveness occurs outside of a guided therapeutic setting. Walker and Gorsuch (2004) sought to determine whether any time sequence of experiences might constitute a more or less uniform forgiveness process. Whereas they had some success, they were far from identifying a uniform experience of how forgiveness occurs. Also, until recently (Davis et al., 2015), it had never been empirically demonstrated that decisions to forgive are separate from or might be a precondition to emotional forgiveness. They might simply be part of one complex interconnected set of experiences that make up forgiveness as a whole.

#### ***3.3.1. Empirical evidence of the forgiveness process and the decision to forgive***

Although many forgiveness models have been defined theoretically, few studies have attempted to demonstrate empirically that the process occurs in the way they posit in their theories.

As mentioned in the previous section, Walker and Gorsuch (2004) tried to provide evidence of how a process of forgiveness might occur. To do so, they reviewed 16 different models of forgiveness and generated items to assess all of the identified steps of every model. Then they gave the items to a sample, and they ran an exploratory factor analysis. They extracted five factors to define a forgiveness process—as derived using a combination of theories and a single sample of respondents. The decision-to-forgive item was under the dimension of “emotional forgiveness,” which many researchers who study forgiveness would regard as (at best) controversial. As a final step, Walker and Gorsuch used structural equation models to assess how variables relate to each other and which variables predict the others. However, the results obtained were not clear: None of the proposed models reported strong support. For one reason, their



data were correlational, taken at a single time. They could not establish a way that forgiveness ostensibly unfolds over time using cross-sectional data.

Some authors have tried to provide empirical evidence to support their proposed model of forgiveness by developing interventions based on the different steps previously defined. Helb and Enright (1993) tested how an intervention based on the steps defined on the Enright and The Human Development Study Group (1991) model of forgiveness helps to achieve forgiveness. They used an intergroup design and conclude that the intervention was effective compared to a control group. The problem was that they only measured forgiveness after and at the end of all the interventions (i.e. 8 sessions), thus, it was not possible to see the effect of each the dimension treated in each session (e.g., decision to forgive in session 4) neither to establish the order of how forgiveness occurs. In addition, as I argued earlier, intervention models can never describe how people might forgive in a naturally occurring setting because interventions lead participants through a leader-directed sequence of experiences. Other studies have also reported success using Enright's model of forgiveness and the REACH Forgiveness model (for a review, see Wade & Worthington, 2005). However the steps and the phases in the models have not been empirically validated (Strelan & Covic, 2006)—especially as occurring in natural (non-intervention) settings.

Knutson, Enright, and Garbers (2008) tried to support the validity of Enright et al.'s forgiveness model by asking people to order the 21 different steps in the order they think occur when a person forgives. They found that the overlap between respondent's answers and the theoretical order proposed accounted for approximately 36% of shared variance. Participants rated the commitment to forgive (including the decision to forgive) as the most important item. Participants also situated the decisional phase earlier in the process compared to the Enright et al. proposal. However, it is important to note, there was not unanimity in the way people ordered the experiences (i.e., steps). This is vital; attempts to discern a universal forgiveness process are doomed. However, a more reasonable goal could be to discern an average pathway to forgiving, or to identify an often-traveled process (or several often-traveled processes) as long as the model is not taken as prescriptive or even universally descriptive.

McCullough et al. (2003) studied the trajectories of the negative (i.e. avoidance and revenge) and the positive (i.e., benevolence) trajectories of forgiveness. They found

that the negative dimensions were reduced over time but the positive one did not increase linearly with time. These results gave support to the hypothesis that forgiveness implies the reduction of the negative feelings and motivations—especially at first—but not the increase of positive feelings and emotions—at least until the negative motives are sufficiently reduced. In line with this study, McCullough et al. (2010) tried to identify the mathematical function underlying the temporal course of forgiveness. They found the logarithmic model of change (a power curve) to be the best fit to define changes on forgiveness for the aggregate data; however, to assess forgiveness they used a forgiveness total score and thus, again it was not possible to see the change in the different dimensions of avoidance, revenge, and benevolence motives. Even with a smooth power curve describing aggregate responses, they also presented Figures that showed a wide variety of individual responses.

Although the findings were relevant for the forgiveness knowledge, still McCullough et al. were not able to establish an order of how forgiveness occurs in the interrelationship among avoidance, revenge, and benevolence motives. They also neither included nor assessed the effect of making a decision to forgive. Finally, they provided data that specifically showed that it is different to describe a sample's response (which often is regular and orderly because individual fluctuations have been averaged out) from any individual's response.

### ***3.3.2. Assessment of decisional forgiveness***

One reason this conceptual ambiguity has not been settled empirically is that, until recently no psychometrically and theoretically sound measure of decisional forgiveness existed.

Accurate assessment is needed to untangle the experiences around whether forgiveness will occur and, if so, what the mechanisms are that foster it. Worthington et al. (2007) proffered an eight-item Decisional Forgiveness Scale (DFS; for a review and evaluation, see Worthington et al. (2015). However, theorizing about decisional forgiveness (Hook et al., 2009) and subsequent research on the DFS showed it to have weak theoretical and psychometric support for those particular items. Thus, Davis et al. (2015) developed a more theoretically pure and empirically well-supported instrument to assess decisional forgiveness –the Decision to Forgive Scale (DTFS). His items more accurately fit the theory of what decisional forgiveness is, and his items were also

stronger in their psychometric performance. The description and psychometric properties of this instrument will be presented with detail on Study 2.

## **PART II. EMPIRICAL RESEARCH**

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## CHAPTER V

### PURPOSE AND HYPOTHESES

The main objective of the studies presented in this dissertation is to study the influence of making a decision to forgive in the forgiveness process. Considering the different models reviewed and the little literature supporting the construct, I suppose that one's decision to forgive can make a big influence on how forgiveness occurs, making it faster and easier and additionally, less traumatic for the victim.

To accomplish my goal, I will present three studies. The first two studies try to solve a major limitation that I found to carry out the dissertation: there is a lack of instruments that allow forgiveness assessment in the Spanish context. Thus, with the objective of selecting the best instrument regarding my purposes and additionally, to provide a guide to other researchers, I first present a systematic review of all the existing instruments to assess forgiveness (Study 1). Second, a translation and validation of the Decision To Forgive Scale (DTFS) into Spanish is presented (Study 2). Finally, a third study exploring the role of one's decision to forgive in the forgiveness process and its association with health variables is reported (Study 3).

#### **Study 1: Measuring Forgiveness: A systematic review**

##### **Purpose**

The purpose of this study is to identify all the existent instruments to assess forgiveness, including scales, behavioral and biological measures, and to describe its properties in order to provide an exhaustive review that can be helpful for research and clinical purposes.

##### **Specific objectives**

- *Objective 1.1:* To identify all the existing measures of forgiveness in the literature.
- *Objective 1.2:* To provide a brief resume of each of them.
- *Objective 1.3:* In the case of the scales, to analyze all its psychometric properties and provide a table summarizing the information and providing a total score easily understandable for the reader.

- *Objective 1.4:* To provide a nomological network of associations regarding forgiveness.

### **Hypotheses**

- *Hypothesis 1.1:* Heterogeneous methods exist to assess forgiveness.
- *Hypothesis 1.2:* Self-report scales are the more common used to assess forgiveness.
- *Hypothesis 1.3:* There is weak consensus regarding the nomological network of forgiveness.

### **Study 2: Decisional Forgiveness across Spanish and American Populations: Translation, Validation, and Measurement Invariance of the Decision to Forgive Scale--Spanish**

#### **Purpose**

The purpose of this study is to translate and validate the Decision To Forgive Scale (DTFS; Davis et al., 2015) into Spanish (the DTFS-Spanish; DTFS-S) to obtain a psychometrically sound (i.e., with evidence supporting its validity and reliability) measure that allow me to assess this construct and to study its influence on how people forgive. I also aimed to test for its measurement invariance across Spanish and American populations.

#### **Specific objectives**

- *Objective 2.1:* To provide evidence supporting the estimated reliability of the DTFS-S.
- *Objective 2.2:* To provide evidence supporting the validity of the DTFS-S.
  - *Objective 2.2.1:* To provide evidence of content validity by using the back-translation process and a control group.
  - *Objective 2.2.2:* To provide evidence of factorial validity through applying confirmatory factor analysis techniques.
  - *Objective 2.2.3:* To provide evidence of construct validity by studying the correlation of the DTFS-S with related constructs and using Structural Equation Modeling (SEM) techniques.

- *Objective 2.2.4:* To provide evidence of discriminant validity through the differentiation of the DTFS-S from the dimensions of the TRIM-18.
- *Objective 2.3:* To assess measurement invariance of the DTFS-S across American and Spanish populations.

### **Hypotheses**

- *Hypothesis 2.1:* A one-factor structure for the DTFS-S will show adequate fit.
- *Hypothesis 2.2:* The DTFS-S scores will show adequate estimated internal consistency and temporal stability of the scores.
  - *Hypothesis 2.2.1:* The DTFS-S will show an adequate Cronbach's alpha value.
  - *Hypothesis 2.2.2:* The DTFS-S scores will present an adequate value of Intraclass Correlation Coefficient (ICC).
- *Hypothesis 2.3:* The DTFS-S will show evidence of discriminant validity, as evidenced by adequate fit of a four-factor model (with DTFS-S and three TRIM-18-S items) and only moderate correlations between the DTFS-S and the three TRIM-18-S subscales.
- *Hypothesis 2.4:* The DTFS-S will show high correlations with the TRIM-18-S subscales and total scores.
  - *Hypothesis 2.4.1:* DTFS-S and Avoidance scores will be negatively correlated.
  - *Hypothesis 2.4.2:* DTFS-S and Revenge scores will be negatively correlated.
  - *Hypothesis 2.4.3:* DTFS-S and Benevolence scores will be positively correlated.
  - *Hypothesis 2.4.4:* DTFS-S and TRIM-18 total score (i.e., Benevolence plus reversed Avoidance and Revenge subscale scores) will be positively correlated.
- *Hypothesis 2.5:* The DTFS-S will be correlated with associated constructs:
  - *Hypothesis 2.5.1:* The DTFS-S will show a moderate but significant correlation with the collectivistic self-construal.
  - *Hypothesis 2.5.2:* The DTFS-S will be moderately correlated with rumination.



- *Hypothesis 2.5.3*: The DTFS-S will be negatively correlated with state anger.
- *Hypothesis 2.5.4*: The DTFS-S will be positively correlated with empathy.
- *Hypothesis 2.5.5*: The DTFS-S will be negatively correlated with anxiety and depression.
- *Hypothesis 2.5.6*: The DTFS-S will be moderately positively correlated with satisfaction with life.
- *Hypothesis 2.6*: The latent model to study the association of the DTFS-S with the relation of the offender will show adequate fit to the data.
  - *Hypothesis 2.6.1*: The variable “previous relationship with the offender” will show significant regression paths with TRIM-18-S subscales but not with DTFS-S.
  - *Hypothesis 2.6.2*: The variable “actual relationship with the offender,” we hypothesize that only the regression path with benevolence will be significant.
- *Hypothesis 2.7*: The DTFS will present full measurement invariance (i.e. configural, metric, scalar and strict factorial invariance) with the DTFS across American and Spanish populations.

### **Study 3: Roles of one’s decision to forgive in forgiveness processes**

#### **Purpose**

The goal of this study is to investigate the influence of making a decision to forgive in the ways people forgive. Furthermore, I aim to study also the association of decisional forgiveness with health and well-being variables.

#### **Objectives**

- *Objective 3.1*: To study and define the trajectory of the three TRIM-18 dimensions and the DTFS using Latent Growth Models.
  - *Objective 3.1.1*: To define a linear and a quadratic model to see which one explains better the trajectory of Avoidance.
  - *Objective 3.1.2*: To define a linear and a quadratic model to see which one explains better the trajectory of Revenge.

- *Objective 3.1.3:* To define a linear and a quadratic model to see which one explains better the trajectory of Benevolence.
- *Objective 3.1.4:* To define a linear and a quadratic model to see which one explains better the trajectory of DTFS.
- *Objective 3.2:* To study how making a decision to forgive at time one predicts change on the trajectories of the TRIM dimensions.
  - *Objective 3.2.1:* To study the effect of making a decision to forgive at time one on the Avoidance trajectory by regressing its intercept and slope on DTFS.
  - *Objective 3.2.2:* To study the effect of making a decision to forgive at time one on the Revenge trajectory by regressing its intercept and slope on DTFS.
  - *Objective 3.2.3:* To study the effect of making a decision to forgive at time one on the Benevolence trajectory by regressing its intercept and slope on DTFS.
- *Objective 3.3:* To study how health and well-being variables are associated to decisional forgiveness.

### **Hypotheses**

- *Hypothesis 3.1:* A linear model will be adequate to define the trajectories of the TRIM-18 dimensions (i.e., avoidance, revenge, and benevolence) and the DTFS.
- *Hypothesis 3.2:* Decision to forgive at time one will predict the rhythm of change on the TRIM-18 dimensions.
  - *Hypothesis 3.2.1:* DTFS at time 1 will accelerate the decrease of the Avoidance dimension over time.
  - *Hypothesis 3.2.2:* DTFS at time 1 will accelerate the decrease of the Revenge dimension over time.
  - *Hypothesis 3.2.3:* DTFS at time 1 will accelerate the increase of the Benevolence dimension over time.
- *Hypothesis 3.3:* DTFS will be significantly correlated with health and well-being variables. Specifically:
  - *Hypothesis 3.3.1:* DTFS will be negatively correlated with anxiety.
  - *Hypothesis 3.3.2:* DTFS will be negatively correlated with depression.
  - *Hypothesis 3.3.3:* DTFS will be negatively correlated with anger.

- *Hypothesis 3.3.4:* DTFS will be negatively correlated with stress.
- *Hypothesis 3.3.5:* DTFS will be negatively correlated with negative affect and positively with positive affect.
- *Hypothesis 3.3.6:* DTFS will be positively correlated with empathy.
- *Hypothesis 3.3.7:* DTFS will be negatively correlated with rumination.
- *Hypothesis 3.3.8:* DTFS will be positively correlated with satisfaction with life.

## CHAPTER VI

### STUDY 1. MEASURING FORGIVENESS: A SYSTEMATIC REVIEW

In the current study, we evaluate the status of assessment in forgiveness. We sought to compile all existing measures along with information, when possible, on test structure, length and basic psychometric properties. The analysis of this information will provide one basis for choosing which methods to employ in scientific studies and clinical practice. Besides, we suggest a nomological network of associations regarding the construct validity of forgiveness. Our network informs about the concept of forgiveness; it provides an initial quantification of which and how other variables might be associated to this construct.

#### Method

##### The Search

We searched publications from four electronic databases (i.e., Scopus, Web of Science, PubMed, and *PsycINFO*). We used the following keywords: *forgiv\** crossed with *measur\**, *scale\**, *assess\** and *instrument\**. No language restriction was considered. We searched databases from their inception to February, 2016. We also scanned papers (and electronic) issues of journals that frequently (based on references) published articles on forgiveness. The search identified 3943 unique papers. Titles and abstracts of all identified publications were reviewed to identify all articles describing measures to assess forgiveness. These included articles describing the development of a new instrument or other methods to assess forgiveness. In Figure 1, we describe how we reduced the unique papers from 3943 to 42 articles (yielding 45 measures) that were intensively analyzed. In addition, an updated scoping search was performed up to January 2017. No new measures were found.

##### Delimiting the Sample

We excluded self-forgiveness instruments because that construct seems to have more to do with an offender's experience than a forgiver's experience (see Wenzel, Woodyatt, & Hedrick, 2012). We also excluded single-item measures of forgiveness and articles that used several ad hoc items for forgiveness or forgivingness but did not report scale development, because the psychometrics were not available. We excluded unpublished dissertations because their peer review was not masked but limited to a

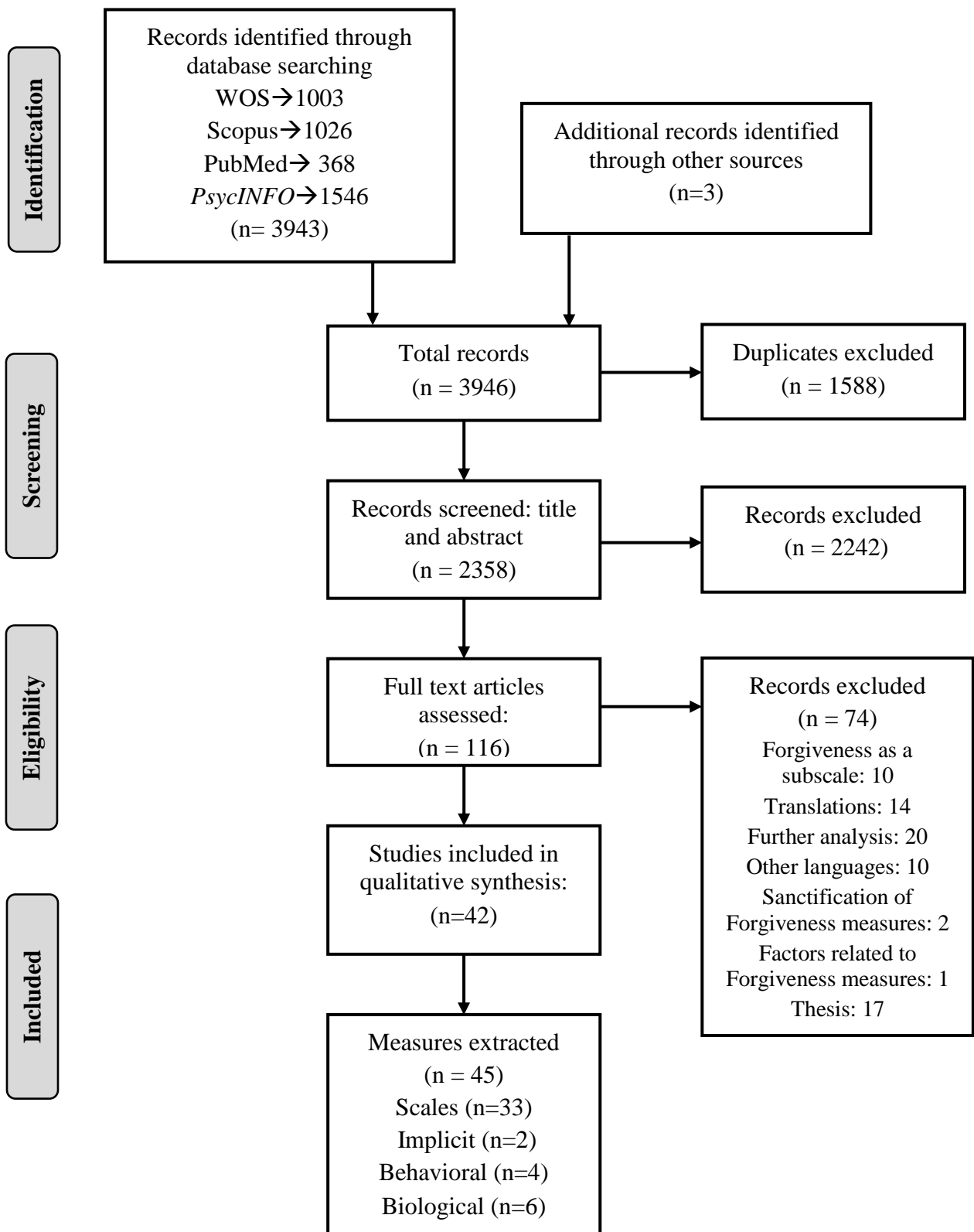


Figure 1. Flow diagram of study selection

university committee. We also excluded scales that assessed a variant of forgiveness (i.e., Sanctification of Forgiveness). Finally, only information from the primary publication was used.

### **Coding Articles for Psychometric Adequacy**

We developed and piloted a standardized form to abstract information from the articles that developed and adduced psychometric data on forgiveness scales. We followed The Meta-Analyses Reporting Standards (MARS) Statement (American Psychological Association Publications and Communications Board Working Group on Journal Article Reporting Standards [APA], 2008). To obtain an appraisal of the quality of information presented on each forgiveness scale, information regarding scale properties was scored based on Terwee et al. (2007) and the Standards for Educational and Psychological Testing (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education [AERA, APA, & NCM, respectively], 2014). We analyzed ten characteristics: concept definition based on prior literature; availability; sample described adequately; scale structure; estimated reliability (i.e., Cronbach's alpha and test retest reliability, respectively); level and types of validity evidence, including whether item generation was described; whether quantitative analyses like factor analyses, were used; and evidence based on relationship of forgiveness to other variables and to a criterion (i.e., whether these relationships were of high or moderate conceptual relationship to forgiveness). Therefore, a total of ten properties were evaluated. In each case a coding of sufficient information (+), insufficient or weak information (+/-), or no information (-) was made. Based on this codification, a score of 1, 0.5 or 0 was given to each property to obtain a total score, an overall crude measure of quality of psychometric support whose maximum value was 10. Two raters independently abstracted information from each article. Raters then shared their information. The interrater agreement calculated for each property (computing Cohen's kappa coefficient) ranged from .87 to 1 ( $p < .001$ ). Raters resolved their few differences successfully by consensus.

### **Construct Validity**

Construct validity refers to the degree to which the operational definition of a variable actually reflects the intended construct it is supposed to measure (e.g., Cook & Campbell, 1979). It is the appropriateness of the inferences made based on test scores.

Following Cronbach and Meehl (1955), we sought to construct a nomological network of associations separately for trait forgivingness and episodic forgiveness. We classified each construct against with which authors sought to validate forgiveness instruments into one of three categories (high, moderate or low theoretical closeness to theoretical forgivingness or forgiveness). We then tested to see whether the closeness of associations in the network was reflected in empirical correlations.

## **Results**

We found 45 forgiveness measures (Table 3). These measures were classified into two groups (McCullough et al., 2002) measures to assess forgiveness directly (i.e., scales of forgiveness) or extant assessment methods applied to the evaluation of forgiveness (i.e., implicit, behavioral, and biomarker measures used to assess forgiveness). In Table 4, we present our rating of each measure on the ten properties listed in the Method.

### **Forgiveness Scales**

Of 45 forgiveness measures, 33 were self-report scales. From these scales, 15 assessed Episodic Forgiveness; one, Dyadic Forgiveness (The Interpersonal Relationship Resolution Scale; Hargrave & Sells, 1997); and 17, Dispositional Forgivingness. Within the latest group, all the scales evaluated trait forgivingness except one that assessed seeking forgiveness (Seeking Forgiveness Questionnaire; Chiaramello, Muñoz Sastre, & Mullet, 2008).

### ***Concept definition***

In Table 4, we show the classification of the articles in terms of whether they (a) provided a definition of forgiveness, (b) differentiated between dimensions of forgiveness (cognitive, emotional, behavioural) and (c) referred to a positive or a negative construct. Most of the definitions provided were based on specific authors' conceptualizations (for a review, see Fehr et al., 2010). Nine authors presented their own definition (i.e., Brown, 2003; Davis, DeBlaere, et. al., 2015; DeShea, 2003; Hargrave & Sells, 1997; Helb & Enright, 1993; Kamat, Jones, & Row, 2006; McCullough et al., 1998; Thompson et al., 2005; Yáñez-Yaben & Comino, 2012).

**Table 3.** *Reviewed measures of forgiveness*


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<b>Scales of Forgiveness</b>
<b>Dispositional forgiveness</b>
Forgiveness of Others Scale (FOS; Mauger et al., 1992).
Willingness To Forgive (WTF; Helb & Enright, 1993).
Psychological Profile of Forgiveness (PPF; Helb & Enright, 1993).
Family Forgiveness Scale (FFS; Pollard et al., 1998).
Forgiveness Questionnaire (FQ; Mullet et al., 1998).
Forgiveness Attitudes Questionnaire (FAQ; Kanz, 2000).
Transgression Narrative Test of Forgivingness (TNTF; Berry, Worthington, et al., 2001).
Forgiveness Likelihood Scale (FLS; Rye et al., 2001).
Escala sobre o Perdão (EP; Barros, 2002).
Tendency To Forgive Scale (TTF; Brown, 2003).
Willingness To Forgive Scale (WTFS; DeShea, 2003).
Heartland Forgiveness Scale (HFS; Thompson et al., 2005).
Trait Forgiveness Scale (TFS; Berry, Worthington et al., 2005).
CAPER (Casulllo & Fernandez-Liporace, 2005).
Forgiving Personality Scale (FPS; Kamat et al., 2006).
Family Forgiveness Questionnaire (FFQ; Maio et al., 2008).
Seeking Forgiveness Questionnaire (SFQ; Chiaramello et al., 2008).
<b>Episodic forgiveness</b>
Enright Forgiveness Inventory (EFI; Subkoviak et al., 1995).
Transgression Related Interpersonal Motivations Inventory (TRIM- 12; McCullough et al., 1998).
Wade's Forgiveness Scale (WFS; Wade et al., 2001).
Rye's Forgiveness Scale (RFS; Rye et al., 2001).
Forgiveness Inventory (FI; Gordon & Baucom, 2003).
Transgression-Related Interpersonal Motivations inventory (TRIM-18; McCullough, Root, & Cohen, 2006).
Marital Offense-Specific Forgiveness Scale (MOFS; Paleari et al., 2009).
Acts of Forgiveness Scale (AFS; Drinnon & Jones, 2009).
Cuestionario de Perdón en Divorcio-Separación (CPD-S; Yárnoz-Yaben & Comino, 2012).
BICAR (Pansera & La Guardia, 2012).
Workplace Forgiveness Scale (WPFS; Boonyarit et al., 2013).
Forgiveness Aversion Scale (FAS; Williamson et al., 2014).
Forgiveness Reconciliation Inventory (FRI; Balkin et al., 2014).
Decision to Forgive Scale (DTFS; Davis, Hook, et al., 2015).
Group Forgiveness Scale (GFS; Davis, DeBlaere, et al., 2015).
<b>Dyadic forgiveness</b>
Interpersonal Relationship Resolution Scale (IRRS; Hargrave & Sells, 1997).
<b>Other Measures of Forgiveness</b>
<b>Implicit forgiveness</b>
Implicit Relational Assessment Procedure (IRAP; Ferroni & Barnes-Holmes, 2014).
Implicit Association Test of Forgiveness (IATF; Fatfouta et al., 2015).
<b>Behavioural forgiveness</b>
Conciliatory behaviour (Zechmeister et al., 2004).
Defection in a Prisoner's dilemma game (Exline et al., 2004).
Affective tone in a written response (Exline et al., 2004).
Allocation of Money (Exline et al., 2004).
Resource Distribution (Carlisle et al., 2012).
Cyberball paradigm (Dorn et al., 2014).
List of positive qualities (Dorn et al., 2014).
<b>Biological forgiveness</b>
Heart Rate (Lawler et al., 2003).
Blood Pressure (Lawler et al., 2003).
fMRI (Farrow, Hunter, et al., 2008).
Genetic polymorphisms (Kang et al., 2008).
Oxytocin (Tabak et al., 2011).
Salivary cortisol (Berry & Worthington, 2001).

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**Table 4.** Coded ratings of ten aspects regarding the quality of the forgivingness scales

Instrument <sup>1</sup>	Dimension	Concept <sup>2</sup>	Language <sup>3</sup> / Translations	Sample	Scale Structure N° items(Type)	Subscales <sup>4</sup>	Availability <sup>5</sup>	Reliability <sup>6</sup>		Item generation	Validity		T
								$\alpha$	Test- Retest		Formal Analysis	Relation with other variables <sup>7</sup>	
Forgiveness of Others Scale	Dispositional	-	English	+/- Counselling clients	+ 15 (True-False)		+/-	+	+	+	+/-	+/-	6
Willingness To Forgive	Dispositional	+	English	+ Elderly women	+ 16 (Multiple choice Scenario-based)		-	+	-	-	-	+/-	4.5
Psychological Profile of Forgiveness	Dispositional	+	English	+ Elderly women	+ 30 (Likert 1-4)/	1.Absence Of Negative (AON) emotions 2.AON judgments 3.AON behaviors 4.Presence Of Positive (POP) aspects 5.POP judgments 6.POP behaviors	-	+	-	-	-	+/-	4.5
Family Forgiveness Scale	Dispositional	-	English/ Korean	+ Adults	+ 40 (Likert 1-4)/	1.Family of origin section 2.Primary relationship section	+	+	-	+	+	+/-	7
Forgiveness Questionnaire	Dispositional	-	English/ Japanese	+ Adults	+ 38+8 (Likert 1-17)	1.Revenge vs Forgiveness 2.Personal and Social Circumstances 3.Forgiveness Block 4.Obstacles to Forgiveness	+/-	-	-	-	+	-	3.5
Forgiveness Attitudes Questionnaire	Dispositional	-	English	+/- College students	+ 26 (Multiple choice Scenario-based)		+	+	-	+/-	-	+/-	4.5
Transgression Narrative Test of Forgivingness	Dispositional	+	English	+ Undergraduate students	+ 5 (Likert 1-5 Scenario-based)		+	+	+	+	+	+	10
Forgiveness Likelihood Scale	Dispositional	+ CBE P	English/ Portuguese	+ Undergraduate students	+ 10 (Likert 1-5 Scenario-Based)		+	+	+	-	+	+ (+/-)	8.5

<i>Escala Sobre o Perdão</i>	Dispositional	+	Portuguese	+	+		+	+	-	-	+	+	7
				Priests/ Students/ Teachers	12 (Likert 1-5)								
Tendency To Forgive scale	Dispositional	+	English	+	+		+	+	+	-	-	+(+/-)	7.5
				College students	4 (Likert 1-7)								
Willingness To Forgive Scale	Dispositional	+	English/ Portuguese	+	+		+	+	-	+/-	+	+	7.5
				Undergraduate students	12 (Likert 0-6 Scenario-Based)								
Heartland Forgiveness Scale	Dispositional	+	English/ Turkish	+	+	1.Fgv of Self 2.Fgv of Others 3.Fgv of Situations	+	+	+	+	+	+(+)	10
		P		Undergraduate students/ Adults on romantic relationship	18 (Likert 1-7)								
Trait Forgivingness Scale	Dispositional	+	English/ Korean	+	+		+	+	+	+	+	+(+)	10
		E P		Undergraduate students	10 (Likert 1-5)								
CAPER	Dispositional	+	Spanish	+	+/-		-	+/	-	+/-	+	-	4.5
		E P		Adults	20 (Likert 1-4)			-					
Forgiving Personality Scale	Dispositional	+	English	+	+		+	+	+	+	+	+/- (+)	9.5
				Undergraduate students/ College students	33 (Likert 1-5)								
Family Forgiveness Questionnaire	Dispositional	-	English	+	+	1.Tendency to forgive other family members 2.Perception of forgiveness	+/-	+	+/-	-	+	+	6
				Families	12 (Likert -3-3)								
Seeking Forgiveness Questionnaire	Dispositional	+	English	+	+	1.Inability in Seeking Forgiveness 2.Sensitivity to Circumstances 3.Uncondicional Seeking Forgiveness	+/-	-	-	+/-	+	+(+/-)	6.5
				Adults	15 (Likert 1-19)								
Enright Forgiveness Inventory	Episodic	+	English/ Dutch/ Korean	+	+	1.Positive Affect 2.Negative affect 3.Positive Behavior 4.Negative Behavior 5.Positive cognition 6.Negative cognition	-	+	+	+	+	+	8
		E N		College students and their parents	60 (Likert 1-6)								
Transgression Related Interpersonal Motivations Inventory (TRIM-12)	Episodic	+	English/ Turkish/ Chinese	+	+	1.Avoidance 2.Revenge	+	+	+/-	+	+	+(+)	9.5
		B P		Undergraduate students	12 (Likert 1-5)								

Wade's Forgiveness Scale	Episodic	+ CBE	English/ Chinese	+/- College students	+ 83 (Likert 1-5)	1.Thoughts a. Revenge b. Freedom from Obsession c. Affirmation d. Victimization 2.Feelings 3.Behaviors a. Avoidance b. Toward God c. Conciliation d. Holding a Grudge	+	+	-	+	+	-	6.5
Rye's Forgiveness Scale	Episodic	+ CBE	English	+ Undergraduate students	+ 15 (Likert 1-5)	1.Absence of Negative 2.Presence of Positive	+	+	+	-	+	+(+)	9
Forgiveness Inventory	Episodic	-	English	+ Married couples	+ 23 (Likert 1-5)	1.Impact 2.Meaning 3.Moving On	+/-	+	-	+	+	+	6.5
Transgression-Related Interpersonal Motivations inventory (TRIM-18)	Episodic	+ E P	English/ Chilean Chinese Spanish	+ Undergraduate students	+ 18 (Likert 1-5)	1.Avoidance vs Benevolence 2.Revenge	+/-	-	-	-	+	+	6
Marital Offense-Specific Forgiveness Scale	Episodic	+	English/ Turkish	+ Couples	+ 10 (Likert 1-6)	1.Resentment- Avoidance 2.Benevolence	+	+	-	+	+	+(+)	9
Acts of Forgiveness Scale	Episodic	+ C N	English/ Turkish	+ Undergraduate students	+ 45 (Likert 1-5)		-	+	+	+	+	+	8
Cuestionario de Perdón en Divorcio-Separación	Episodic	+ CBE P	Spanish	+ Divorce adults	+ 5 (Likert 1-5)		+	+	-	+	+	+	8
BICAR	Episodic	+ E P	English	+ Undergraduate and graduate students	+/- 30	1.Benevolence 2.Inner resolution 3.Conciliation 4.Avioldance 5.Retribution	+/-	+	-	+/-	+	+/-	6

Workplace Forgiveness Scale	Episodic	+ E P	English	+ Nurses	+ 23 (Likert)	1.Overcoming negative thought and Feeling towards the Offender 2. Seeking to Understanding the Offender's Reasons. 3. Fostering Positive Approaches toward the Offender 4. Belief in the Benefits of Forgiveness	+/-	+/ -	-	+	+	+	7
Forgiveness Aversion Scale	Episodic	+ E P	English	+ Adults	+/- 9 (Likert)	1.Self-Protection 2.Unreadiness 3.Face Concerns	+	+/ -	-	+	+	+(+)	8
Forgiveness Reconciliation Inventory	Episodic	-	English	+ Undergraduate and graduate students/ Clinical population	+ 24 (Dichotomous opposing adjectives)	1.Collaborative Exploration 2.Role of Reconciliation 3.Remorse/Change 4.Outcome	-	+	-	+	+	+	6
Decision to Forgive Scale	Episodic	+ CBE P	English	+ Undergraduate students	+ 5 (Likert 1-5)	1.Avoidance 2.Revenge 3.Decision to Forgive	+/-	+	+	+	+	+(+)	9.5
Group Forgiveness Scale	Episodic	+	English	+ Aduts Undergraduate students	+ 17 (Likert 1-5)		+/-	+	-	+	+	+	7.5
Interpersonal Relationship Resolution Scale	Dyadic	+	English	+ Graduate and undergraduate students/ Clinical population	+ 44 (Yes/no)	Forgiveness Scale: 1.Insight 2.Understanding 3.Opportunity of Compensation 4.Overact of Forgiveness Pain Scale: 1.Shame 2.Rage 3.Control 4.Chaos	+	+	-	+	+	+	8

### *Estimated reliability*

Cronbach's alpha and Intraclass Correlation Coefficient (ICC) were most frequently used as measures of estimated internal consistency and temporal stability, respectively. The cutoff points suggested by Muñiz, Hidalgo, García-Cueto, Martinez, and Moreno (2005; see Table 4) were used to determine whether a measure reported inadequate, adequate but with deficits, or adequate values of estimated reliability. Following these criteria the majority of the studies reported an adequate estimated internal consistency. Temporal stability correlations (e.g., test-retest information) were reported for 13 scales, usually over two to eight weeks.

### *Validity evidence*

Concerning content validity, 18 scales, most of them assessing episodic forgiveness, reported a clear description of the item generation and selection (e.g., target or expert group, discussion, literature/theory analysis, interviews). Regarding validity evidence based on internal structure, the majority of the dispositional scales (13/17) and the totality of the episodic scales reported information about the quantitative analyses of the structure of their instruments (e.g., various exploratory and confirmatory factor analytic procedures or item response theory methods). Evidence supporting construct validity of scale scores, based on correlations with related constructs, was reported for almost all instruments—usually involving correlations of the scale scores with scores on scales measuring theoretically related variables, as recommended by the AERA et al. (2014).

### **Construct Validity—a Nomological Network of Associations**

We sought to provide evidence of construct validity through examining the associations of different constructs and variables mentioned in the method section with measures of forgiveness. We hypothesized the closeness of association for each criterion variable as High, Moderate, or Low conceptual similarity. We tallied every correlation of every study within the 32 articles (Dyadic was not included), and we classified each as to whether it represented our hypothesized level of conceptual similarity—thus mapping out a nomological network of associations with trait forgiveness and episodic forgiveness. Many articles reported multiple studies, and many studies involved numerous correlations. We have provided raw data in Annex 1 (Supplemental Tables 1 and 2. We have simplified and aggregated the results within

Tables 5 and 6 in which we reported mean correlations for each group of variables. We conducted a one-way conceptual similarity ANOVA (high, moderate, or low) for Dispositional and Episodic measures using as dependent variable the absolute value of the correlations. This allowed us to test whether the degree of conceptual similarity resulted in stronger correlations as it moved from low to moderate to high. We categorized 373 correlations (230 for dispositional measures and 143 for episodic measures). There were significant differences across conceptual similarity for both dispositional,  $F_{Dispositional}(2, 227) = 31.5, p < .001$ , and episodic  $F_{Episodic}(2, 140) = 27.7, p < .001$ , forgiveness measures. Post-hoc Tukey test showed that there were also significant differences across levels for both dispositional, High ( $n=21, r_{mean\ absolute} = .43$ ) > Moderate ( $n=103, r_{mean\ absolute} = .32$ ) > Low ( $n=106, r_{mean\ absolute} = .20$ ), and episodic, High ( $n=39, r_{mean\ absolute} = .46$ ) > Moderate ( $n=67, r_{mean\ absolute} = .38$ ) > Low ( $n=45, r_{mean\ absolute} = .26$ ), forgiveness.

### **Other Measures of Forgiveness besides Scales**

In this section, we review extant methods applied to the assessment of forgiveness. They are classified into implicit, behavioral, and biological measures of forgiveness.

#### ***Concept definition***

Eight of eleven authors described forgiveness adequately using a referenced conceptualization (i.e., McCullough et al., 2000; Subkoviak et al., 1995; Worthington & Wade, 1999). Of the 8 definitions, two defined forgiveness as reduced negativity, and six defined forgiveness as reduced negativity plus increased positivity. Three refer to forgiveness as linked to cognition, behavior, and emotions; four as just emotion; one as just behavior.

#### ***Implicit measures of forgiveness***

We identified two implicit measures. The Implicit Relational Assessment Procedure developed in Ireland by Ferroni and Barnes-Holmes (2014) measures implicit attitudes related to forgiveness of self and others. Information about generation and selection of the statements or stimulus was not reported, nor information about reliability and validity.

**Table 5.** Evidence for construct validity of Trait Forgivingness through a nomological network of associations

Forgivingness Correlated with Variables Used as a Criteria to Support Construct Validity	Hypothesized Level of Correlation	Number of Correlations	Mean Correlations in Groups of Measures
<b>Hypothesized High</b>		<b>21</b>	<b>.43</b>
Association with Other Dispositional Measures of Forgivingness (i.e., TNTF, MFI, Vengeance, TFS-partner rating)	High	21	.43
<b>Hypothesized Moderate</b>		<b>103</b>	<b>.32</b>
Associations with Agreeableness and Neuroticism	Moderate	38	.29
Associations with Trait Measures Close to Unforgiveness (i.e., Anger, Rumination, Aggression, and Hostility)	Moderate	27	.40
Associations with Trait Mental Health Measures (i.e., Anxiety and Depression)	Moderate	16	.32
Association with Episodic Forgiveness Measures (i.e., EFI, SIF, TRIM-12, MFI-Self, WtF, IRRS, FoS)	Moderate	12	.22
Associations with Empathy	Moderate	9	.24
Associations with Apology by Offender	Moderate	1	.63
<b>Hypothesized Low</b>		<b>106</b>	<b>.20</b>
Associations with Conscientiousness, Extraversion, and Openness	Low	49	.16
Associations with Dispositional States (Verbal Aggression, Physical Aggression, Need for affection, Self-esteem, Optimism, Satisfaction with life, Happiness, Loneliness, Hope, Gratitude, Cognitive Flexibility, Positive Affect, Negative Affect, Distraction, Need for Approval)	Low	46	.24
Associations with State Measures of Anger and Anxiety	Low	8	.28
Associations with Religion or Spiritual Measures (i.e., Religious Motivation, Spiritual Well-Being, Existential Well-Being)	Low	3	.17

**Table 6.** Evidence for construct validity of Episodic Forgiveness through a nomological network of associations

Episodic Forgiveness Correlated with Variables Used as a Criteria to Support Construct Validity	Hypothesized Level of Correlation	Number of Correlations	Mean Correlations in Groups of Measures
<b>Hypothesized High</b>		<b>39</b>	<b>.46</b>
Association with Other Episodic Measures of Forgiveness (e.g., EFI, TRIM-12, single item of forgiveness)	High	39	.46
<b>Hypothesized Moderate</b>		<b>67</b>	<b>.38</b>
Associations with State Measures of Anger and Anxiety	Moderate	10	.39
Associations with Trait Measures Close to Unforgiveness (i.e., Anger, Rumination, Aggression, and Hostility)	Moderate	12	.37
Association with Dispositional Forgiveness Measures (e.g., Forgiveness Likelihood Scale, TNTF, Forgiveness of Others)	Moderate	9	.37
Associations with Empathy (state and trait)	Moderate	4	.46
Associations with Offender variables (i.e., Apology, Responsibility Attributions, Intent)	Moderate	6	.35
Associations with Offense variables (i.e., Transgression Severity, Offense Hurtfulness, Offence Seriousness)	Moderate	16	.34
Associations with Quality of the Relationship (i.e., Marital Quality, Closeness, Relationship Satisfaction, Commitment)	Moderate	10	.40
<b>Hypothesized Low</b>		<b>45</b>	<b>.26</b>
Associations with Dispositional States (Self-esteem, Satisfaction with life, Hope, Positive Affect, Negative Affect)	Low	22	.22
Associations with Trait Mental Health Measures (i.e., Anxiety and Depression)	Low	10	.28
Associations with Religion or Spiritual Measures (i.e., Religious Motivation, Spiritual Well-Being, Existential Well-Being)	Low	13	.27



The Forgiveness Implicit Association Test, developed in Germany by Fatfouta, Schröder-Abé, and Merkl (2014), assesses the difference in response latencies between congruent and incongruent pairings of stimuli. Estimated reliability, using the Spearman-Brown corrected split-half correlation, was 0.89. One-month temporal stability correlation was 0.50.

### *Behavioral measures of forgiveness*

One way of studying forgiveness is to observe behaviors indicative of forgiveness-related motivations. Four behavioral measures were identified.

Zechmeister, Garcia, Romero, and Vos (2004) experimentally studied 113 college students on the effects of arousal in a scripted laboratory offense in which a confederate made amends and apologized. The behavioral measure that indicated that forgiveness had occurred was whether the offended student volunteered to help the offender by doing a favor. Behavioral conciliation depended on arousal, apology, and offense removal.

Exline, Baumeister, Bushman, Campbell, and Finkel (2004) studied how narcissistic entitlement was related to forgiveness-related behavior, which was assessed using multiple measures such as defection in a 10-trial prisoner's dilemma game, affective tone in a written response to a moderately antagonistic note, and money allocated to a partner who had offended. Entitlement predicted less forgiving responses on two behavioral measures: more hostile responses to a negative message and less money allocated to the other player.

Carlisle et al. (2012) examined 136 university students. Based on a resource-distribution paradigm, the behavioral measure of forgiveness was the opportunity to distribute raffle tickets to the other participants who had either apologized or offered restitution. Restitution from a transgressor increased prosocial behavior toward that transgressor, but apology had no effect.

Dorn, Hook, Davis, Van Tongeren, and Worthington (2014) used two behavioral methods of studying forgiveness using three samples. Participants were offended in a laboratory adaptation of the Cyberball (social exclusion) paradigm. Forgiveness was indicated by how likely the participant was to pass the ball to the player who excluded the participant. In another study, participants recalled an offense that they had either

forgiven, committed to forgive but still struggled, or had not forgiven. Participants who had forgiven listed more positive qualities than did participants who had not forgiven.

### ***Biological measures of forgiveness***

Berry and Worthington (2001) used analysis of cortisol in saliva. Salivary cortisol is associated with stress from unforgiveness. Both Worthington (2006) and Strelan and Covic (2006) characterized unforgiveness as stressful. Finding that salivary cortisol levels were related to unforgiveness supports that theorizing. Tabak, McCullough, Szeto, Mendez, and McCabe (2011), used blood draws to assess cortisol and oxytocin levels. Decreased levels of forgiveness were associated with elevated mean peripheral oxytocin reactivity.

Witvliet, Ludwig, and Vander Laan (2001) and Lawler et al. (2003) examined the peripheral psychophysiological correlates of forgiveness in response to interpersonal conflict. They assessed blood pressure, heart rate, frontalis EMG and skin conductance and found associations between forgiveness and the cardiovascular variables (i.e., heart rate and blood pressure). Witvliet et al. found that unforgiveness is associated with higher skin conductance levels and greater cardiovascular reactivity in terms of blood pressure and heart rate. Lawler et al. using a between-subjects design relative to Witvliet et al.'s within-subjects design, concluded that the state forgiveness was an emotion or action related to heart rate and trait forgiveness a personality construct linked to blood pressure.

Farrow et al. (2008) used functional magnetic resonance imaging (fMRI) to focus on individuals with posttraumatic stress disorder (PTSD). Participants underwent fMRI scanning before and after a cognitive behavioral treatment (CBT) including a forgiveness component. Farrow et al. found an activation of the posterior cingulate gyrus in post-therapy response to forgivability judgments.

Kang, Namkoong, and Kim (2008) studied the heritability and the association of anger and forgiveness with genetic polymorphisms. They isolated the DNA from blood cells and genotyped DRD4 and COMT polymorphisms. They only found differences for DRD4 in males. The DRD4-2repeat (2R) allele group presented lower anger and higher forgiveness than the 4R allele.

## Discussion

In this review, we extended findings regarding assessment contributed by more selective reviews—some general (i.e., McCullough et al., 2000) and some focused on comparing properties of individual instruments (i.e., Worthington et al., 2015). We reviewed 45 measures following the MARS statement (APA, 2008). We provided initial evidence supporting the estimated reliability and a valid interpretation of scores.

### Definition of Forgiveness

The present review reaffirms the lack of consensus between authors regarding the definition of forgiveness. We understand forgiveness as a psychological response that involves the absence of negative affect, judgment and behavior, and depending on the value of the relationship (perhaps) the presence of positive ones (Worthington, 2005). Therefore, scales assessing the negative construct of forgiveness might be chosen when the offense occurs in a non-valued relationship, whereas scales including the positive construct were recommended in valued relationships. Besides, experimenters should consider assessing different components of forgiveness.

### Estimated Reliabilities of Scores

Most self-report instruments have scores with Cronbach's alphas between .80 and .95. As we know from psychometric formulae, alpha is related to scale length (as well as overlap in item content). However, we found short scales with high alphas (i.e., TTF, DTFS). In fact, we computed the correlation between scale length and alpha for all instruments in the review ( $r = .366, p < .001$ ) suggesting that, while important, scale length was not a strong causal explanation for high alphas. Importantly, readers recognize that higher alphas are not necessarily "better." The purpose for a scale—assuming that a minimum threshold for alpha is reached and assuming that the test user will recognize appropriate limitations imposed when alpha is low—determines what a "high" or "moderate" alpha is. For example, in clinical work, where precise diagnosis of an individual is important, clinicians need alpha to be at least .95. In experimental studies—especially in exploratory experiments in which a science is new or in which an application of a concept's connection to an established construct is new or in a correlational study that uses other constructs of moderate estimated reliability—standards for the estimated reliability of scores are not as rigorous, and an alpha of .70 might suffice.

Fewer than half of the scales reported temporal stability coefficients, which is vital information when no intervention occurs. With interventions, change is expected over time, so temporal stability coefficients inform clinical users about the amount of change due to simple instrument instability relative to change due to the intervention (Wade et al., 2014). Similar consideration is important in assessing longitudinal developmental changes with age (Enright & Fitzgibbons, 2014), or due to naturally occurring decay of unforgiveness with time (McCullough et al., 2003; McCullough et al., 2010).

It is important that articles report reliability evidence so that users can make informed decisions on use. Our review provides information about the degree to which alphas and test-retest correlations from the different scales are or not adequate in order to facilitate clinicians and researchers select the appropriated instrument.

### **Evidence Related to Valid Interpretation of Scores- Nomological Network**

As we observed above, definitions of forgiveness differ. It is not surprising that there was a lack of homogeneity in the selection of concepts theoretically related to forgiveness. Scale developers could select constructs to serve as construct validity criteria by referring to their own theory. We have taken an experimental approach to determining criteria indicating construct validity. There was no existing corpus of constructs comprising the nomological network of interrelations among variables (Cronbach & Meehl, 1955). We attempted to construct such a network within the present study. For both dispositional and episodic forgiveness scales we found high, moderate and low associations to differ significantly.

#### ***Dispositional Forgivingness Scales***

As shown in Table 5, high associations were found with other forgivingness measures. Moderate associations of constructs predisposing people for forgivingness were found with high agreeableness, low neuroticism, high empathy and also low levels of trait measures close to unforgiveness (i.e., anger, rumination, aggression, and hostility). Forgivingness as a trait was also moderately associated with trait mental health measures; specifically it was associated to less likelihood of being depressed and anxious. Low associations included correlations of trait forgivingness with traits of conscientiousness, extraversion, and openness to experience as well as to dispositional states as needs for affection and approval, high self-esteem, gratitude, optimism, hope,

positive affect, and cognitive flexibility. Trait forgivingness was also low related to negative affect, verbal aggression, physical aggression, and loneliness.

### ***Episodic Forgiveness***

As presented in Table 6, high associations were found with other episodic measures of forgiveness. Moderate associations of state forgiveness were found with low levels of state anger and anxiety and high levels of empathy and trait forgivingness. Also, characteristics regarding the offense (e.g., offense hurtfulness), the offender (e.g., responsibility attributions) and the quality of the relationship (e.g. closeness), were found to be moderately related to episodic forgiveness. For example, if the offended person received an apology from the offender, or if their relationship was very close it is easier to achieve state forgiveness. Finally, episodic forgiveness was found to be weakly associated with trait mental health measures; specifically it was associated to low levels of trait anxiety and trait depression. It was also related to dispositional states in concrete to low levels of negative affect, and high levels of satisfaction with life and positive affect. Besides, episodic forgiveness was high related to religiousness and well-being,

Our findings of correlates with forgivingness and episodic forgiveness were consistent with, but more thorough than, an important existing meta-analysis (i.e., Fehr et al., 2010). We added the comparisons showing that the closeness of numerical association was related to closeness of conceptual association.

### **Biological and Behavioral Indicators of Forgiveness**

Biological measures are more useful as a complement to self-report measures of unforgiveness states than as a direct measure of forgiveness because biological reactions might be related to a multitude of factors (e.g., other stressors, other life events, health or workplace worries, etc.) that might be affecting a person other than an offense; whereas self-reports are specific to the construct. Thus, forgiveness requires a self-report of forgiveness that is coincident with reduced physiological indication of stress to show evidence of forgiveness and not mere reduced stress. Further analysis should be done to establish estimated reliability and validity of scores from biomarkers.

Forgiveness occurs in an interpersonal context (Fehr et al., 2010). Behavioral measures might reflect many social restrictions on acting on one's revenge or avoidance motivations, making them more remote to forgiveness than self-report. Behavioral

methods cannot replace self-reports but used as a complement, they can provide corroboration, identify silent or hollow forgiveness (Baumeister et al.,1998) and add nuances to self-reported responses. We found that behavioral methods have been infrequently used, are psychometrically weak and unsophisticated in relation to self-reports and physiological indices, and they usually require experimental manipulation. All of these considerations make behavioral assessments more suited for experimental studies than for assessment of forgiveness in non-experimental settings, except for indirect markers of forgiveness (e.g., writing positive qualities about an offender) used by Dorn et al. (2014), that could be easily applied in clinical or educational contexts.

### **Measures Recommended**

There are many trait and state instruments strong for conducting research or for clinical practice. Based on the obtained scores and examination of psychometric evidence, we suggest the use of the most promising. Of course, instrument selection can be difficult and should be done based on the purposes of the user.

Based on our coding of ten aspects of each instrument (see Table 4), we recommend the Transgression Narrative Test of Forgiveness (TNTF), the Heartland Forgiveness Scale (HFS) or the Trait Forgivingness Scale (TFS) for the assessment of dispositional forgivingness. The three of them obtained a total score of ten, meaning that they are psychometrically strong instruments. Nonetheless, they assess forgivingness differently. For instance, TNTF uses scenario-based items, HFS is composed of three subscales, and TFS is unidimensional.

For episodic forgiveness, again considering the scores obtained, we suggest TRIM-12 and the Decision to Forgive Scale, depending on what stage of the process of forgiveness the reader wants to assess. Most theoreticians and clinicians have hypothesized that most of the time, decision to forgive is the first step (for a review, see Davis et al., 2015), usually prior to reduction of the negative aspects and the building in of the positive ones. However, McCullough et al. (2010) showed that often spontaneous forgiveness occurs—with or without any explicit decision to forgive—and the curve decays as a power function to describe all data.

Because self-report instruments can be insensitive to processes outside of awareness (e.g., implicit emotions, attitudes and religiosity), indirect measures may

uncover processes of forgiveness not explicitly attended to. Susceptibility to social desirability (Ferroni & Barnes-Holmes, 2014) is always a threat to validity, and indirect indications of forgiveness coincident with self-reports improves confidence that forgiveness has occurred. However, changes in behavior, physiology and implicit attitudes can also be due to many things besides forgiving—like seeing justice enacted, relinquishing offenses to God, excusing, justifying, forbearing, or accepting. Thus, neither indirect measures of forgiveness by themselves nor self-reports by themselves are completely adequate for thoroughly assessing forgiveness. We thus recommend triangulation of methods when possible, particularly for research purposes.

### **Limitations of the Present Study and Implications for Future Research**

We believe that we have accomplished three major outcomes in the current review. We have given an overview of the status of instrument construction and psychometric support for forgiveness measures, recommended the strongest instruments for use, and provided a unique method of constructing a nomological network of associations with forgiveness constructs and identified the strong, moderate, and weak associations.

Nevertheless, there are several limitations in this review. First, we did not restrict the language of the instruments we sought to review. However, we were limited to Spanish, Portuguese, and English in our abilities to evaluate the research reports. Thus, we could not analyze eleven scales (five Korean; two Japanese; two Chinese; one Iranian and one German). Second, we analyzed primary publications that reported psychometric data. In some cases, additional publications have since added new psychometric data that could help interpret reliability, validity, and structural composition of scores (i.e., Macaskill, 2012); however, considering all of the literature relating to all instruments used would be such a daunting task to make it impractical. Thus, we regretfully must accept the limitation. Third, single-item measures were not included in our review. Despite their psychometric shortcomings, they should not be dismissed.

### **Conclusion**

In this review, we evaluated the level of sophistication of research in forgiveness assessment and provided one basis for choosing which method to employ in scientific and clinical fields. Also, our review suggests the content of a nomological network of

associations regarding the construct validity of forgiveness that informs about the concept of forgiveness, knowing which and how other variables are associated to this construct. Finally, we have provided suggestions, based on our analyses, of which specific instruments should be considered for assessing both dispositional and episodic forgiveness.

### **Final comments**

This study is already published (Fernández-Capo, Recoder, Gámiz, Gómez-Benito, & Worthington, 2017) and a copy can be found in the Annex 1.





## CHAPTER VII

### STUDY 2. DECISIONAL FORGIVENESS ACROSS SPANISH AND AMERICAN POPULATIONS: TRANSLATION, VALIDATION, AND MEASUREMENT INVARIANCE OF THE DECISION TO FORGIVE SCALE-- SPANISH

The present investigation reports three studies. In Study 2.1, we sought to translate the DTFS (Davis et al., 2015) into Spanish (called the DTFS-Spanish; DTFS-S). Then we sought to provide basic psychometric evidence supporting validity and reliability of the scores of the DTFS-S in a Spanish-speaking population. Specifically, we aimed to study the dimensionality of the scale. We examined whether the one-factor structure found in the English version of the DTFS would replicate for the Spanish version. We also aimed to provide additional validity evidence distinguishing scores on the DTFS-S from forgiveness as an end-point. In Study 2.2, we investigated the relationship of DTFS-S with other constructs to add evidence of construct validity. In Study 2.3, we aimed to measure invariance across Spanish and American populations.

All the studies presented below received approval from the Ethics Committee at the *Universitat Internacional de Catalunya*.

#### Study 2.1

In Study 2.1, we included the translation of the instrument together with initial evidence of its internal structure. We estimated reliability of the scores on the DTFS-S. Also, we provided initial evidence related to interpreting the scores to have construct validity by distinguishing DTFS-S from Transgression-Related Inventory of Motivations-18-Spanish (TRIM-18-S) subscales.

#### Method

##### Participants

Participants ( $N=400$ ; 133 males;  $M_{age} = 34.23$ ,  $SD = 13.60$  and 267 females;  $M_{age} = 35.87$ ,  $SD = 12.95$ ) completed the DTFS-S to test for its dimensionality, initial validity and reliability of the scores. From those, a subset of 52 participants (17 males;  $M_{age} = 29.53$ ,  $SD = 13.57$  and 35 females;  $M_{age} = 24.71$ ,  $SD = 11.16$ ) randomly selected,

completed the protocol a second time after one-week to allow the evaluation of estimated 1-week temporal stability of scores on the scale.

### **Instruments**

*Demographic information.* Participants supplied their age, sex, and nationality.

*Offense characteristics.* Participants provided information about who was the offender and when the offense happened.

*Decision to Forgive Scale (Davis et al., 2015).* The scale is composed of 5 items that participants have to answer using a 5-point rating ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores range from 5 to 25 with higher scores indicating a stronger decision to forgive. Scores on the DTFS were related to lower existential distress. Information about the Spanish version is presented below in Results and will be called the DTFS-Spanish (DTFS-S).

*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), avoidance (7 items) and benevolence (6 items) motivations following an offense. Participants were instructed to write a short summary about a hurtful transgression they could remember and then rate their motivations toward the offender by indicating their agreement with each item using a 5-point response option (1=*strongly disagree* to 5=*strongly agree*). Higher scores indicate higher motivations. It is possible to obtain a forgiveness total score by reverse coding the items on the avoidance and revenge subscales and summing them together with the direct scores on the benevolence items (for an item-response-theory analysis to support this, see McCullough et al., 2010). Cronbach's alphas from the original scale (TRIM-18) were above .85 for each of the three subscales. For the TRIM-18-S (Fernández-Capo et al., 2017), alphas were between .71 and .81. In our sample, alphas were all above .80.

### **Translation Process**

Following the recommendations by Muñiz, Elosua, and Hambleton (2013), the scale was translated into Spanish using the back-translation process. First, two psychologists whose first language was Spanish and second language was English each

separately translated the scale into Spanish. Then they shared both versions and discussed the discrepancies. The final version was then sent to two psychologists whose first language was English and second language was Spanish. Each independently translated the scale into English again, resolved their differences and the final (English) version was then compared to the original one. No significant discrepancies were found between the versions. As a final step, we conducted a pilot study with 15 people to ensure understandability and appropriateness of the items. The final version was called the DTFS-S.

### **Procedure**

Participants were invited to participate in an online survey via e-mail or posts in social networks. To be eligible for the study, participants needed to identify with Spanish nationality, speak and write Spanish fluently, and be at least 18 years old. After giving their informed consent, participants completed demographic questions followed by the instruments used for the study. They were not offered any form of compensation for being in the study (most people took less than 10 minutes to complete the study).

### **Data Analysis**

#### *Dimensionality and structure of the DTFS-S*

To evaluate the dimensionality of the scale a one-factor CFA model was tested. The MLR estimator was used due to univariate and multivariate kurtosis. Missing data (less than 4%) were controlled with full information maximum likelihood. Because Chi-square is sensitive to sample size, model fit was evaluated also based on the comparative fit index (CFI), the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), and the evaluation of parameter estimates. CFI values around .95 indicate good fit. RMSEA values below .08 indicate a reasonable fit, whereas values below .05 are considered a good fit. SRMR values are expected to be below .08 (Hu & Bentler, 1999).

#### *Estimated reliability of the scores*

Evidence for estimated reliability of scores was explored by computing Cronbach's alpha and Intraclass Correlation Coefficient (ICC) to calculate estimated internal consistency and estimated temporal stability of the scores, respectively.

### ***Differentiating DTFS-S from TRIM-18-S***

To provide primary evidence supporting construct validity, we sought to differentiate decisional forgiveness from forgiveness motivations (as measured by TRIM-18-S). We replicated the model tested in the original article (Davis et al., 2015)—analyzing the DTFS with avoidance and revenge subscales of the TRIM. However, we expanded beyond Davis et al. (2015) by including the positive dimension of the TRIM-18-S (i.e., Benevolence). Thus, we tested a 4-factor CFA model with TRIM-18-S and DTFS-S items loading in 4 different correlated factors. The MLR estimator was applied again for this analysis.

*Mplus* version 6 was used to test the dimensionality of the DTFS-S and to define the model that distinguished it from the TRIM-18-S subscales. Analyses for estimated reliability of scores were done with the SPSS statistical package.

## **Results and Discussion**

### **Dimensionality and Structure of the DTFS-S**

According to the original scale, all the items of the DTFS-S were treated as indicators of a single factor. The results obtained for the one-factor model showed a good fit of the model to the data  $\chi^2(5) = 14.12$ ,  $p = .015$ , CFI = .99, RMSEA = .07 (90% CI = .03 - .11), SRMR = .01. The standardized factor loadings ranged from .51 to .94. These results support our hypothesis that the DTFS-S would show the same structure as the original DTFS version (Davis et al., 2015).

### **Estimated Reliability of the Scores**

Cronbach's alpha was .92 indicating good internal consistency (González & Pazmiño, 2015) of the DTFS-S score. Estimated temporal stability of the scale score was also supported obtaining an ICC of .72. These results supported our hypothesis that the DTFS-S scores had high estimated reliability.

### **Differentiating DTFS-S from TRIM-18-S**

The results obtained for the 4-factor model to distinguish DTFS-S from TRIM-18-S were  $\chi^2(224) = 569.69$ ,  $p < .001$ , CFI = .93, RMSEA = .06 (90% CI = .06-.07), SRMR = .06. They showed adequate fit of the model to the data. The factor loadings were all significant and ranged from .49 to .94. Correlations among the DTFS-S and

avoidance, revenge and benevolence subscales were  $r = -.60$ ,  $r = -.54$ , and  $r = .74$ , respectively. These results suggested primary evidence of the difference between the two constructs.

### **Study 2.2**

The aim of Study 2.2 was to provide evidence of convergent construct validity of the DTFS-S scores through the study of its relationship with conceptually related constructs. We also aimed to define a model that allows the exploration of the association between previous and actual relationship with the offender with DTFS-S and TRIM-18-S by regressing all the latent factors (i.e., DTFS, avoidance, revenge and benevolence) on previous relationship and at the same time regressing actual relationship on the four latent factors.

### **Method**

#### **Participants**

We sampled  $N=171$  students, who completed the DTFS-S plus additional measures to assess convergent construct validity of the scores. One participant was excluded because the response pattern showed that he or she answered randomly. The final sample included 69 males ( $M_{age} = 19.06$ ,  $SD = 1.78$ ) and 101 females ( $M_{age} = 20.26$ ,  $SD = 4.09$ ).

#### **Instruments**

Participants completed the same measures presented in the Study 2.1 (i.e., demographic information, offense characteristics, DTFS-S and TRIM-18-S). They also completed instruments to assess self-construal, rumination, anger, empathy, closeness with the offender before and after the offense happened, anxiety, depression and satisfaction with life:

**Self construal.** *Self-Construal Scale (SCS; Singelis, 1994; psychometric data for the Spanish version from Singelis et al., 2006).* The SCS is composed of 30 items divided into two subscales (15 items each) that assess the tendency to think of oneself as independent (e.g., “I enjoy being unique and different from others in many respects”) or interdependent (e.g., “I will sacrifice my self-interest for the benefit of the group I am in”) with others. To assess collectivistic self-construal we used the interdependent

subscale composed of 15 items in which participants indicate their agreement on a 7-point response format from 1 (*strongly disagree*) to 7 (*strongly agree*). The estimated reliability of the SCS had alphas ranging from .62 to .70. In the present study, alpha was .75.

**Rumination.** *Ruminative Responses Scale (RRS: Treynor, Gonzalez, and Nolen-Hoeksema, 2003; psychometric data for the Spanish version from Hervás, 2008).* The RRS is a self-report measure composed of 22 items to assess ruminative response style, that is a patterns of responses focused on thinking repeatedly about the causes and consequences of depressive symptoms. The items must be answered using a 4-point response option ranging from 1 (*almost never*) to 4 (*almost always*), obtaining a total score that ranged from 22 to 110, with higher scores indicating a more ruminative pattern of response. Cronbach's alpha was .93 in the original version. In the present study, alpha was .90.

**Anger.** *State-Trait Anger Expression Inventory-2 (STAXI-2; Spielberg, 1999; psychometric data for the Spanish version from Miguel-Tobal, Casado, Cano-Vindel, & Spielberger, 2001).* The STAXI-2 is a self-report measure that evaluates general predisposition to express and feel anger. For the present study, we used the "state anger" subscale composed of 15 items that have to be answered using a 4-point response option (1 = *not at all* to 4 = *very much so*). Good psychometric properties were reported in the original study for this subscale with an alpha value of .89. In the present study, alpha was also .89.

**Empathy.** *Test de Empatía Cognitiva y Afectiva (TECA; López-Pérez, Fernández-Pinto, & Abad, 2008).* The TECA is a Spanish language self-report instrument that assesses cognitive and affective empathy. It can be divided into four subscales (i.e., perspective adoption, emotional comprehension, empathic stress, and empathic joy), or it can be used as a global measure of empathy by summing the scores of those subscales. It is composed of 33 items answered using a 5-point response option where 1 = *I totally disagree* and 5 = *I totally agree*. Cronbach's alpha from the original study was .86. In the present study, alpha was .82.

**Closeness with the offender.** Previous and actual relational closeness with 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)” (1 = *no at all* to 5 = *extremely close*; Tsang et al., 2006).

**Anxiety.** *Beck Anxiety Inventory (BAI: Beck, Epstein, Brown, & Steer, 1988; psychometric data for the Spanish version from Beck & Steer, 2011).* The BAI is a self-report measure to assess anxious symptomatology. Participants have to rate how much they were bothered in the last week by the 21 different symptoms of the scale within a 4-point response option from 0 (*It did not bother at all*) to 3 (*I almost could not stand it*). Cronbach’s alpha from the original study of the Spanish version (Sanz, 2011) was .85. In the present study, alpha was .91.

**Depression.** *Beck Depression Inventory (BDI: Beck, Ward, Mendelson, Mock, & Erbaugh, 1961; psychometric data for the Spanish version from Sanz & Vázquez, 1998).* The BDI is a 21-item self-report measure in which each item presents four statements indicating different levels of severity of a particular symptom experienced in the last week. Participants select the statement that best reflects their behavior during the last week. Scores range from 21 to 84, with high scores indicating higher levels of depression. Alpha for scores on the scale was .86. In the present study, alpha was .90.

**Satisfaction with life.** *Satisfaction with Life Scale (SWLS: Diener, Emmons, Larson, & Griffin, 1985; psychometric data for the Spanish version from Atienza, Pons, Balaguer & García-Merita, 2000).* The SWLS is an instrument designed to assess global cognitive judgments of one’s satisfaction with life. It is composed of 5 items answered using a 7-point response option ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach’s alpha in the original study was .84. In the present study, alpha was .85.

## **Procedure**

Participants were recruited in undergraduate courses in exchange for a breakfast ticket. To qualify, participants had to be at least 18 years old, identify as Spanish in nationality, and also read and speak Spanish fluently. Participants received a paper-pencil packet. They read the consent form and signed it before moving on to questionnaires. Most participants took between 15 and 20 minutes to complete the packet.

## **Data Analysis**



### ***Evidence regarding association with conceptually related constructs***

SPSS statistical package was used to compute bivariate correlations to assess the degree of association between the DTFS-S and TRIM-18-S subscales and total score, collectivistic self-construal, rumination, state anger, empathy, anxiety, depression, and satisfaction with life. We also computed means, standard deviations and alpha coefficients for all the measures (see Table 7).

### ***Additional evidence differentiating DTFS-S from TRIM-18-S***

Mplus version 6 was used to define the model with all 4 factors (i.e. DTFS, avoidance, revenge and benevolence) regressed on previous relationship and actual relationship regressed on the 4 factors. The MLR estimator was used due to univariate and multivariate kurtosis. Missing data (less than 4%) were controlled with full information maximum likelihood.

## **Results and Discussion**

### **Evidence Regarding Association with Conceptually Related Constructs**

Prior to conducting the statistical analyses, we checked the data for normality assumptions and found that some variables were not normally distributed (i.e., revenge and state anger). Thus, we used non-parametric tests in the analyses that included those variables.

In Table 7, we show the correlations among forgiveness variables and the other associated variables.

Significant correlations in the expected direction were found between DTFS-S and almost all the other measures. The DTFS-S was correlated negatively with avoidance ( $r = -.63$ ), revenge ( $r = -.49$ ), and positively with benevolence ( $r = .76$ ). DTFS-S was correlated positively with collectivistic self-construal ( $r = .29$ ). It was not significantly correlated with rumination, contrary to our hypothesis. But DTFS-S was correlated negatively with state anger ( $r = -.21$ ). The DTFS-S was correlated positively with empathy ( $r = .24$ ). As far as mental health and well-being correlates, the DTFS-S scores were not correlated with either anxiety or depression, but was positively correlated with satisfaction with life ( $r = .19$ ).

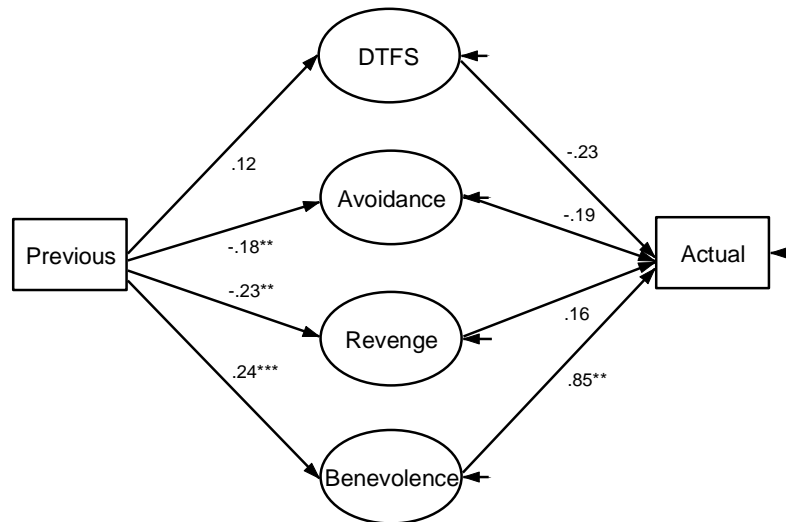
**Table 7.** Means, standard deviations, internal consistency estimates, and bivariate correlations among all instruments used in Study 2

	<b>M (SD)</b>	<b><math>\alpha</math></b>	<b>DTFS</b>	<b>Ítem DTFS</b>	<b>AVD</b>	<b>REV</b>	<b>BEN</b>	<b>Total TRIM</b>
DTFS	16.77 (5.51)	.90	1	-	-	-	-	-
Single Item DTFS	-	-	.285**	1	-	-	-	-
Avoidance	21.45 (8.00)	.90	-.630**	-.158*	1	-	-	-
Revenge	8.67 (3.87)	.83	-.490**	-.099	.497**	1	-	-
Benevolence	18.85 (6.29)	.88	.759**	.221**	-.835**	-.545**	1	-
Total TRIM	60.24 (16.09)	.93	.735**	.193*	-.935**	-.669**	.942**	1
Collectivistic Self- Construal	71.13 (10.10)	.75	.286**	-.038	-.059	-.221**	.230**	.195*
Rumination	45.94 (15.36)	.90	-.027	.099	.026	.043	.049	-.024
State Anger	19.02 (6.18)	.89	-.209**	-.031	.117	.367**	-.128	-.196*
Empathy	115.17 (12.54)	.82	.237**	.025	-.032	-.297**	.166*	.157
Anxiety	15.14 (11.11)	.91	-.060	.131	-.013	.030	.023	-.001
Depression	10.66 (8.17)	.90	-.062	.215**	.021	.045	.026	-.015
Satisfaction with life	23.24 (6.54)	.85	.186*	-.080	-.083	-.109	.102	.116

**Additional Evidence differentiating DTFS-S from TRIM-18-S**

Testing the structural model (as a replication with students, who were about ten years younger in this study 2.2, on the average, than were adults in Study 2.1) yielded an adequate model fit  $\chi^2(263) = 431.977$ ,  $p < .001$ , CFI = .93, RMSEA = .06 (90% CI = .05 - .07), SRMR = .06 (see Figure 2). Consistent with our hypothesis (H11), the regression paths between the avoidance, revenge, and benevolence subscales with closeness of previous relationship with the offender were significant (est = -.18, -.23, .24, respectively) but not the one with DTFS-S (est = .12,  $p = .18$ ). In addition, only the

regression path between benevolence and actual relationship with the offender was significant (est = .85,  $p = .02$ ).



Note: correlations between latent factors and indicators of each factor were not represented in the figure for clarity.  
 \*\*\* $p < .001$  \*\* $p < .01$  \* $p < .05$

**Figure 2.** Model relating forgiveness variables with closeness with the offender before and after the offense

### Study 2.3

In Study 2.3, we aimed to test for measurement invariance of the DTFS-S across American and Spanish populations.

#### Method

##### Participants

We used original data from Davis et al. (2015) to assess measurement invariance across Spanish and American populations. The American sample included  $N = 432$  participants; 134 males ( $M_{age} = 25.36$ ,  $SD = 6.38$ ) and 298 females ( $M_{age} = 26.24$ ,  $SD = 7.54$ ). We used the sample from Study 1 to represent Spanish population.

##### Measures

For this present study (Study 2.3) only demographic information and DTFS-S and DTFS scores were used.

## Data Analyses

Invariance was evaluated through different increasingly restrictive models. First, we assessed configural invariance by studying whether the structure and dimensionality (i.e., same items loading into the same number of factors) of the scale were the same in both groups. Second, we tested for metric invariance by constraining factor loadings to be equal across groups. Third, a model that constrained factor loadings and intercepts to be equal was run to assess scalar invariance. Finally, a model evaluating strict factorial invariance was performed by fixing also the residuals to be equal across groups. The MLR estimator was applied. Chi square difference test (adjusted taking into account the use of the MLR estimator, described at the *Mplus* website (<http://www.statmodel.com/chidiff.shtml>) was used to assess differences between models.

## Results and Discussion

Results for the different models tested can be found in Table 8. The configural model (Model 5) was estimated with no cross-group equality constraints, and although the Chi-square was significant, the remaining indices indicated an adequate fit of the model to the data. Thus, we tested for metric invariance (Model 6) by constraining factor loadings to be equal across both groups. A significant change in the Chi-square,  $\Delta \chi^2(5) = 29.314, p < .01$ , indicated that the fit of the model was significantly worse. To identify which items differed across groups, we checked the modification indices (van de Schoot, Lugtig, & Hox, 2012), which suggested that the factor loading of item 4 (i.e., *Mi elección es perdonarle*) should be estimated freely for every group. As a consequence, we tested for partial measurement invariance (i.e., a condition where the majority of the items are invariant across groups but some are not; Model 7) by allowing item 4 to load differently across groups. The partial metric model provided an adequate fit and did not differ significantly,  $\Delta \chi^2(4) = 5.723, p = .22$ , from the configural model (Model 5). Almost all the items (i.e., not item 4) were invariant across cultures, meaning that American and Spanish populations attribute similar meaning to the latent construct (i.e., decisional forgiveness; Van de Schoot et al., 2012).

Retaining Model 5 as reference, we tested for partial scalar invariance by constraining intercepts to be equal (Model 8); however the Chi-square difference was significant,  $\Delta \chi^2(5) = 27.506, p < .01$ , indicating that the level of the underlying items

are different across groups. Because scalar invariance was not achieved testing of invariance across residuals was not considered.

**Table 8.** Goodness of fit indicators of the different models tested to assess measurement invariance (Study 3)

Model	Model Comparison								
	S-B $\chi^2$	df	CFI	TLI	RMSEA	SRMR	S-BA $\chi^2$	$\Delta$ df	<i>p</i>
Spain vs. USA									
Configural	26.364*	10	.986	.971	.063	.013	-	-	-
Metric	50.188*	15	.969	.958	.076	.052	29.314	5	<.01
Partial Metric	34.024*	14	.982	.975	.059	.052	5.728	4	.22
Scalar	65.400*	19	.959	.957	.077	.078	27.506	5	<.01

Note: S-B $\chi^2$  = Satorra-Bentler chi square; df = degrees of freedom; S-BA  $\chi^2$  = Satorra-Bentler scaled difference;  $\Delta$ df = difference in degrees of freedom between nested models; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; SRMR: Standardized Root Mean Square Residual.

### General Discussion

The purposes of this article were (1) to translate the Decision to Forgive Scale into Spanish, (2) to provide initial evidence supporting construct validity, and then (3) to test for its measurement invariance across different populations. Scores on the Spanish version of the Decision to Forgive Scale (DTFS-S) have good psychometric adequacy. There is evidence of estimated reliability of scores, and primary evidence supporting construct validity in interpreting the scores to indicate a decision to forgive.

### Internal Structure and Estimated Reliability

The DTFS-S has a simple factor structure, with all the items loading significantly in a single factor. Our findings are in line with our expectations that the Spanish version of the DTFS-S would show the same structure as the original DTFS version (Davis et al., 2015). Cronbach's alpha showed good estimated internal consistency (González & Pazmiño, 2015) of the scores on the Spanish version of the DTFS-S. Moreover, the alpha obtained in our study (.92) was very close to the one obtained in the original study in English (.93; Davis et al., 2015). Scores on the scale also presented good estimated one-week temporal stability as demonstrated by the

results obtained on the ICC. Altogether these results provided enough evidence to support estimated reliability of the scores of the DTFS-S.

### **Distinguishing DTFS from TRIM**

As Davis et al. (2015) pointed out, many forgiveness models emphasized the importance on distinguishing making a decision to forgive from emotional forgiveness or from motivations related to transgressions—like avoidance, revenge, or benevolence motivations. Namely, Exline et al. (2003) theorized that decisions to forgive were separate from emotional and motivational changes. The DTFS-S assessed the decision to forgive, and the TRIM-18-S assessed motivations. We replicated the model tested by the authors of the original scale by submitting the TRIM-18-S and DTFS-S items under CFA analyses. However, because the positive dimension of forgiveness—not just reducing unforgiving motivations—has been gaining attention, we decided to work with the TRIM-18 version (McCullough, et al., 2006) (instead of TRIM-12; McCullough et al., 1998). This included the benevolence subscale. A 4-factor solution presented adequate overall model fit. CFA results demonstrated that although decision to forgive is related with avoidance, revenge and benevolence (TRIM dimensions that assess motivations), they are not the same. These results provide additional evidence of construct validity of the scores, and initial evidences of the distinction of DTFS from emotional-motivational forgiveness.

Another key variable in the forgiveness process was the relationship with the offender before and after the offense happened (Strelan, Karremans, & Krieg, 2017). Considering decisional forgiveness as an experience apart from some complete experience of forgiveness as an end point (though there is some overlap), we hypothesized that one's decision to forgive is a free act or a voluntary choice (Hope, 1987; Pingleton, 1989, in Kaminer et al., 2000) intra-motivated and independent from offense and offender variables. We defined a latent model to explore the association of both variables with closeness with the offender and interestingly we found that while the regression paths between TRIM-18-S subscales were all significant (in line with what Burnette, McCullough, Van Tongeren, & Davis [2012] found), the DTFS-S path was not, meaning that one's decision to forgive is not predicted by the previous relationship with the offender. Thus, these results support our hypothesis. Furthermore,

these findings provide further evidence that demonstrates that decisional forgiveness is different from TRIM-18-S.

### **DTFS and Related Constructs**

To provide initial evidence supporting construct validity, we ran different bivariate correlations between DTFS-S and constructs theoretically related with it. DTFS-S scores correlated in the expected direction with almost all the measures. Of special attention was the correlation between DTFS-S scores and collectivistic self-construal. Collectivistic cultures recognize forgiveness within the context of harmony and reconciliation (Kurniati et al., 2017). Also, it has been demonstrated that some people within collectivistic cultures could feel forced or obligated (by their culture or community) to forgive (Davis, Worthington, Hook, & Hill 2013; Hook et al., 2009; Hook et al., 2012). We hypothesized that a collectivistic view of oneself would be significantly related to making a decision to forgive, and our results supported this hypothesis adding supplemental evidence about the existent relation between self-construal and decisional forgiveness.

As McCullough et al. (1998) pointed out; empathy plays a crucial role when someone has to forgive an offense or an offender. Although their study explored the association of empathy with forgiveness as an end-point, it seems logical that empathy would play an important role when deciding to forgive, thus we explore the association with and found that empathic people have higher scores on DTFS, as expected.

DTFS-S scores were associated with low anger states but not with mental health. We did not find significant associations between decisional forgiveness and anxiety or depression, however, DTFS-S significantly correlated with satisfaction with life.

### **Measurement Invariance**

It is typically assumed that an instrument operated the same way in different groups and populations; however when we tested for measurement invariance of the DTFS results were different than what we expected. Configural invariance was achieved across Spanish and American populations, but not metric. By freeing item 4 to load differently in both groups we were able to establish partial metric and partial scalar invariance. These results indicate that American and Spanish people answer differently to item 4 and don't understand the construct in the same way, thus preventing the

comparison of DTFS-S total score across groups. Nonetheless, when reviewing the factor loadings, we observe that they did not differ that much (Spanish = .942 vs American = .923), thus, when using the instrument in both population we recommend to repeat the analyses in order to see if this change could really affect the results.

### **Implications for the Use of the DTFS-S**

We believe this supports a recommendation that the DTFS-S scale can be used for research purposes. Perhaps the DTFS-S might be appropriate for clinical purposes, but we did not test it with actual patients.

### **Limitations**

This study had several limitations. First, although a general population was used for the majority of the analyses, only students were used to explore the association of the DTFS-S with other measures. Thus, our evidence for validly interpreting the scores to indicate connections with other variables in the nomological network of associations is limited. Second, whereas we used available instruments translated into Spanish previously and having psychometric support in Spanish speaking cultures, there was a general absence of many psychometrically sound instruments for a Spanish population. That made it difficult to measure other constructs that could be of interest for the study (e.g., trait forgivingness, measures indicating whether apologies had been offered or restitution had been made, measures of communication of regret by the offender, etc.). In addition, the lack of many instruments to assess processes during the discussion of transgressions and the experience of forgiveness did not permit the investigation of the time-course of forgiving. However, with the DTFS-S in the literature, this will become more possible.

### **Conclusion**

Making a decision to forgive is a separate and a key experience in forgiving an offender. Having a psychometrically sound measure that allows its assessment in Spanish population will help researchers find out and explore whether decisions to forgive often are a starting point that facilitates thorough forgiveness, and, if so, to design psychotherapeutic interventions that facilitate this experience.



**Final comments**

This study is under revision in *Current Psychology*.

## CHAPTER VIII

### STUDY 3: ROLES OF ONE'S DECISION TO FORGIVE IN FORGIVENESS PROCESSES

In the following study, we attempted to (a) model DTFS and forgiveness dimensions (i.e., avoidance, revenge, and benevolence) as a process of temporal change, (b) study the influence of decisional forgiveness in those trajectories, and (c) provide an initial exploration of the relation between decisional forgiveness and health and well-being variables.

To be able to define different trajectories, we collected repeated longitudinal measures. We hypothesize that DTFS and forgiveness trajectories can be defined with a simple linear model (McCullough et al., 2003), with an intercept indicating the initial values (i.e., first time point) of the dimensions and a slope representing the amount of change over time. For many people, forgiveness is a progressive experience that builds on early gains until forgiving is complete. We expect to find a reduction of the negative dimensions of the TRIM-18 (i.e., avoidance and revenge) and an increase of the positive dimension (i.e., benevolence) and DTFS. However, for some people, forgiveness might be experienced quickly at first, and after a period of incubation, reflection, and perhaps interaction with the offender, the forgiving person might slide back and lose some of the early gains. The possibility of such a quadratic model to define DTFS and TRIM-18 dimensions will also be explored.

In a second step, we will regress the decision to forgive at the initial point on the intercept and slope of the different models. This will assess whether there is any significant influence of this construct on people's courses of forgiving.

Finally, to explore more about the nomological network of decisional forgiveness, we will correlate the forgiving variables with health and well-being variables.

#### Method

##### Participants and Procedure

Participants were  $N = 191$  undergraduate students (71.9% female, 28.1% male;  $M$  age = 23.91 years,  $SD = 9.47$  years) from the *Universitat Internacional de Catalunya*

(Barcelona, Spain) and the Ludwig-Maximilians University (Munich, Germany). Students came from the degree programs of Psychology (42.8%), Medicine (21.4%), Dentistry (18.7%), Physiotherapy (10.2%) and Nursery (7.0%). To participate in the study, participants should have felt transgressed the same day or the day before—using the methodology of McCullough et al. (2010). By the time participants completed the protocol for the first time, the majority (70.2%) reported offenses from the day before and only a few (28.3%) reported transgressions received the same day. Participants who completed all five repeated measures received a 10€ voucher. We recruited participants through the psychology course (and Experimental Psychology course for the Psychology students). We went to these courses and transmitted our interests in surveying people who had been recently hurt or transgressed. From then on, every week we sent an e-mail as a reminder. Whenever participants felt offended, they could start the study through a link that was sent previously by e-mail. Before starting to answer the questionnaires, an informed consent was presented with all the information about the study. After students gave informed consent and completed the protocol for first time, we re-contacted the participants four more times (every two or three days approximately, which modified McCullough et al., who assessed students daily for 19 days) through e-mail providing a new link to complete the measures. Hence, we attempted to measure participants' forgiveness of their transgressions in the time period of approximately two weeks (12 days) after the offense had happened.

This study received approval from the Ethics Committee at the *Universitat Internacional de Catalunya*.

## Measures

The instruments used to assess closeness with the offender, forgiveness (i.e. avoidance, revenge, and benevolence motivations), decision to forgive, anxiety, anger, depression, rumination, empathy, and satisfaction with life were described in Study 2. Sociodemographic information was also collected.

***Offense-specific variables.*** Participants provided a description of the offense and information about who was the offender. They also reported when the offense occurred and how painful it was by answering a single item using a 6-point response format from 0 = *Not painful* to 6 = *Worst pain I ever felt*. Participants also reported if they had received an apology from their offender or not.

**Affect.** *Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988).* The PANAS is a self-report questionnaire containing two scales of 10 items each that assess positive and negative affect, respectively. Items are answered using a 5-point response format from 1 = *Very slightly or not at all* to 5 = *Extremely*. Higher scores indicate more presence of the dimension.

**Stress.** *Perceived Stress Scale (PSS; Cohen, Kamarck & Mermelstein, 1983; psychometric data provided by Remor, 2006).* The PSS is a 10-item instrument used for measuring the degree to which situations in one's life are appraised as stressful. Items have to be answered within a 5-point response format from 0 = *Never* to 4 = *Very often*. Higher punctuations indicate higher levels of stress.

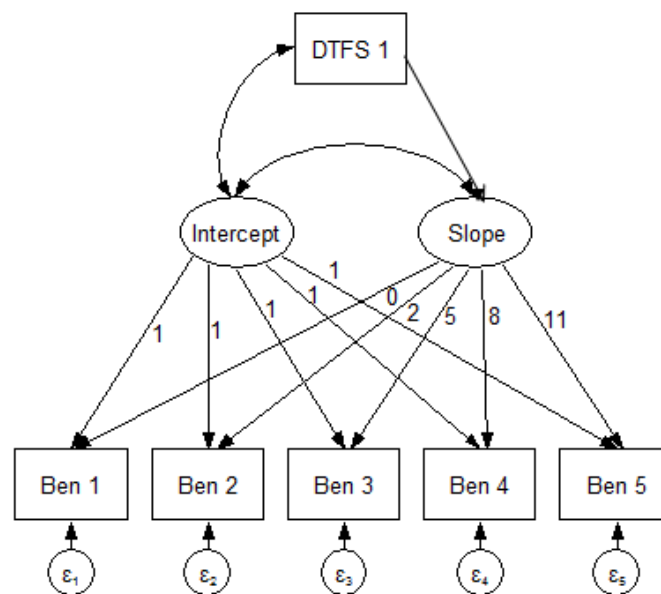
### **Data analysis**

SPSS Statistical Package was used to provide a descriptive analysis including means and standard deviations of all measures at the 5 time points.

*Mplus* version 6 (Muthén & Muthén, 1998-2011) was used to apply structural equation modeling techniques to observe the trajectories of the three dimensions of the DTFS and the TRIM-18 (i.e., avoidance, revenge, and benevolence). Model fit was evaluated using the Chi-square ( $\chi^2$ ) statistic. However, because  $\chi^2$  is sensitive to sample size, we also evaluated the models with the comparative fit index (CFI), the Tucker-Lewis Index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). These indices were interpreted following Hu and Bentler (1998) recommendations. Values of CFI and TLI above .90, RMSEA below .08 and SRMR below .08 suggest an adequate fit of the model to the data.

To examine within-person changes in decisional forgiveness and in the three dimensions of the TRIM-18, we employed latent growth curve modeling using the MLR estimator. Latent growth curve models (LGMs) allowed us to observe two different parameters of change. First, the starting values for baseline measures of each construct assessed through the estimation of the mean latent intercept. Second, the amount of change across time for each construct by the estimation of the mean slope. We also estimated the variance of individual intercept and slope values. This final step will allow us the examination of intra-subjects changes (i.e., intercept and slope variances).

To test the effect of decisional forgiveness on the three major dimensions of forgiveness, we regressed the decision to forgive at time one on the estimated slopes of each construct. Figure 3 depicts the model of benevolence as an example. We added the DTFS at time one as an observed variable and a regression path between the slope and the new variable. We also defined a correlation between the intercept and DTFS, we chose a correlation instead of a regression path because information was collected at the same time point and thus it is not possible to establish a relation of causality.



**Figure 3.** *Latent Growth Curve Model of Benevolence with DTFS predicting change across time. Factor loadings represent the amount of days since the offence occurred.*

Finally, in order to increase the nomological network of associations of decisional forgiveness, we computed Pearson correlations between DTFS and health and well-being variables. The mean scores of each variable through the five time points were used.

## Results

### Descriptive statistics

Table 9 shows means and standard deviations for almost all measures at the five time points.

**Table 9.** Means and standard deviations for major study variables, assessments (1-5)

	Time 1		Time 2		Time 3		Time 4		Time 5	
	(N=182)		(N = 98)		(N = 77)		(N = 71)		(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
Anxiety	14.00	10.52	9.68	9.65	8.39	9.12	7.52	8.70	7.85	9.64
Anger	22.76	8.35	18.49	6.16	18.26	6.66	17.45	5.35	17.68	5.91
Depression	11.59	10.30	9.54	10.02	8.96	9.81	7.86	8.68	8.29	9.41
Positive Affect	27.54	7.39	27.48	6.98	26.83	6.29	26.48	7.42	26.94	7.98
Negative Affect	20.87	7.72	19.34	6.52	18.10	6.76	18.49	6.63	18.69	6.82
Stress	26.17	8.06	24.52	8.30	25.25	9.26	24.96	9.64	25.27	9.24
Rumination	43.71	12.42	41.37	12.45	40.43	12.28	39.41	13.68	39.83	12.82
Empathy	119.39	13.46	118.82	13.38	119.53	16.20	119.58	14.87	118.84	14.74
Satisfaction with life	23.81	6.74	23.21	7.28	24.86	7.31	24.99	7.48	24.45	7.42

### *Type of offenses*

Most of the participants felt transgressed by a friend (40.8%) followed by their partner (12.6%) that is, 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%), unknown person (6.3%), their boss (2.6%) and “others” (6.8%) including a professor or a doctor as examples. Four participants (2.1%) did not report information about the offender.

***Apology and relationship with the offender***

Only the 27.3% of the sample received an apology from their offender whereas the remaining 72.7% did not. Regarding quality of previous and actual relationship with the offender, results indicated that they were closer to their offender before ( $M = 4.14$ ,  $SD = 1.80$ ) than after ( $M = 3.14$ ,  $SD = 2.03$ ) the offense happened.

**Trajectories of decisional forgiveness and the TRIM-18 dimensions**

In Table 10, we present the goodness-of-fit indices of the different models tested. The intercept mean and variance describe the average starting point of each variable and the individual variability in starting point at the beginning of the study, respectively. In Table 11, we present the estimated values of the parameters of each model. Initial levels of the participants in the four variables were significantly greater than zero (i.e., intercept mean) and also differences among their starting levels were observed (i.e., intercept variance) in the four dimensions. Significant average changes were detected in the four dimensions, indicating that, on average, avoidance ( $B = -.25$ ,  $p < .01$ ) and revenge ( $B = -.08$ ,  $p = .014$ ) levels decreased linearly over the 12 days after receiving an offense, and benevolence ( $B = .16$ ,  $p < .01$ ) and decision to forgive ( $B = .11$ ,  $p < .01$ ) levels tended to increase over the same time period. 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 ( $s^2 = .23$ ,  $p < .01$ ), revenge ( $s^2 = .07$ ,  $p < .01$ ), and benevolence ( $s^2 = .17$ ,  $p < .01$ ) were found, but not in decisional forgiveness. All together, these results indicated that at the beginning of the study the initial levels of the four dimensions were significantly greater than zero and showed significant individual variability. Furthermore, the three dimensions of the TRIM-18 showed significant change and also significant individual variability in change over a 12-days period of time. The decision to forgive showed a significant increase over time but not individual variability.

**Table 10.** Goodness-of-fit indices of the different models tested

Model	$\chi^2$	df	CFI	TLI	RMSEA	SRMR	BIC	AIC
DTFS								
LGCM	18.750*	10	.924	.924	.070	.057	2722.27	2690.29
Avoidance <sup>a</sup>								
LGCM	21.696*	11	.928	.934	.072	.071	3129.13	3100.15
Path Model	30.201*	14	.930	.925	.079	.071	4096.49	4054.63
Revenge								
LGCM	24.108*	10	.900	.900	.087	.058	2515.94	2483.74
Path Model	25.843*	13	.932	.921	.073	.054	3523.16	3478.08
Benevolence								
LGCM	22.018*	10	.910	.910	.081	.105	2969.77	2937.57
Path Model	22.577*	13	.958	.951	.063	.088	3861.84	3816.76

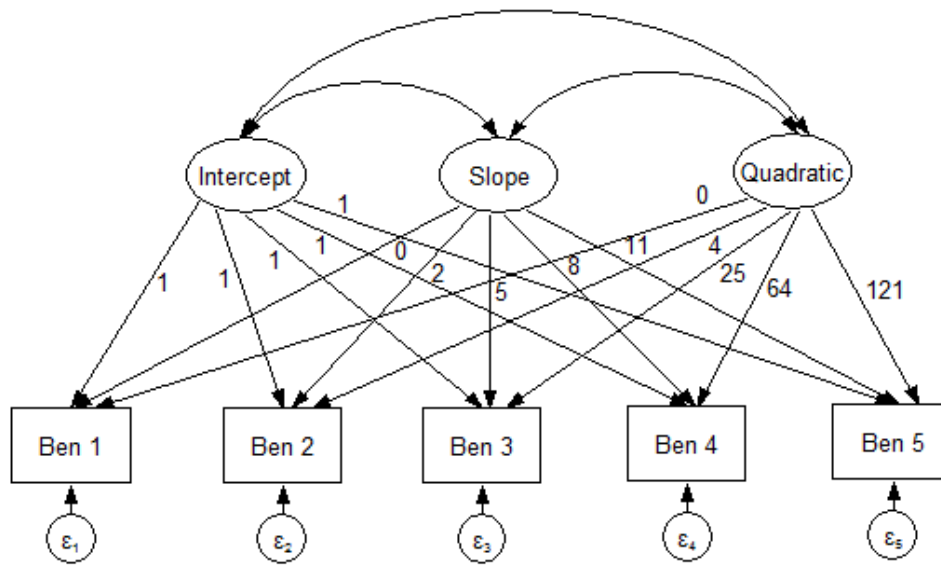
Note:  $\chi^2$ : Chi-square; df: degrees of freedom; CFI: Comparative Fit Index; TLI: Tucker-Lewis Index; RMSEA: Root Mean Square Error of Approximation; SRMR: Standardized Root Mean Squared Residual; BIC: Bayesian Information Criterion; AIC: Akaike Information Criterion. <sup>a</sup>The residual variance of avoidance at time 5 was constrained to 0 for model identification.

**Table 11.** Intercept and slope means and variances of the linear latent growth models

	Intercept				Slope			
	Mean	<i>p</i>	Variance	<i>p</i>	Mean	<i>p</i>	Variance	<i>p</i>
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

We also studied the possibility of a curvilinear model to define the trajectories of the four major dimensions—which would test whether initial gains in forgiveness might be lost over time. To do so, we added a third parameter represented by the squared values on the time variable (i.e., 0, 2, 5, 8, 11). An example of the benevolence model is presented in Figure 4. The estimated quadratic terms for all the models were not statistically significant ( $ps > .05$ ) suggesting that change in decisional forgiveness and TRIM-18 dimensions are best described as linear (Muthén, 2009). That is, when forgiveness occurred, it tended to increase and not regress to an initial value.





**Figure 4.** *Curvilinear model of Benevolence*

### Decisional forgiveness as predictor of change

Model fit indices can be found in Table 10. The correlation between DTFS and the avoidance intercept was negative and significant ( $r = -.65, p < .01$ ); however, the regression path was only marginally significant ( $\beta = .25, p = .06$ ). Similar results were found in the revenge model. The correlation between the intercept and DTFS was significant ( $r = -.50, p < .01$ ), but the regression path was not ( $\beta = .21, p = .07$ ). This was not the case of benevolence, where both, the correlation between the intercept and DTFS ( $r = .83, p < .01$ ) and the regression path ( $\beta = -.33, p < .01$ ), were significant.

These results suggested that one's decision to forgive just after experiencing an offense is a good predictor of change in benevolence. It is important to point out that the regression coefficient was negative, meaning that a high decision to forgive after an offense slowed down the rhythm of change in benevolence. This is probably due to the high correlation between the intercept and DTFS, which indicates that those with high levels on decisional forgiveness already had high levels of benevolence. In relation to avoidance, having higher levels of decisional forgiveness accelerated the decrease on the avoidance dimension. The correlation between the avoidance intercept and DTFS indicated that individuals with high levels of forgiveness avoided less his offenders.

### Decision to forgive and its association with other variables

In Table 12, we present the correlations of DTFS and the three dimensions of the TRIM-18 with health and well-being variables. Decisional forgiveness showed significant positive correlations with benevolence, positive affect, empathy and satisfaction with life. On the other direction, we found significant negative correlations of decision to forgive with avoidance, revenge, state anger and stress. We did not found significant correlations with anxiety, depression, rumination, and negative affect.

**Table 12.** *Pearson correlations between decisional forgiveness and TRIM-18 with other variables*

Variable	1	2	3	4
1. Avoidance	1	.453**	-.766**	-.623**
2. Revenge	.453**	1	-.522**	-.443**
3. Benevolence	-.766**	-.522**	1	.775**
4. DTFS	-.623**	-.443**	.775**	1
5. Anxiety	.013	.054	-.081	-.108
6. Anger	.199**	.296**	-.326**	-.233**
7. Depression	-.002	.118	-.011	-.081
8. Positive Affect	-.101	-.057	.158*	.207**
9. Negative Affect	.012	.191*	-.055	-.085
10. Stress	.057	.199**	-.198*	-.171*
11. Rumination	.142	.080	-.129	-.108
12. Empathy	.037	-.273**	.244**	.161*
13. Satisfaction with life	-.075	-.076	.140	.228**

### Discussion

Forgiveness is a process of temporal change where victims reduce their negative feelings and motivations toward their offender and (perhaps) increased their positive ones (Exline & Baumeister, 2000; McCullough et al., 1997). In the present study, we aimed to report information about (a) the trajectories of the DTFS and the TRIM-18 dimensions, (b) how a decision to forgive influences the changes on those dimensions, and (c) how decisional forgiveness is related to health and well-being variables.

### **Defining DTFS and TRIM-18 trajectories**

We defined two different possible models (i.e., a linear and a quadratic) for DTFS and each dimension of the TRIM-18. In all cases the quadratic term was not significant indicating that a linear model explained better the different trajectories (Muthén, 2009).

This is the first study that modeled decisional forgiveness over time. We found that on average, decision to forgive tended to increase linearly over time. Results showed inter-individual differences on starting values; however, we did not find variance among participants on the amount of change (i.e., slope).

According to previous literature (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 negative feelings, emotions and behaviors (e.g., Fincham, Hall & Beach, 2006; Subkoviak et al., 1995; Worthington, 2005). On the other hand, we found results on the other direction regarding the positive dimension; a significant intercept and a positive significant slope revealed that the benevolence subscale also tends to be increased over time. These results are different from what McCullough et al. (2003) found. They did not identify significant changes in the benevolence subscale. Altogether, these results indicated that, on average, a person who received an offense tended to forgive over almost two weeks following a transgression.

We specifically examined within-subject and between-subject variations of the DTFS and the TRIM-18 dimensions. Interestingly we found that there was interindividual variation (i.e., variation among persons) on the initial levels of DTFS and avoidance, revenge, and benevolence (i.e., the intercepts) and also in the extent of change of each of the TRIM-18 dimensions (i.e., the slopes).

### **Making a decision to forgive**

Different models of forgiveness have suggested that forgiveness involves, at some point, a decision to forgive. Although it has been defined, no one has never

empirically evidenced its role on the subsequent experience of forgiveness. In line with what Knutson et al. (2008) found by asking participants to rate the importance of each step (considering Enright's 21 steps), we hypothesized that decision to forgive would be the first step to achieve total forgiveness. Thus, we explicitly evaluated the role of one's decision to forgive after receiving an offense (i.e., DTFS at time 1) as a predictor of change in the three dimensions of forgiveness.

DTFS at time one marginally predicted changes in avoidance, that is, higher levels of decisional forgiveness accelerated the decrease of avoidance levels, thus, making the person less avoidant faster. However, the influence was only marginally significant. Considering revenge, we did not find a significant effect of decisional forgiveness on its change as we had expected. We thought that this could be due to the starting values. Most participants already presented very low levels of avoidance and revenge just after being offended, and thus, the amount of change (in avoidance and revenge) possible (due to the low base rate) or the possibility that one might decrease the values of avoidance and revenge becomes more difficult.

The implication of our finding is that, in future studies, investigators should study the role of decisional forgiveness in more severe offenses or in people with higher levels of initial unforgiveness (i.e., avoidance and revenge) to see if decisions to forgive have important or relevant effects.

Additionally, decisional forgiveness was found to be a significant predictor of change in benevolence. However, higher levels of initial decisional forgiveness decrease the rate of change in benevolence. This is probably due to the high correlation between decisional forgiveness and benevolence at time one. Those who showed high levels of decisional forgiveness also presented high levels of benevolence, making it harder to keep on increasing its levels over time, and thus, benevolence had the slowest rate of change. The correlation between decisional forgiveness and benevolence was found to be very high in this study and also in study 2 ( $r = .74$ ). Although it is not possible to establish which one comes first, both benevolence and a decision to forgive are highly related, that is, when one increases, also does the other. This association is of main interest if we consider what the majority of literature about forgiveness says. It is still on debate if forgiveness involves only a reduction of negative emotions, cognition and behaviors, or also an increase of the positive ones. Our studies evidenced that high

levels of decisional forgiveness are related to high levels of benevolence, that is, the positive dimension of forgiveness. These results are in line with the idea of decisional forgiveness as the “cognitive commitment to pursue forgiveness by ceasing to retaliate, condemn, or wish ill toward the offender” (Enright & Fitzgibbons, 2002 as cited on Freedman & Zarifkar, 2016). It occurs when the victim stops wishing the worst for his or her offender, and he or she is able to make a decision. Thus, interventions focused on increasing one’s decision to forgive will probably advocate an increase of the positive dimension of forgiveness.

Some people might find that working with cognition is easier than working with emotions. However, this is not always the case, and most treatments—whether focused on cognitive modification or on emotional change—have overall effect sizes that are comparable. However, importantly, they tend to change different variables—particularly the ones they aimed to change. For example, in a study in preparation, Toussaint and his colleagues (2018) have randomly assigned college students to Luskin’s (2001) cognitive-behaviour therapy (CBT) treatment, Forgive for Good (FFG), or to Worthington’s (2006) REACH Forgiveness model, which seeks changes in motivation and emotion as the major targets. Toussaint et al. found that FFG produced higher changes in Rye’s measure of the presence of positive and absence of negative cognition; however, REACH Forgiveness produced higher reductions of unforgiving (avoidance and revenge) motivations and emotional forgiveness. FFG was equal to REACH Forgiveness on decisional forgiveness and trait forgivingness. A control condition, which is similar to the naturally occurring forgiveness assessed throughout the present thesis, produced less change than both in reducing unforgiveness, increasing emotional forgiveness, and changing cognition. The control condition was equal to both FFG and REACH Forgiveness in decisional forgiveness (although this used the version of the scale that was replaced by the DTFS). The REACH Forgiveness intervention produced more change in trait forgivingness than the control condition, which did not differ from the FFG condition.

### **Decision to forgive and related variables**

In order to learn more about decisional forgiveness, we explored its association with other constructs that we expected to be correlated with it. Worthington et al. (2007) hypothesized that decisions to forgive would be more highly related to both increased

spirituality (i.e., closeness to what one considers sacred) and better relationships, but would not affect mental health and physical health as much as would emotional forgiveness. However, they also hypothesized that emotional forgiveness, because it might reduce stress more than decisional forgiveness, might more positively affect stress, physical health, and mental health.

As in Study 2, we found significant relations in bivariate correlations of DTFS with empathy and state anger. Additionally, regarding health variables decisional forgiveness was related to higher levels of positive affect and lower levels of stress. This suggests that theorizing by Worthington, Witvliet, Pietrini, and Miller was oversimplified. We might think of it as describing main effects but not indirect effects. For example, if a decision to forgive indeed positively affects the relationship (as Worthington et al. hypothesized), it is entirely likely that the improved relationship will make the person less stressed, affecting physical health positively, and also positively affecting mental health. Thus, decisions to forgive can affect the entire person—physically, psychologically, relationally, and spiritually. Thus, we might hypothesize in this post hoc analysis that DTFS would perhaps have an even more positive relationship with life satisfaction than we had hypothesized at the outset of this project.

Of special interest is this correlation between DTFS and satisfaction with life. In comparison to TRIM-18 dimensions, it is the only construct that showed a positive and significant correlation. Some previous studies indicated that forgiveness was not associated with satisfaction with life (i.e., McCullough et al., 2001; Muñoz, Vinsonneau, Neto, Girard, & Mullet, 2003); however, a review by Worthington et al. (2018) found several times when forgiveness was related positively to life satisfaction. In the present study, this is the first time that decisional forgiveness has been studied and has been found to be significantly related to life satisfaction. Muñoz et al. (2003) referred to satisfaction with life as a self-referential construct; that is, it depends only on the person and not on the person's relation with others. Within the forgiveness framework, we could consider decisional forgiveness as a self-referential construct, independent from variables of the others and depending only on the willingness of the victim. As a will act, it becomes easier to focus on promoting one's decision to forgive instead of on reducing the negative dimensions, which many times depend on offender or offense variables that we cannot control.

### **Limitations**

This study had several limitations. One major limitation was the heterogeneity of the offenses described by the sample, we collected information about offenses but it was not possible to control for its effects. Our sample was composed only by university students and the offenses reported were of minor severity. Future research should study if the trajectories of TRIM-18 and DTFS dimensions follow the same pattern when offenses are more severe (e.g., sexual abuse, mistreatment). Our study collected information during the following two weeks after receiving an offense, however, when investigating how forgiveness occurs in sever offenses one should consider a more extended period of time (Freedman & Enright, 1996). In those cases, making a decision to forgive would probably be more difficult, however, if the results replicated ours, an intervention focused on promoting the decision to forgive, will lead to an increase of the benevolence dimension and also to a faster decrease of the avoidance and revenge motivations.

## CHAPTER IX

### CONCLUSIONS

#### **Conclusions from Study 1. Measuring forgiveness: A systematic review**

- *Conclusion 1.1:* Forgiveness is usually assessed by scales or questionnaires.
- *Conclusion 1.2:* Based on our rating, the TNTF, the HFS, and the TFS are the more psychometrically powerful scales to assess dispositional forgiveness.
- *Conclusion 1.3:* Based on our rating, the TRIM-12 and the DTFS are the more psychometrically powerful scales to assess episodic forgiveness.
- *Conclusion 1.4:* There is a lack of consensus about what forgiveness implies and about its nomological network of associations.

#### **Conclusions from Study 2. Decisional forgiveness across Spanish and American populations: Translation, validation, and measurement invariance of the Decision to Forgive Scale--Spanish**

- *Conclusion 2.1:* The DTFS-S is a valid and reliable measure that can be used for research or clinical purposes to assess decisional forgiveness.
- *Conclusion 2.2:* The DTFS-S should be carefully interpreted when comparing its scores to American populations (i.e., DTFS) because full measurement invariance was not achieved.

#### **Conclusions from Study 3. Roles of one's decision to forgive in forgiveness processes**

- *Conclusion 3.1:* The TRIM-18 dimensions and DTFS trajectories can be defined through a simple linear model.
  - *Conclusion 3.1.1:* Avoidance motivations tend to decrease linearly over the 2 weeks following an offense.
  - *Conclusion 3.1.2:* Revenge motivations tend to decrease linearly over the 2 weeks following an offense.
  - *Conclusion 3.1.3:* Benevolence motivations tend to increase linearly over the 2 weeks following an offense.



- *Conclusion 3.1.4:* Decisional forgiveness tends to increase linearly over the 2 weeks following an offense.
- *Conclusion 3.2:* Making a decision to forgive is highly associated with benevolence motivations.
- *Conclusion 3.3:* One's decision to forgive predicts the trajectory of benevolence motivations. Specifically, as they are highly correlated, higher levels of decisional forgiveness slow down the rhythm of change of benevolence.
- *Conclusion 3.4:* One's decision to forgive marginally predicts the trajectory of avoidance and revenge motivations. Specifically, higher levels of decisional forgiveness accelerate the rhythm of decrease in those dimensions.
- *Conclusion 3.5:* People who have decided to forgive show lower levels of negative emotions and higher levels of health and well-being.
- *Conclusion 3.6:* Only decisional forgiveness is significantly correlated with satisfaction with life.

## **CHAPTER X**

### **GENERAL CONCLUSIONS AND FUTURE RESEARCH LINES**

There are many theoretical, empirical, and assessment limitations associated to the field of forgiveness. I presented a systematic review about all the instruments that exists to assess forgiveness and the results obtained pointed out two major ideas; first, forgiveness is a complex concept, as evidenced by the heterogeneity among the different definitions proposed in the literature. Second, because of its complexity, its assessment is also complicated and the variety of measures that exist comprised a wide range of possibilities. The amount of measures reflects the lack of a consensus of what forgiveness really is. Researchers and clinicians working on the field of forgiveness, we should make an effort to better describe what forgiveness really implies, delimiting what is and what is not, clearly. Having a homogenous definition of forgiveness will facilitate the explanation of the process, the construction of more specific instruments and developing interventions focused on its development.

An important contribution of this dissertation is the presentation of an instrument ready to be used in the Spanish context. The DTFS-S together with the TRIM-18-S (the validation was done as part of another thesis; Annex 4; Fernández-Capo et al., 2017) are a good attempt to assess forgiveness and do research about it within the Spanish context, where many times we found the difficulty of not having valid and reliable measures to work with.

Finally, in my last study, I tried to provide evidence of how decisional forgiveness intervenes on the most common accepted dimensions of forgiveness (measured by TRIM-18). Making a decision to forgive has a relevant impact on the three dimensions of forgiveness, specifically on the benevolence dimension. Future interventions should take more into consideration decisional forgiveness, as it is a conscious choice that depends only on the victim and not on offense or offender variables, and thus, is something that the offended person can control. We expected that if the victim is willing to decide, as conscious choice, to forgive, he or she will probably be more committed to the process although the difficulties that may emerge, and will obtain the desired results faster.



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## **ANNEXES**

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**ANNEXES STUDY 1**

- **SUPPLEMENTAL TABLES 1 AND 2**

- **ARTICLE PUBLISHED IN EUROPEAN PSYCHOLOGIST**





## SUPPLEMENTAL TABLES 1 AND 2

**Supplemental Table 1***Raw Data for Assessment of Validity Data Supporting Dispositional Forgiveness Scales*

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
Forgiveness of Others Scale	Mauger et. al., (1992)		Depression	Moderate	.16	Not reported
			Need for affection	Low	-.53	Not reported
			Forgiveness of Self	Moderate	.37	Not reported
Psychological Profile of Forgiveness	Helb & Enright, (1993)	Total	Self-esteem	Low	.54	*
		1.Absence Of Negative (AON) emotions	Anxiety (Spielberg State-Trait Anxiety Scale)			
		2.AON judgments	State-Anxiety	Low	-.70	*
		3.AON behaviors	Trait-Anxiety	Moderate	-.74	*
		4.Presence Of Positive (POP) affects	Depression (Beck Depression Inventory)	Moderate	-.41	*
		5.POP judgments				
Transgression Narrative Test of Forgivingness	Berry, Worthington, Parrot, O'Conor, & Wade, (2001)		Anger (Trait Anger Scale)	Moderate	S1: -.43	***
				Moderate	S2: -.38	***
				Moderate	S3: -.43	***
			Temperament (TAS)	Moderate	S1: -.37	***
				Moderate	S2: -.33	***
				Moderate	S3: -.44	***
			Reactivity (TAS)	Moderate	S1: -.36	***
				Moderate	S2: -.34	***
				Moderate	S3: -.27	*
			Aggression Questionnaire			
			Anger	Moderate	S1: -.33	***
				Moderate	S2: -.35	***
				Moderate	S3: -.45	***
			Hostility	Moderate	S1: -.21	n.s.
				Moderate	S2: -.37	**
		Moderate	S3: -.32	*		

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
			Verbal aggression	Low	S1: -.13	n.s.
				Low	S2: -.15	n.s.
				Low	S3: -.12	n.s.
			Physical Aggression	Low	S1: -.09	n.s.
				Low	S2: -.21	n.s.
				Low	S3: -.24	n.s.
			Big Five Inventory			
			Agreeableness	Moderate	S1: .25	*
				Moderate	S2: .33	***
				Moderate	S3: .28	*
			Neuroticism	Moderate	S1: -.29	*
				Moderate	S2: -.27	***
				Moderate	S3: -.32	*
			Conscientiousness	Low	S1: .15	n.s.
				Low	S2: .24	***
				Low	S3: .16	n.s.
			Extraversion	Low	S1: -.02	n.s.
				Low	S2: .19	***
				Low	S3: -.02	n.s.
			Openness	Low	S1: .14	n.s.
				Low	S2: .14	n.s.
				Low	S3: .02	n.s.
			Rumination	Moderate	-.49	***
Forgiveness Likelihood Scale	Rye et al., (2001)		EFI	Moderate	.25	***
			Single item of Forgiveness from the EFI	Moderate	.23	***
			Religiousness (Hoge Intrinsic Religious Motivation Scale)	Low	.22	***
			State Anger (State-Anger Scale)	Low	-.07	n.s.
			Trait Anger (Trait-Anger Scale)	Moderate	-.31	***
			Hope (Avoidance of Hope)	Low	.02	n.s.

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
			Threats subscale from Miller Hope Scale)			
			Existential Well-Being (Spiritual Well-Being Scale)	Low	.07	n.s.
			Religious Well-Being (Spiritual Well-Being Scale)	Low	.23	***
<i>Escala sobre o Perdao</i>	Barros (2002)		Optimism	Low	S1:.26	**
				Low	S2:.27	**
				Low	S3:-.10	n.s.
				Low	S4:.21	*
			Satisfaction with life	Low	S1:.31	***
				Low	S2:.36	**
				Low	S3:-.08	n.s.
				Low	S4:.10	n.s.
			Happiness	Low	S1:.34	***
				Low	S2:.46	***
				Low	S3:-.04	n.s.
				Low	S4:.19	n.s.
			Neuroticism	Moderate	S1:-.26	**
				Moderate	S2:-.14	n.s.
				Moderate	S3:-.16	n.s.
				Moderate	S4:.07	n.s.
			Loneliness	Low	S1:-.33	***
				Low	S2:-.46	***
				Low	S3:-.04	n.s.
				Low	S4:-.10	n.s.
			Anxiety	Low	S1:.30	**
				Low	S2:-.35	**
				Low	S3:-.01	n.s.
				Low	S4:-.09	n.s.
Tendency To Forgive	Brown, (2003)		Self-esteem (Rosenberg Self-	Low	.31	*

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
scale.			Esteem Scale)			
			Trait Anger (Trait-Anger Scale)	Moderate	-.44	*
			Vengeance	High	S1: -.45	***
				High	S2: -.39	**
			Depression	Moderate	-.34	**
			Dispositional Forgiveness (Transgression Narrative Test of Forgivingness (TNTF))	High	.39	**
			Perspective Taking	Low	.29	***
			Conscientiousness	Low	.04	n.s.
			Neuroticism	Moderate	-.39	**
			Agreeableness	Moderate	.43	**
			Openness	Low	.07	n.s.
			Extraversion	Low	.08	n.s.
Willingness To Forgive Scale.	DeShea, (2003)		Empathy	Moderate	.03	n.s.
			Vengeance	High	-.26	**
			Perspective Taking	Moderate	.13	*
			Gratitude	Low	.38	*
			Self-esteem	Low	.12	n.s.
			Transgression Narrative Test of Forgivingness (TNTF)	High	.69	**
			TRIM-12	Moderate	Not reported	n.s.
Heartland Forgiveness Scale	Thompson et al., (2005)	3. F. of Other	Dispositional Forgiveness			
			Forgiveness of Self Scale	Moderate	.19	***
			Forgiveness of Others Scale	High	.53	***
			Multidimensional Forgiveness Inventory	High	.34	***
			MFI-Self	Moderate	.05	n.s.

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
			MFI-Others	High	.47	***
			Willingness to Forgive (Hebl)	Moderate	.20	n.s.
			Non-dispositional forgiveness			
			Interpersonal Relationship Resolution Scale (IRRS)	Moderate	.15	n.s.
			TRIM-12	Moderate	-.38	***
			EFI	Moderate	.23	***
			Cognitive flexibility	Low	.31	***
			Positive Affect	Low	.23	***
			Negative Affect	Low	-.33	***
			Distraction	Low	.25	***
			Rumination	Moderate	-.25	***
			Vengeance	High	-.50	***
			Hostility	Moderate	-.42	***
Trait Forgiveness Scale	Berry, Worthington, O'Connor, Parrott, & Wade, (2005)		Anger (Trait Anger Scale)	Moderate	S1: -.48	***
				Moderate	S2: -.45	***
				Moderate	S3: -.49	***
			Big Five			
			Agreeableness	Moderate	S1: .52	***
				Moderate	S2: .55	***
				Moderate	S3: .60	***
			Neuroticism	Moderate	S1: -.41	***
				Moderate	S2: -.25	**
				Moderate	S3: -.49	***
			Conscientiousness	Low	S1: .41	***
				Low	S2: .10	n.s.
				Low	S3: .23	*
			Extraversion	Low	S1: .24	**
				Low	S2: .03	n.s.
				Low	S3: .26	*

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
			Openness	Low	S1: .16	*
				Low	S2: .08	n.s.
				Low	S3: .01	n.s.
			Interpersonal Reactivity Inventory			
			Empathetic Concern	Moderate	S1: .38	***
				Moderate	S2: .24	***
				Moderate	S3: .27	***
			Perspective-Taking	Moderate	S1: .36	***
				Moderate	S2: .18	**
				Moderate	S3: .32	**
			Fear	Low	S1: -.28	***
					S2: -.44	***
			Rumination	Moderate	S1: -.60	***
					S2: -.69	***
			Aggression Questionnaire			
			Anger	Moderate	-.40	***
			Hostility	Moderate	-.35	**
			Verbal aggression	Low	-.10	n.s.
			Physical aggression	Low	-.17	n.s.
			TNTF	High	S1: .50	***
					S2: .48	***
			TFS (Partner)	High	.35	**
Forgiving personality scale	Kamat, Jones, & Row, (2006)		Forgiveness of Others	High	.68	***
			Forgiveness/Non-Retaliation	High	.70	***
			Apology	Moderate	.63	***
			Vengeance	High	-.63	***
			Agreeableness	Moderate	.54	**
			Conscientiousness	Low	.35	**

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
			Neuroticism	Moderate	-.22	*
Family Forgiveness Questionnaire	Maio, Thomas, Fincham, & Carnelly, (2008)	Total Score 1.Tendency to forgive other family members (TTF) 2.Perception of forgiveness (POF)	Trait Forgiveness	High	S1: .19	*
				High	S2: .19	*
				High	S3: .24	*
				High	S4: .29	*
				High	S5: .30	*
				High	S6: .38	*
			Trait Anxiety	Moderate	S1: -.15	n.s.
				Moderate	S2: -.24	*
				Moderate	S3: -.17	n.s.
				Moderate	S4: -.37	*
				Moderate	S5: -.19	*
				Moderate	S6: -.42	*
			Depression	Moderate	S1: -.49	*
				Moderate	S2: -.48	*
				Moderate	S3: -.15	n.s.
				Moderate	S4: -.40	*
				Moderate	S5: -.08	n.s.
				Moderate	S6: -.35	*
			Need for approval	Low	S1: .28	*
				Low	S2: .25	*
				Low	S3: .16	n.s.
				Low	S4: .12	n.s.
				Low	S5: .16	n.s.
				Low	S6: .26	*
Self-esteem	Low	S1: .39	*			
	Low	S2: .46	*			
	Low	S3: .16	n.s.			
	Low	S4: .30	*			
	Low	S5: .21	*			
	Low	S6: .23	*			
Extraversion	Low	S1: .13	n.s.			



Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
				Low	S2: .27	*
				Low	S3: .28	*
				Low	S4: .32	*
				Low	S5: -.04	n.s.
			Agreeableness	Low	S6: .06	n.s.
				Moderate	S1: .29	*
				Moderate	S2: .30	*
				Moderate	S3: .30	*
				Moderate	S4: .22	*
				Moderate	S5: .11	n.s.
				Moderate	S6: .32	*
			Conscientiousness	Low	S1: .21	*
				Low	S2: .24	*
				Low	S3: .20	*
				Low	S4: .08	n.s.
				Low	S5: .10	n.s.
				Low	S6: .23	*
			Emotional stability	Moderate	S1: .44	*
				Moderate	S2: .48	*
				Moderate	S3: .16	n.s.
				Moderate	S4: .26	*
				Moderate	S5: .21	*
				Moderate	S6: .48	*
			Intellect	Low	S1: .27	*
				Low	S2: .29	*
				Low	S3: .13	n.s.
				Low	S4: .17	n.s.
				Low	S5: .05	n.s.
				Low	S6: .11	n.s.
Seeking Forgiveness Questionnaire	Chiaramello, Muñoz & Mullet (2008)	1.Inability in Seeking Forgiveness	Personality			
			Openness	Low	-.23	**
			Neuroticism	Moderate	.12	n.s.

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
			Conscientiousness	Low	.05	n.s.
			Extraversion	Low	-.13	n.s.
			Agreeableness	Moderate	-.23	***
			Willingness to forgive	Moderate	-.11	n.s.
		2.Sensitivity to Circumstances	Personality			
			Openness	Low	-.02	n.s.
			Neuroticism	Moderate	.06	n.s.
			Conscientiousness	Low	-.04	n.s.
			Extraversion	Low	.03	n.s.
			Agreeableness	Moderate	.08	n.s.
			Willingness to forgive	Moderate	-.00	n.s.
		3.Uncondictonal Seeking Forgiveness	Personality			
			Openness	Low	.14	n.s.
			Neuroticism	Moderate	-.00	n.s.
			Conscientiousness	Low	-.08	n.s.
			Extraversion	Low	.07	n.s.
			Agreeableness	Moderate	.28	***
			Willingness to forgive	Moderate	.46	***

**Supplemental Table 2***Raw Data for Assessment of Validity Data Supporting Episodic Forgiveness Scales*

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
Enright Forgiveness Inventory	Subkoviack et al., (1995)	EFI total	Single item of F	High	.68	***
			State-Anxiety (Spielberg State-Trait Anxiety Scale)	Moderate	-.43	**
				Moderate	-.30	**
				Moderate	-.37	n.s.
				Moderate	-.44	**
			Religiosity	Low	.37	*
		1. Total affect	Single item of Forgiveness	High	.68	***
			State-Anxiety (Spielberg State-Trait Anxiety Scale)	Moderate	-.48	**
				Moderate	-.30	**
				Moderate	-.49	**
				Moderate	-.53	**
		1.a. Positive affect	Religiosity	Low	.32	*
1.b. Negative affect	Depression (Beck Depression Inventory)	Moderate	-.43	**		
2. Positive behavior	Single item of Forgiveness	High	.64	***		
	Religiosity	Low	.40	*		
3. Positive cognition	Single item of Forgiveness	High	.60	***		
	Religiosity	Low	.42	*		
Transgression Related Interpersonal Motivations Inventory-12	McCullough et al., (1998)	1. Avoidance	Single item of Forgiveness	High	-.41	***
				High	-.57	***
		2. Revenge	Single item of Forgiveness	High	-.67	***
				High	-.47	**
Rye Forgiveness Scale	Rye et al., (2001)	1. Absence of negative	EFI	High	.52	***
			Single item of Forgiveness	High	.60	***
			Religiousness	Low	.16	**

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
			Spielberg State-Trait Anxiety Scale			
			State-Anger	Moderate	-.41	***
			Trait-Anger	Moderate	-.34	***
			Hope	Low	.35	***
			Existential Well-being	Low	.40	***
			Religious Well-being	Low	.20	***
		2. Presence of positive	EFI	High	.75	***
			Single item of Forgiveness	High	.53	***
			Religiousness	Low	.29	***
			State-Anger	Moderate	-.13	*
			Trait-Anger	Moderate	-.21	***
			Hope	Low	.11	*
			Existential Well-being	Low	.21	***
			Religious Well-being	Low	.30	***
Transgression Related Interpersonal Motivations Inventory-18	McCullough, Root, & Cohen (2006)	1. Avoidance vs Benevolence	Transgression Severity	Low	.12	*
			Communal Strength	Low	.48	***
		2. Revenge	Communal Strength	Low	.21	***
Marital Offense-Specific Forgiveness Scale	Paleari et al., (2009)	1. Resentment-Avoidance	Affective Empathy	Moderate	-.44	***
				Moderate	-.36	***
			Rumination	Moderate	.62	***
				Moderate	.55	***
			Responsibility Attributions	Moderate	.49	***
				Moderate	.48	***
			Offence Hurtfulness	Low	.29	***
				Low	.30	***

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
			Offence Seriousness	Low	.31	***
				Low	.37	***
			Marital Quality	Low	-.42	***
				Low	-.61	***
			Closeness	Low	-.29	***
				Low	-.16	n.s.
			Marital Support	Low	-.36	***
				Low	-.53	***
			Depression	Moderate	.33	***
				Moderate	.35	***
			Self-esteem	Low	-.25	**
				Low	-.33	***
			Stress	Low	.34	***
				Low	.28	**
			Satisfaction With Life	Low	-.35	***
				Low	-.38	***
		2. Benevolence	Affective Empathy	Moderate	.63	***
				Moderate	.40	***
			Rumination	Moderate	-.37	***
				Moderate	-.44	***
			Responsibility Attributions	Moderate	-.26	**
				Moderate	-.39	***
			Offence Hurtfulness	Low	-.28	**
				Low	-.20	*
			Offence Seriousness	Low	-.33	***
				Low	-.28	**
			Marital Quality	Low	.51	***

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
				Low	.57	***
		Closeness		Low	.31	***
				Low	.27	**
		Marital Support		Low	.44	***
				Low	.49	***
		Depression		Moderate	-.29	***
				Moderate	-.24	**
		Self-Esteem		Low	.21	*
				Low	.28	**
		Stress		Low	-.18	*
				Low	-.08	n.s.
		Satisfaction With Life		Low	.38	***
				Low	.32	***
Acts of Forgiveness Scale	Drinnon & Jones (2009)		Trainer's General Forgiveness	High	.53	**
			Wades Forgiveness Scale	High	.82	**
			IRRS	High	.63	**
			F Of Others	High	.15	**
			F Non Retaliation	High	.19	**
			TNTF	High	.25	**
			Forgiving Personality	High	.34	**
Cuestionario de Perdón en Divorcio-Separación	Yárnoz-Yaben & Comino (2012)		Divorce Adaptation	Low	.51	**
			Satisfaction With Life	Low	.26	**
			Care	Low	.31	**
			Child Behavior	Low	-.15	n.s.
BICAR	Pansera (2012)		Relationship Satisfaction	Low	.46	**
			Commitment	Low	.44	**
			Event Severity	Low	-.39	**

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
			Responsibility Attributions	Moderate	-.20	**
			Intent Attributions	Moderate	-.27	**
Workplace Forgiveness Scale	Boonyarit et al. (2013)	Total	Specific Offence	High	.64	**
			Dispositional Forgiveness	High	.63	**
			State Forgiveness	High	.56	**
			Positive Affect	Low	.18	**
			Negative Affect	Low	-.17	**
			Willingness To Reconcile	Moderate	.54	**
			Rumination	Moderate	-.37	**
			Revenge	High	-.53	**
			1. Negative Thought	Specific Offence	High	.63
		Dispositional Forgiveness		High	.49	**
		State Forgiveness		High	.50	**
		Positive Affect		Low	.12	*
		Negative Affect		Low	-.25	**
		Willingness To Reconcile		Moderate	.37	**
		Rumination		Moderate	-.50	**
		2. Seeking To Understand	Specific Offence	High	.12	*
			Dispositional Forgiveness	High	.25	**
			State Forgiveness	High	.08	n.s.
			Positive Affect	Low	.14	**
			Negative Affect	Low	.01	n.s.
			Willingness To Reconcile	Moderate	.16	**
Rumination	Moderate		.07	n.s.		
3. Positive Approaches	Revenge	High	-.13	*		
	Specific Offence	High	.53	**		

Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
			Dispositional Forgiveness	High	.52	**
			State Forgiveness	High	.53	**
			Positive Affect	Low	.06	n.s.
			Negative Affect	Low	-.09	n.s.
			Willingness To Reconcile	Moderate	.62	**
			Rumination	Moderate	-.26	**
			Revenge	High	-.50	**
		4. Benefits	Specific Offence	High	.40	**
			Dispositional Forgiveness	High	.46	**
			State Forgiveness	High	.33	**
			Positive Affect	Low	.25	**
			Negative Affect	Low	-.08	n.s.
			Willingness To Reconcile	Moderate	.22	**
			Rumination	Moderate	-.22	**
			Revenge	High	-.32	**
Forgiveness Aversion Scale	Williamson et al. (2014)	Total	Trait Anxiety	Moderate	.29	***
			Offence Severity	Low	.26	***
			Rumination	Moderate	.44	***
			Apology	Moderate	-.56	***
			Trust	Low	-.25	***
			Repeated Offenses	Moderate	.40	***
			Intimidation	Low	.19	***
			Need For Power	Low	.13	***
			Revenge	High	.36	***
Forgiveness Reconciliation Inventory	Balkin et al. (2014)	1. Collaborative Exploration	Absence Of Negative	High	-.40	***
			Presence Of Positive	High	-.41	***
			Forgiveness Likelihood	Moderate	-.22	Not reported



Instrument	Authors (date)	Subscales	Construct Used as a Criterion to Support Construct Validity	Conceptual Similarity of the Validity Criterion to the Measure	Correlation	Significance <sup>1</sup>
		2. Role Of Reconciliation	Absence Of Negative	High	-.42	***
			Presence Of Positive	High	-.52	***
			Forgiveness Likelihood	Moderate	-.20	Not reported
		3. Remorse/Change	Absence Of Negative	High	-.32	***
			Presence Of Positive	High	-.50	***
			Forgiveness Likelihood	Moderate	-.09	n.s.
		4. Outcome	Absence Of Negative	High	-.44	***
			Presence Of Positive	High	-.67	***
			Forgiveness Likelihood	Moderate	-.23	Not reported
Decision To Forgive Scale	Davis, Hook, et al. (2015)	Total	Avoidance	High	-.47	***
			Revenge	High	-.39	***
			Stage Of Change	Moderate	.81	***
Group Forgiveness Scale	Davis, DeBlaere, et al. (2015)	1. Avoidance	Affirmation	Low	.19	**
			Exploration	Low	-.07	n.s.
			Resolution	Low	-.14	**
			Religious Commitment	Low	-.08	n.s.
		2. Revenge	Affirmation	Low	.43	**
			Exploration	Low	-.15	**
			Resolution	Low	-.26	**
			Religious Commitment	Low	-.07	n.s.
		3. Decision To Forgive	Affirmation	Low	-.13	*
			Exploration	Low	.11	*
			Resolution	Low	.10	n.s.
			Religious Commitment	Low	.27	**

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# Measuring Forgiveness

## A Systematic Review

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**Abstract:** Forgiveness is frequently investigated, and many methods of assessment have been used. However, discerning which methods of assessment to use for which purposes has generally not been based on systematic analysis. We searched four databases: Scopus, Web of Science, PubMed, and *PsycINFO*. Forgiveness measures were grouped into Forgiveness Scales (i.e., Dispositional Forgiveness, Episodic Forgiveness, and Dyadic Forgiveness) and Other Measures of Forgiveness (i.e., implicit, behavioral, and biological measures). We reviewed original articles that describe the development of 45 measures and compiled psychometric information (including instrument language and availability, original samples, instrument composition, estimated reliabilities of scores, evidence of construct validity, and an evaluation of each measure). Also, our review suggests a nomological network of associations regarding the construct validity of interpreting scores as forgiveness. Those associations inform the concept of forgiveness, describing which and how variables are associated with this construct. We evaluate the level of sophistication of research in forgiveness assessment and offer suggestions to consider when choosing specific instruments to assess dispositional and episodic forgiveness.

**Keywords:** forgiveness, forgivingness, assessment, instruments, systematic review

Forgiveness has received increasing attention for the past 20 years. It is central to healthy human functioning (see Toussaint, Worthington, & Williams, 2015) and might be one of the most important processes in restoring interpersonal relationships after conflict (Karremans & Van Lange, 2008; Toussaint & Webb, 2005; Tsang, McCullough, & Fincham, 2006). Forgiveness is usually complex. It is especially difficult when harm is severe and offenders are unrepentant. Multiple characteristics of the forgiver, the transgressor, the relationship, and the offense affect whether forgiveness is experienced (for a review, see Fehr, Gelfand, & Nag, 2010).

Although there is no universally accepted definition of forgiveness, descriptions have included affective, cognitive, motivational, and (sometimes) behavioral components (Miceli & Castelfranchi, 2011). It is generally accepted that when a person forgives, his or her emotions and motivations (McCullough et al., 1998; Worthington, 2006), cognition (Enright & Fitzgibbons, 2014), physiological responses (Lawler et al., 2003), behavioral intentions (Exline, Worthington, Hill, & McCullough, 2003), and (perhaps) behaviors toward the offender (Enright & Fitzgibbons, 2014; McCullough, Fincham, & Tsang, 2003; McCullough, Luna, Berry, Tabak, & Bono, 2010) become less negative

and more positive over time. Some authors emphasize the experience of positive affect toward the transgressor as a critical part of complete forgiveness (Enright & Fitzgibbons, 2014; Subkoviak, Enright, Wu, & Gassin, 1995; Worthington, 2006). Others (e.g., Gassin & Enright, 1995) highlight forgiveness as the reduction of negative responses to offense. Worthington (2005) observed that when strangers or people in non-valued relationships offend, victims focus on reducing the negative and once no negative feelings are evident, forgiveness is considered complete. However, in valued, continuing relationships, victims focus on both, first reducing the negative feelings to near zero, and then (if possible) increasing some net positive feelings for the valued person. Only after reaching some net positively valenced relationship do victims consider forgiveness complete.

Due to different conceptualizations and because the study of forgiveness has grown, numerous measures have been developed to assess several types and aspects of forgiveness. McCullough, Hoyt, and Rachal (2000) classified the available instruments along three dimensions. First, specificity with which forgiveness is assessed includes dispositional (i.e., a stable personality trait), episodic (i.e., linked to a particular event or offense), and dyadic forgiveness (i.e., unique offenses that occur within that relationship).

Second, the direction of measurement involves granting (as a victim) or seeking (as an offender) forgiveness, or both (as with self-forgiveness). Third, the methods of assessment include self-ratings, coding of behavioral observations, or physiological methods (i.e., chemical or psychophysiological). Although previously published reviews of some measures of forgiveness exist (e.g., McCullough, Hoyt, & Rachal, 2000; Worthington et al., 2015), all are selective and have been published as chapters in edited books. Prior reviews do not provide an overview of available measures, nor do they assess the quality of data supporting each type of measurement. In addition, the strength of evidence supporting the construct validity of forgiveness has not been systematically investigated. Generally, articles that develop assessments of forgiveness present a conceptualization and then adduce a few correlations with measures of other variables theoretically assumed to be related.

In the current article, we evaluate the status of assessment in forgiveness. We sought to compile all existing measures along with information, when possible, on test structure, length, and basic psychometric properties. The analysis of this information will provide one basis for choosing which methods to employ in scientific studies and clinical practice. Besides, we suggest a nomological network of associations regarding the construct validity of forgiveness. Our network informs about the concept of forgiveness; it provides an initial quantification of which and how other variables might be associated to this construct.

## Method

### The Search

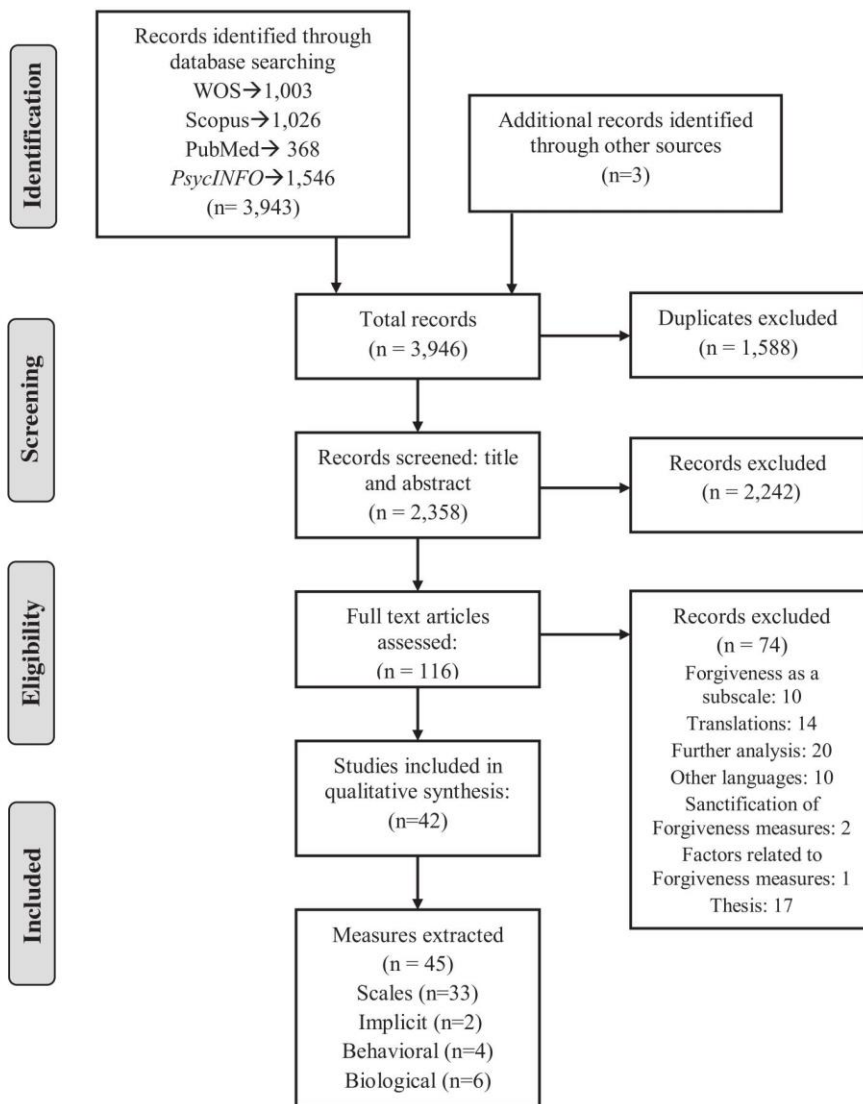
We searched publications from four electronic databases (i.e., Scopus, Web of Science, PubMed, and *PsycINFO*). We used the following keywords: *forgiv\** crossed with *measur\**, *scale\**, *assess\**, and *instrument\**. No language restriction was considered. We searched databases from their inception to February, 2016. We also scanned papers (and electronic) issues of journals that frequently (based on references) published articles on forgiveness. The search identified 3,943 unique papers. Titles and abstracts of all identified publications were reviewed to identify all articles describing measures to assess forgiveness. These included articles describing the development of a new instrument or other methods to assess forgiveness. In Figure 1, we describe how we reduced the unique papers from 3,943 to 42 articles (yielding 45 measures) that were intensively analyzed. In addition, an updated scoping search was performed up to January 2017. No new measures were found.

### Delimiting the Sample

We excluded self-forgiveness instruments because that construct seems to have more to do with an offender's experience than a forgiver's experience (see Wenzel, Woodyatt, & Hedrick, 2012). We also excluded single-item measures of forgiveness and articles that used several ad hoc items for forgiveness or forgivingness but did not report scale development, because the psychometrics were not available. We excluded unpublished dissertations because their peer review was not masked but limited to a university committee. We also excluded scales that assessed a variant of forgiveness (i.e., Sanctification of Forgiveness). Finally, only information from the primary publication was used.

### Coding Articles for Psychometric Adequacy

We developed and piloted a standardized form to abstract information from the articles that developed and adduced psychometric data on forgiveness scales. We followed The Meta-Analyses Reporting Standards (MARS) Statement (American Psychological Association [APA] Publications and Communications Board Working Group on Journal Article Reporting Standards, 2008). To obtain an appraisal of the quality of information presented on each forgiveness scale, information regarding scale properties was scored based on Terwee et al. (2007) and the Standards for Educational and Psychological Testing (American Educational Research Association [AERA], American Psychological Association [APA], & National Council on Measurement in Education [NCM], 2014). We analyzed 10 characteristics: concept definition based on prior literature; availability; sample described adequately; scale structure; estimated reliability (i.e., Cronbach's alpha and test-retest reliability, respectively); level and types of validity evidence, including whether item generation was described; whether quantitative analyses, like factor analyses, were used; and evidence based on relationship of forgiveness to other variables and to a criterion (i.e., whether these relationships were of high or moderate conceptual relationship to forgiveness). Therefore, a total of 10 properties were evaluated. In each case, a coding of sufficient information (+), insufficient or weak information (+/-), or no information (-) was made. Based on this codification, a score of 1, 0.5, or to obtain a total score, an overall crude measure of quality of psychometric support whose maximum 0 was given to each property value was 10. Two raters independently abstracted information from each article. Raters then shared their information. The interrater agreement calculated for each property (computing Cohen's  $\kappa$  coefficient) ranged from .87 to 1 ( $p < .001$ ). Raters resolved their few differences successfully by consensus.



**Figure 1.** Flow diagram of study selection.

## Construct Validity

Construct validity refers to the degree to which the operational definition of a variable actually reflects the intended construct it is supposed to measure (e.g., Cook & Campbell, 1979). It is the appropriateness of the inferences made based on test scores. Following Cronbach and Meehl (1955), we sought to construct a nomological network of associations separately for trait forgiveness and episodic forgiveness. We classified each construct against with which authors sought to validate forgiveness instruments into one of three categories (high, moderate, or low theoretical closeness to theoretical forgivingness or forgiveness). We then tested to see whether the closeness of associations in the network was reflected in empirical correlations.

## Results

We found 45 forgiveness measures (Table 1). These measures were classified into two groups (McCullough et al., 2000) measures to assess forgiveness directly (i.e., scales of forgiveness) or extant assessment methods applied to the evaluation of forgiveness (i.e., implicit, behavioral, and biomarker measures used to assess forgiveness). In Table 2, we present our rating of each measure on the 10 properties listed in the Method.

### Forgiveness Scales

Of 45 forgiveness measures, 33 were self-report scales. From these scales, 15 assessed Episodic Forgiveness; one,

**Table 1.** Reviewed measures of forgiveness

Scales of forgiveness
Dispositional forgiveness
Forgiveness of Others Scale (FOS; Mauger et al., 1992)
Willingness to forgive (WTF; Helb & Enright, 1993)
Psychological profile of forgiveness (PPF; Helb & Enright, 1993)
Family Forgiveness Scale (FFS; Pollard, Anderson, Anderson, & Jennings, 1998)
Forgiveness Questionnaire (FQ; Mullet, Houdbine, Laumonier, & Girard, 1998)
Forgiveness Attitudes Questionnaire (FAQ; Kanz, 2000)
Transgression narrative test of forgivingness (TNTF; Berry, Worthington, Parrott, O'Connor, & Wade, 2001)
Forgiveness Likelihood Scale (FLS; Rye et al., 2001)
Escala sobre o perdão (EP; Barros, 2002)
Tendency to Forgive Scale (TTF; Brown, 2003)
Willingness to Forgive Scale (WTFS; DeShea, 2003)
Heartland Forgiveness Scale (HFS; Thompson et al., 2005)
Trait Forgiveness Scale (TFS; Berry, Worthington, O'Connor, Parrott, & Wade, 2005)
CAPER (Casullo & Fernandez-Liporace, 2005)
Forgiving Personality Scale (FPS; Kamat et al., 2006)
Family Forgiveness Questionnaire (FFQ; Maio, Thomas, Fincham, & Carnelley, 2008)
Seeking Forgiveness Questionnaire (SFQ; Chiaramello et al., 2008)
Episodic forgiveness
Enright Forgiveness Inventory (EFI; Subkoviak et al., 1995)
Transgression Related Interpersonal Motivations Inventory (TRIM-12; McCullough et al., 1998)
Wade's Forgiveness Scale (WFS; Wade, Gorsuch, Rosik, & Ridley, 2001)
Rye's Forgiveness Scale (RFS; Rye et al., 2001)
Forgiveness Inventory (FI; Gordon & Baucom, 2003)
Transgression-Related Interpersonal Motivations inventory (TRIM-18; McCullough, Root, & Cohen, 2006)
Marital Offense-Specific Forgiveness Scale (MOFS; Paleari, Regalia, & Fincham, 2009)
Acts of Forgiveness Scale (AFS; Drinnon & Jones, 2009)
Cuestionario de Perdón en Divorcio-Separación (CPD-S; Yáñez-Yaben & Comino, 2012)
BICAR (Pansera & La Guardia, 2012)
Workplace Forgiveness Scale (WPFS; Boonyarit, Chuawanlee, Macaskill, & Supparerkchaisakul, 2013)
Forgiveness Aversion Scale (FAS; Williamson, Gonzales, Fernandez, & Williams, 2014)
Forgiveness Reconciliation Inventory (FRI; Balkin, Harris, Freeman, & Huntington, 2014)
Decision to Forgive Scale (DTFS; Davis, Hook, et al., 2015)
Group Forgiveness Scale (GFS; Davis, DeBlaere, et al., 2015)
Dyadic forgiveness
Interpersonal Relationship Resolution Scale (IRRS; Hargrave & Sells, 1997)
Other measures of forgiveness
Implicit forgiveness
Implicit relational assessment procedure (IRAP; Ferroni & Barnes-Holmes, 2014)

(Continued on next column)

**Table 1.** (Continued)

Other measures of forgiveness
Implicit association test of forgiveness (IATF; Fatfouta et al., 2014)
Behavioral forgiveness
Conciliatory behavior (Zechmeister et al., 2004)
Defection in a Prisoner's dilemma game (Exline et al., 2004)
Affective tone in a written response (Exline et al., 2004)
Allocation of money (Exline et al., 2004)
Resource distribution (Carlisle et al., 2012)
Cyberball paradigm (Dorn et al., 2013)
List of positive qualities (Dorn et al., 2013)
Biological forgiveness
Heart rate (Lawler et al., 2003)
Blood pressure (Lawler et al., 2003)
fMRI (Farrow et al., 2008)
Genetic polymorphisms (Kang et al., 2008)
Oxytocin (Tabak et al., 2011)
Salivary cortisol (Berry & Worthington, 2001)

Dyadic Forgiveness (The Interpersonal Relationship Resolution Scale; Hargrave & Sells, 1997); and 17, Dispositional Forgiveness. Within the latest group all the scales evaluated trait forgivingness except one that assessed seeking forgiveness (Seeking Forgiveness Questionnaire; Chiaramello, Muñoz Sastre, & Mullet, 2008).

### Concept Definition

In Table 2, we show the classification of the articles in terms of whether they (a) provided a definition of forgiveness, (b) differentiated between dimensions of forgiveness (cognitive, emotional, behavioral), and (c) referred to a positive or a negative construct. Most of the definitions provided were based on specific authors' conceptualizations (for a review, see Fehr et al., 2010). Nine authors presented their own definition (i.e., Brown, 2003; Davis, DeBlaere, et al., 2015; DeShea, 2003; Hargrave & Sells, 1997; Helb & Enright, 1993; Kamat, Jones, & Row, 2006; McCullough et al., 1998; Thompson et al., 2005; Yáñez-Yaben & Comino, 2012).

### Estimated Reliability

Cronbach's alpha and Intraclass Correlation Coefficient (ICC) were most frequently used as measures of estimated internal consistency and temporal stability, respectively. The cutoff points suggested by Muñoz, Hidalgo, García-Cueto, Martínez, and Moreno (2005; see Table 2) were used to determine whether a measure reported inadequate, adequate but with deficits, or adequate values of estimated reliability. Following these criteria the majority of the studies reported an adequate estimated internal consistency. Temporal stability correlations (e.g., test-retest information) were reported for 13 scales, usually over 2–8 weeks.

**Table 2.** Coded ratings of 10 aspects regarding the quality of the forgiveness scales

Instrument <sup>1</sup>	Dimension	Concept <sup>2</sup>	Language <sup>3</sup> / translations	Sample	Scale structure No. of items (type)	Subscales <sup>4</sup>	Reliability <sup>6</sup>			Validity		Relation with other variables <sup>7</sup>	T
							Availability <sup>5</sup>	α	Test-retest	Item generation	Formal analysis		
Forgiveness of Others Scale	Dispositional	-	English	+/- Counselling clients	+ 15 (True/False)		+/-	+	+	+/-	+/-	6.0	
Willingness to forgive	Dispositional	+	English	+ Elderly women	+ 16 (Multiple choice scenario-based)		-	+	-	-	+/-	4.5	
Psychological profile of forgiveness	Dispositional	+	English	+ Elderly women	+ 30 (Likert 1-4)	1. Absence of negative (AON) emotions 2. AON judgments 3. AON behaviors 4. Presence of positive (POP) aspects 5. POP judgments 6. POP behaviors	-	+	-	-	+/-	4.5	
Family Forgiveness Scale	Dispositional	-	English/Korean	+ Adults	+ 40 (Likert 1-4)	1. Family of origin section 2. Primary relationship section	+	+	-	+	+/-	7.0	
Forgiveness Questionnaire	Dispositional	-	English/Japanese	+ Adults	+ 38 + 8 (Likert 1-17)	1. Revenge versus forgiveness 2. Personal and social circumstances 3. Forgiveness block 4. Obstacles to forgiveness	+/-	-	-	-	+	3.5	
Forgiveness Attitudes Questionnaire	Dispositional	-	English	+/- College students	+ 26 (Multiple choice scenario-based)		+	+	-	+/-	+/-	4.5	
Transgression narrative test of forgiveness	Dispositional	+	English	+ Undergraduate students	+ 5 (Likert 1-5 scenario-based)		+	+	+	+	+	10.0	
Forgiveness Likelihood Scale	Dispositional	+ CBE P	English/Portuguese	+ Undergraduate students	+ 10 (Likert 1-5 scenario-based)		+	+	+	+	+	8.5	
Escala Sobre o Perdão	Dispositional	+	Portuguese	+ Priests/teachers + College students	+ 12 (Likert 1-5)		+	+	-	+	+	7.0	
Tendency to Forgive Scale	Dispositional	+	English	+ College students	+ 4 (Likert 1-7)		+	+	+	-	+	7.5	
Willingness to Forgive Scale	Dispositional	+	English/Portuguese	+ Undergraduate students	+ 12 (Likert 0-6 scenario-based)		+	+	-	+/-	+	7.5	

(Continued on next page)



Table 2. (Continued)

Instrument <sup>1</sup>	Dimension	Concept <sup>2</sup> translations	Language <sup>3</sup> / translations	Sample	Scale structure No. of items (type)	Subscales <sup>4</sup>	Availability <sup>5</sup>	Reliability <sup>6</sup>		Relation with other variables <sup>7</sup>			
								α	Test-retest				
Heartland Forgiveness Scale	Dispositional + P	English/Turkish	English/Turkish	+ Undergraduate students on romantic relationship	+ 18 (Likert 1-7)	1. Forgiveness of self 2. Forgiveness of others 3. Forgiveness of situations	+	+	+	+	(+)	10.0	
Trait Forgiveness Scale	Dispositional + E P	English/Korean	English/Korean	+ Undergraduate students	+ 10 (Likert 1-5)		+	+	+	+	(+)	10.0	
CAPER	Dispositional + E P	Spanish	Spanish	+ Adults	+/- 20 (Likert 1-4)		-	+/-	-	+/-	-	4.5	
Forgiving Personality Scale	Dispositional +	English	English	+ Undergraduate students/college	+ 33 (Likert 1-5)		+	+	+	+	+/-	(+)	9.5
Family Forgiveness Questionnaire	Dispositional -	English	English	+ Families	+ 12 (Likert 3-3)	1. Tendency to forgive other family members	+/-	+	+/-	+	+	+	6.0
Seeking Forgiveness Questionnaire	Dispositional +	English	English	+ Adults	+ 15 (Likert 1-19)	1. Perception of forgiveness 2. Inability in seeking forgiveness 2. Sensitivity to circumstances 3. Unconditional seeking forgiveness	+/-	-	-	+/-	+	(+/-)	6.5
Enright Forgiveness Inventory	Episodic + E N	English/Dutch Korean	English/Dutch Korean	+ College students and their parents	+ 60 (Likert 1-6)	1. Positive affect 2. Negative affect 3. Positive behavior 4. Negative behavior 5. Positive cognition 6. Negative cognition	-	+	+	+	+	+	8.0
Transgression Related Interpersonal Motivations Inventory (TRIM-12)	Episodic + B P	English/Turkish Chinese	English/Turkish Chinese	+ Undergraduate students	+ 12 (Likert 1-5)	1. Avoidance 2. Revenge	+	+	+/-	+	+	(+)	9.5
Wade's Forgiveness Scale	Episodic + CBE	English/Chinese	English/Chinese	+/- College students	+ 83 (Likert 1-5)	1. Thoughts a. Revenge b. Freedom from obsession c. Affirmation d. Victimization 2. Feelings 3. Behaviors a. Avoidance b. Toward god c. Conciliation d. Holding a grudge	+	+	-	+	-	6.5	

(Continued on next page)



Table 2. (Continued)

Instrument <sup>1</sup>	Dimension	Concept <sup>2</sup>	Language <sup>3</sup> / translations	Sample	Scale structure No. of items (type)	Subscales <sup>4</sup>	Reliability <sup>6</sup>			Validity		
							Availability <sup>5</sup>	Test-retest	Item generation	Formal analysis	Relation with other variables <sup>7</sup>	T
Forgiveness Reconciliation Inventory	Episodic	–	English	+ Undergraduate and graduate students/clinical population	+ 24 (Dichotomous opposing adjectives)	1. Collaborative exploration 2. Role of reconciliation 3. Remorse/change 4. Outcome	–	–	+	+	+	6.0
Decision to Forgive Scale	Episodic	+ CBE P	English	+ Undergraduate students	+ 5 (Likert 1–5)	1. Avoidance 2. Revenge 3. Decision to forgive	+/-	+	+	+	+	9.5
Group Forgiveness Scale	Episodic	+	English	+ Adults undergraduate students	+ 17 (Likert 1–5)		+/-	+	–	+	+	7.5
Interpersonal Relationship Resolution Scale	Dyadic	+	English	+ Graduate and undergraduate students/clinical population	+ 44 (Yes/no)	Forgiveness Scale: 1. Insight 2. Understanding 3. Opportunity of compensation 4. Overact of Forgiveness	+	+	–	+	+	8.0

Notes. (+) satisfactory, (+/-) not satisfactory or missing information, (–) no information. <sup>1</sup>See references in Table 1. <sup>2</sup>Definition of forgiveness (+) provided or (–) not provided; association of forgiveness with cognition (C), behavior (B) or/and emotion (E); forgiveness from a positive (P) or negative (N) point of view. <sup>3</sup>Language in which was developed, and/identified translations. <sup>4</sup>Number of subscales. <sup>5</sup>The article includes (+) full copy of the instrument, or (+/-) items and scaling information, or (–) it does not include the instruments or items. <sup>6</sup>Estimated reliability: (+) if  $\alpha > .60$ ; (+/-) if  $\alpha < .60$ ; test-retest reliability: (+) if  $> .65$ , (–) if  $< .65$ . <sup>7</sup>Evidence based on relation with other variables: related constructs/relations with criteria: (+) more than 50% of the correlations match with the nomological network (NN); (+/-) less than 50% match with the NN, (–) no information; T = total score.

### Validity Evidence

Concerning content validity, 18 scales, most of them assessing episodic forgiveness, reported a clear description of the item generation and selection (e.g., target or expert group, discussion, literature/theory analysis, interviews). Regarding validity evidence based on internal structure, the majority of the dispositional scales (13/17) and the total-ity of the episodic scales reported information about the quantitative analyses of the structure of their instruments (e.g., various exploratory and confirmatory factor analytic procedures or item response theory methods). Evidence supporting construct validity of scale scores, based on correlations with related constructs, was reported for almost all instruments – usually involving correlations of the scale scores with scores on scales measuring theoretically related variables, as recommended by the AERA et al. (2014).

## Construct Validity – A Nomological Network of Associations

We sought to provide evidence of construct validity through examining the associations of different constructs and variables mentioned in the Method section with measures of forgiveness. We hypothesized the closeness of association for each criterion variable as High, Moderate, or Low conceptual similarity. We tallied every correlation of every study within the 32 articles (Dyadic was not included), and we classified each as to whether it represented our hypothesized level of conceptual similarity – thus mapping out a nomological network of associations with trait forgiveness and episodic forgiveness. Many articles reported multiple studies, and many studies involved numerous correlations. We have provided raw data in Supplemental Tables 1 and 2 (two 20-page tables, available from the first author upon request [but provided to reviewers for their evaluation of the article]). We have simplified and aggregated the results within Tables 3 and 4 in which we reported mean correlations for each group of variables. We conducted a one-way conceptual similarity analysis of variance (ANOVA) (high, moderate, or low) for Dispositional and Episodic measures using as dependent variable the absolute value of the correlations. This allowed us to test whether the degree of conceptual similarity resulted in stronger correlations as it moved from low to moderate to high. We categorized 373 correlations (230 for dispositional measures and 143 for episodic measures). There were significant differences across conceptual similarity for both dispositional,  $F_{\text{Dispositional}}(2, 227) = 31.5, p < .001$ , and episodic  $F_{\text{Episodic}}(2, 140) = 27.7, p < .001$ , forgiveness measures. Post hoc Tukey test showed that there were also significant differences across levels for both dispositional, High ( $n = 21,$

$r_{\text{rmean absolute}} = .43$ ) > Moderate ( $n = 103, r_{\text{rmean absolute}} = .32$ ) > Low ( $n = 106, r_{\text{rmean absolute}} = .20$ ), and episodic, High ( $n = 39, r_{\text{rmean absolute}} = .46$ ) > Moderate ( $n = 67, r_{\text{rmean absolute}} = .38$ ) > Low ( $n = 45, r_{\text{rmean absolute}} = .26$ ), forgiveness.

## Other Measures of Forgiveness Besides Scales

In this section, we review extant methods applied to the assessment of forgiveness. They are classified into implicit, behavioral, and biological measures of forgiveness.

### Concept Definition

Eight of eleven authors described forgiveness adequately using a referenced conceptualization (i.e., McCullough et al., 2000; Subkoviak et al., 1995; Worthington & Wade, 1999). Of the eight definitions, two defined forgiveness as reduced negativity, and six defined forgiveness as reduced negativity plus increased positivity. Three refer to forgiveness as linked to cognition, behavior, and emotions; four as just emotion; one as just behavior.

### Implicit Measures of Forgiveness

We identified two implicit measures. The Implicit Relational Assessment Procedure developed in Ireland by Ferroni and Barnes-Holmes (2014) measures implicit attitudes related to forgiveness of self and others. Information about generation and selection of the statements or stimulus was not reported, nor information about reliability and validity.

The Forgiveness Implicit Association Test, developed in Germany by Fatfouta, Schröder-Abé, and Merkl (2014), assesses the difference in response latencies between congruent and incongruent pairings of stimuli. Estimated reliability, using the Spearman-Brown corrected split-half correlation, was 0.89. One-month temporal stability correlation was 0.50.

### Behavioral Measures of Forgiveness

One way of studying forgiveness is to observe behaviors indicative of forgiveness-related motivations. Four behavioral measures were identified.

Zechmeister, Garcia, Romero, and Vos (2004) experimentally studied 113 college students on the effects of arousal in a scripted laboratory offense in which a confederate made amends and apologized. The behavioral measure that indicated that forgiveness had occurred was whether the offended student volunteered to help the offender by doing a favor. Behavioral conciliation depended on arousal, apology, and offense removal.

Exline, Baumeister, Bushman, Campbell, and Finkel (2004) studied how narcissistic entitlement was related to

forgiveness-related behavior, which was assessed using multiple measures such as defection in a 10-trial prisoner's dilemma game, affective tone in a written response to a moderately antagonistic note, and money allocated to a partner who had offended. Entitlement predicted less forgiving responses on two behavioral measures: more hostile responses to a negative message and less money allocated to the other player.

Carlisle et al. (2012) examined 136 university students. Based on a resource-distribution paradigm, the behavioral measure of forgiveness was the opportunity to distribute raffle tickets to the other participants who had either apologized or offered restitution. Restitution from a transgressor increased prosocial behavior toward that transgressor, but apology had no effect.

Dorn, Hook, Davis, Van Tongeren, and Worthington (2013) used two behavioral methods of studying forgiveness using three samples. Participants were offended in a laboratory adaptation of the Cyberball (social exclusion) paradigm. Forgiveness was indicated by how likely the participant was to pass the ball to the player who excluded the participant. In another study, participants recalled an offense that they had either forgiven, committed to forgive but still struggled, or had not forgiven. Participants who had forgiven listed more positive qualities than did participants who had not forgiven.

### Biological Measures of Forgiveness

Berry and Worthington (2001) used analysis of cortisol in saliva. Salivary cortisol is associated with stress from unforgiveness. Both Worthington (2006) and Strelan and Covic (2006) characterized unforgiveness as stressful. Finding that salivary cortisol levels were related to unforgiveness supports that theorizing. Tabak, McCullough, Szeto, Mendez, and McCabe (2011) used blood draws to assess cortisol and oxytocin levels. Decreased levels of forgiveness were associated with elevated mean peripheral oxytocin reactivity.

Witvliet, Ludwig, and Vander Laan (2001) and Lawler et al. (2003) examined the peripheral psychophysiological correlates of forgiveness in response to interpersonal conflict. They assessed blood pressure, heart rate, frontal electromyography (EMG), and skin conductance and found associations between forgiveness and the cardiovascular variables (i.e., heart rate and blood pressure). Witvliet et al. found that unforgiveness is associated with higher skin conductance levels and greater cardiovascular reactivity in terms of blood pressure and heart rate. Lawler et al., using a between-subjects design relative to Witvliet et al.'s within-subjects design, concluded that the state forgiveness was an emotion or action related to heart rate and trait forgiveness a personality construct linked to blood pressure.

Farrow et al. (2008) used functional magnetic resonance imaging (fMRI) to focus on individuals with posttraumatic

stress disorder (PTSD). Participants underwent fMRI scanning before and after a cognitive behavioral treatment (CBT) including a forgiveness component. Farrow et al. found an activation of the posterior cingulate gyrus in post-therapy response to forgivability judgments.

Kang, Namkoong, and Kim (2008) studied the heritability and the association of anger and forgiveness with genetic polymorphisms. They isolated the DNA from blood cells and genotyped dopamine receptor (DRD4) and catechol-o-methyltransferase (COMT) polymorphisms. They only found differences for DRD4 in males. The DRD4-2repeat (2R) allele group presented lower anger and higher forgiveness than the 4R allele.

## Discussion

In this review, we extended findings regarding assessment contributed by more selective reviews – some general (i.e., McCullough et al., 2000) and some focused on comparing properties of individual instruments (i.e., Worthington et al., 2015). We reviewed 45 measures following the MARS statement (APA, 2008). We provided initial evidence supporting the estimated reliability and a valid interpretation of scores.

### Definition of Forgiveness

The present review reaffirms the lack of consensus between authors regarding the definition of forgiveness. We understand forgiveness as a psychological response that involves the absence of negative affect, judgment, and behavior, and depending on the value of the relationship (perhaps) the presence of positive ones (Worthington, 2005). Therefore, scales assessing the negative construct of forgiveness might be chosen when the offense occurs in a non-valued relationship, whereas scales including the positive construct were recommended in valued relationships. Besides, experimenters should consider assessing different components of forgiveness.

### Estimated Reliabilities of Scores

Most self-report instruments have scores with Cronbach's  $\alpha$  between .80 and .95. As we know from psychometric formulae, alpha is related to scale length (as well as overlap in item content). However, we found short scales with high alphas (i.e., Tendency to Forgive Scale [TTF], Decision to Forgive Scale [DTFS]). In fact, we computed the correlation between scale length and alpha for all instruments in the review ( $r = .366, p < .001$ ) suggesting that, while important, scale length was not a strong causal explanation for high alphas. Importantly, readers recognize that higher alphas

are not necessarily “better.” The purpose for a scale – assuming that a minimum threshold for alpha is reached and assuming that the test user will recognize appropriate limitations imposed when alpha is low – determines what a “high” or “moderate” alpha is. For example, in clinical work, where precise diagnosis of an individual is important, clinicians need  $\alpha$  to be at least .95. In experimental studies – especially in exploratory experiments in which a science is new or in which an application of a concept’s connection to an established construct is new or in a correlational study that uses other constructs of moderate estimated reliability – standards for the estimated reliability of scores are not as rigorous, and an  $\alpha$  of .70 might suffice.

Fewer than half of the scales reported temporal stability coefficients, which is vital information when no intervention occurs. With interventions, change is expected over time, so temporal stability coefficients inform clinical users about the amount of change due to simple instrument instability relative to change due to the intervention (Wade, Hoyt, Kidwell, & Worthington, 2014). Similar consideration is important in assessing longitudinal developmental changes with age (Enright & Fitzgibbons, 2014), or due to naturally occurring decay of unforgiveness with time (McCullough et al., 2003, 2010).

It is important that articles report reliability evidence so that users can make informed decisions on use. Our review provides information about the degree to which alphas and test-retest correlations from the different scales are or not adequate in order to facilitate clinicians and researchers select the appropriated instrument.

### Evidence Related to Valid Interpretation of Scores–Nomological Network

As we observed above, definitions of forgiveness differ. It is not surprising that there was a lack of homogeneity in the selection of concepts theoretically related to forgiveness. Scale developers could select constructs to serve as construct validity criteria by referring to their own theory. We have taken an experimental approach to determining criteria indicating construct validity. There was no existing corpus of constructs comprising the nomological network of interrelations among variables (Cronbach & Meehl, 1955). We attempted to construct such a network within the present study. For both dispositional and episodic forgiveness scales we found high, moderate, and low associations to differ significantly.

### Dispositional Forgiveness Scales

As shown in Table 3, high associations were found with other forgiveness measures. Moderate associations of

constructs predisposing people for forgiveness were found with high agreeableness, low neuroticism, high empathy, and also low levels of trait measures close to unforgiveness (i.e., anger, rumination, aggression, and hostility). Forgiveness as a trait was also moderately associated with trait mental health measures; specifically it was associated to less likelihood of being depressed and anxious. Low associations included correlations of trait forgiveness with traits of conscientiousness, extraversion, and openness to experience as well as to dispositional states as needs for affection and approval, high self-esteem, gratitude, optimism, hope, positive affect, and cognitive flexibility. Trait forgiveness was also low related to negative affect, verbal aggression, physical aggression, and loneliness.

### Episodic Forgiveness

As presented in Table 4, high associations were found with other episodic measures of forgiveness. Moderate associations of state forgiveness were found with low levels of state anger and anxiety and high levels of empathy and trait forgiveness. Also, characteristics regarding the offense (e.g., offense hurtfulness), the offender (e.g., responsibility attributions), and the quality of the relationship (e.g., closeness), were found to be moderately related to episodic forgiveness. For example, if the offended person received an apology from the offender, or if their relationship was very close it is easier to achieve state forgiveness. Finally, episodic forgiveness was found to be weakly associated with trait mental health measures; specifically it was associated with low levels of trait anxiety and trait depression. It was also related to dispositional states in concrete to low levels of negative affect, and high levels of satisfaction with life and positive affect. Besides, episodic forgiveness was high related to religiousness and well-being.

Our findings of correlates with forgiveness and episodic forgiveness were consistent with, but more thorough than, an important existing meta-analysis (i.e., Fehr et al., 2010). We added the comparisons showing that the closeness of numerical association was related to closeness of conceptual association.

### Biological and Behavioral Indicators of Forgiveness

Biological measures are more useful as a complement to self-report measures of unforgiveness states than as a direct measure of forgiveness because biological reactions might be related to a multitude of factors (e.g., other stressors, other life events, health or workplace worries, etc.) that might be affecting a person other than an offense; whereas self-reports are specific to the construct. Thus, forgiveness

**Table 3.** Evidence for construct validity of trait forgivingness through a nomological network of associations

Forgivingness correlated with variables used as a criterion to support construct validity	Hypothesized level of correlation	Number of correlations	Mean correlations in groups of measures
Hypothesized high		21	.43
Association with other dispositional measures of forgivingness (i.e., TNTF, MFI, vengeance, TFS-partner rating)	High	21	.43
Hypothesized moderate		103	.32
Associations with agreeableness and neuroticism	Moderate	38	.29
Associations with trait measures close to unforgiveness (i.e., anger, rumination, aggression, and hostility)	Moderate	27	.40
Associations with trait mental health measures (i.e., anxiety and depression)	Moderate	16	.32
Association with episodic forgiveness measures (i.e., EFI, SIF, TRIM-12, MFI-Self, WtF, IRRS, FoS)	Moderate	12	.22
Associations with empathy	Moderate	9	.24
Associations with apology by offender	Moderate	1	.63
Hypothesized low		106	.20
Associations with conscientiousness, extraversion, and openness	Low	49	.16
Associations with dispositional states (verbal aggression, physical aggression, need for affection, self-esteem, optimism, satisfaction with life, happiness, loneliness, hope, gratitude, cognitive flexibility, positive affect, negative affect, distraction, need for approval)	Low	46	.24
Associations with state measures of anger and anxiety	Low	8	.28
Associations with religion or spiritual measures (i.e., religious motivation, spiritual well-being, existential well-being)	Low	3	.17

requires a self-report of forgiveness that is coincident with reduced physiological indication of stress to show evidence of forgiveness and not mere reduced stress. Further analysis should be done to establish estimated reliability and validity of scores from biomarkers.

Forgiveness occurs in an interpersonal context (Fehr et al., 2010). Behavioral measures might reflect many social restrictions on acting on one's revenge or avoidance motivations, making them more remote to forgiveness than self-report. Behavioral methods cannot replace self-reports but used as a complement, they can provide corroboration, identify silent or hollow forgiveness (Baumeister, Exline, & Sommer, 1998), and add nuances to self-reported responses. We found that behavioral methods have been infrequently used, are psychometrically weak and unsophisticated in relation to self-reports and physiological indices, and they usually require experimental manipulation. All of these considerations make behavioral assessments more suited for experimental studies than for assessment of forgiveness in nonexperimental settings, except for indirect markers of forgiveness (e.g., writing positive qualities about an offender) used by Dorn et al. (2013), that could be easily applied in clinical or educational contexts.

## Measures Recommended

There are many trait and state instruments strong for conducting research or for clinical practice. Based on the

obtained scores and examination of psychometric evidence, we suggest the use of the most promising. Of course, instrument selection can be difficult and should be done based on the purposes of the user.

Based on our coding of 10 aspects of each instrument (see Table 2), we recommend the Transgression Narrative Test of Forgiveness (TNTF), the Heartland Forgiveness Scale (HFS), or the Trait Forgiveness Scale (TFS) for the assessment of dispositional forgivingness. The three of them obtained a total score of 10, meaning that they are psychometrically strong instruments. Nonetheless, they assess forgivingness differently. For instance, TNTF uses scenario-based items, HFS is composed of three subscales, and TFS is unidimensional.

For episodic forgiveness, again considering the scores obtained, we suggest Transgression Related Interpersonal Motivations Inventory (TRIM-12) and the Decision to Forgive Scale, depending on what stage of the process of forgiveness the reader wants to assess. Most theoreticians and clinicians have hypothesized that most of the time, decision to forgive is the first step (for a review, see Davis, Hook, et al., 2015), usually prior to reduction of the negative aspects and the building in of the positive ones. However, McCullough et al. (2010) showed that often spontaneous forgiveness occurs – with or without any explicit decision to forgive – and the curve decays as a power function.

Because self-report instruments can be insensitive to processes outside of awareness (e.g., implicit emotions,

**Table 4.** Evidence for construct validity of episodic forgiveness through a nomological network of associations

Episodic forgiveness correlated with variables used as a criterion to support construct validity	Hypothesized level of correlation	Number of correlations	Mean correlations in groups of measures
Hypothesized high		39	.46
Association with other episodic measures of forgiveness (e.g., EFI, TRIM-12, single item of forgiveness)	High	39	.46
Hypothesized moderate		67	.38
Associations with state measures of anger and anxiety	Moderate	10	.39
Associations with trait measures close to unforgiveness (i.e., anger, rumination, aggression, and hostility)	Moderate	12	.37
Association with dispositional forgiveness measures (e.g., Forgiveness Likelihood Scale, TNTF, forgiveness of others)	Moderate	9	.37
Associations with empathy (state and trait)	Moderate	4	.46
Associations with offender variables (i.e., apology, responsibility attributions, intent)	Moderate	6	.35
Associations with offense variables (i.e., transgression severity, offense hurtfulness, offence seriousness)	Moderate	16	.34
Associations with quality of the relationship (i.e., marital quality, closeness, relationship satisfaction, commitment)	Moderate	10	.40
Hypothesized low		45	.26
Associations with dispositional states (self-esteem, satisfaction with life, hope, positive affect, negative affect)	Low	22	.22
Associations with trait mental health measures (i.e., anxiety and depression)	Low	10	.28
Associations with religion or spiritual measures (i.e., religious motivation, spiritual well-being, existential well-being)	Low	13	.27

attitudes, and religiosity), indirect measures may uncover processes of forgiveness not explicitly attended to. Susceptibility to social desirability (Ferroni & Barnes-Holmes, 2014) is always a threat to validity, and indirect indications of forgiveness coincident with self-reports improve confidence that forgiveness has occurred. However, changes in behavior, physiology, and implicit attitudes can also be due to many things besides forgiving – like seeing justice enacted, relinquishing offenses to God, excusing, justifying, forbearing, or accepting. Thus, neither indirect measures of forgiveness by themselves nor self-reports by themselves are completely adequate for thoroughly assessing forgiveness. We thus recommend triangulation of methods when possible, particularly for research purposes.

### Limitations of the Present Study and Implications for Future Research

We believe that we have accomplished three major outcomes in the current review. We have given an overview of the status of instrument construction and psychometric support for forgiveness measures, recommended the strongest instruments for use, and provided a unique method of constructing a nomological network of associations with forgiveness constructs and identified the strong, moderate, and weak associations.

Nevertheless, there are several limitations in this review. First, we did not restrict the language of the instruments we sought to review. However, we were limited to Spanish, Portuguese, and English in our abilities to evaluate the research reports. Thus, we could not analyze 11 scales (five Korean; two Japanese; two Chinese; one Iranian and one German). Second, we analyzed primary publications that reported psychometric data. In some cases, additional publications have since added new psychometric data that could help interpret reliability, validity, and structural composition of scores (i.e., Macaskill, 2012); however, considering all of the literature relating to all instruments used would be such a daunting task to make it impractical. Thus, we regretfully must accept the limitation. Third, single-item measures were not included in our review. Despite their psychometric shortcomings, they should not be dismissed.

### Conclusion

In this review, we evaluated the level of sophistication of research in forgiveness assessment and provided one basis for choosing which method to employ in scientific and clinical fields. Also, our review suggests the content of a nomological network of associations regarding the construct validity of forgiveness that informs about the concept of forgiveness, knowing which and how other variables are



associated to this construct. Finally, we have provided suggestions, based on our analyses, of which specific instruments should be considered for assessing both dispositional and episodic forgiveness.

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## **ANNEXES STUDY 2**

- **INFORMED CONSENT STUDY 2**
  - **PROTOCOL OF STUDY 2.1**
  - **PROTOCOL OF STUDY 2.2**
  - **PROTOCOL OF STUDY 2.3**



**INFORMED CONSENT STUDY 2**

Director/a del Proyecto: Professor Dr. Everett Worthington y Dra. Maria Fernández-Capo  
Investigador/a: Silvia Recoder Fernández  
Departamento: Ciencias Básicas. Área de Psicología

Yo, el Sr./la Sra.:.....

- He recibido información verbal sobre el estudio y he leído la información escrita que se adjunta, de la cual he obtenido una copia.
- He entendido lo que se me ha explicado, y los posibles riesgos y beneficios de participar en el estudio.
- He podido comentar el estudio y hacer preguntas al profesional responsable.
- Doy mi consentimiento para participar en el estudio y asumo que mi participación es totalmente voluntaria.
- Entiendo que podré retirarme en cualquier momento.

Mediante la firma de este formulario de consentimiento informado, doy mi consentimiento para que mis datos personales se puedan utilizar como se ha descrito en este formulario de consentimiento, que se ajusta al que dispone la Ley orgánica 15/1999, del 13 de diciembre, de protección de datos de carácter personal.

\_\_\_\_\_  
Firma del participante

\_\_\_\_\_  
Fecha de la firma

Núm. de DNI  
  
\_\_\_\_\_

\_\_\_\_\_

Firma del investigador

Fecha de la firma

Nombre: Silvia Recoder

**DOCUMENTO DE INFORMACIÓN AL SUJETO PARTICIPANTE DEL ESTUDIO DE INVESTIGACIÓN**

Director/a del Projecte: Professor Dr. Everett Worthington i Dra. Maria Fernández-Capo

Investigador/a: Silvia Recoder Fernández

Departament: Ciències Bàsiques. Àrea de Psicologia

Hemos solicitado su participación en un estudio de investigación. Antes de decidir si acepta participar, es importante que comprenda los motivos por los cuales se lleva a cabo la investigación: cómo se utilizará su información, en qué consistirá el estudio y los posibles beneficios, riesgos y molestias que pueda comportar.

**¿Cuáles son los antecedentes y el objetivo de este estudio?**

Este estudio se centra en las relaciones interpersonales. Los sujetos que den su consentimiento para participar deberán contestar unos cuestionarios junto con información sociodemográfica. El proceso durará unos 10 minutos.

**¿Tengo la obligación de participar?**

La decisión sobre participar o no en la investigación le corresponde a usted.

**¿Cuáles son mis obligaciones?**

Las obligaciones del participante consisten en llevar a cabo el experimento y preservar la confidencialidad de lo que se ha hecho.

**¿Cuáles son los posibles efectos secundarios, riesgos o molestias asociados a la participación?**

Este estudio no conlleva riesgos para su persona, sin embargo, ante cualquier problema puede ponerse en contacto con el investigador principal Silvia Recoder (srecoder@uic.es)

**¿Cuáles son los posibles beneficios de participar?**

Aunque usted no recibirá ningún beneficio directo por su participación, los resultados de la investigación serán útiles para el desarrollo científico en el campo de la Psicología.

### **¿Cómo se utilizarán mis datos en el estudio?**

El trato de la comunicación y donación de los datos de carácter personal de los sujetos participantes en el ensayo se ajustan al que dispone la Ley orgánica 15/1999, de 13 de diciembre, de protección de datos de carácter personal.

Estos datos no incluyen ni su nombre de su dirección, sino que se asignará un código. Solamente el equipo investigador tendrá acceso a la clave del código que permite el acceso a la llave del código que permite asociar los datos del estudio con usted. No obstante, las autoridades reguladoras, el comité de ética independiente u otras entidades de supervisión podrán revisar sus datos personales. El objetivo de las revisiones comentadas es garantizar la dirección adecuada del estudio o la calidad de los datos del estudio.

Si retiran el consentimiento de utilizar sus datos en el estudio, no podrán continuar participando en la investigación. Tienen que tener en cuenta que los resultados del estudio pueden aparecer publicados en la bibliografía, si bien su identidad no será revelada.

### **¿Cómo puedo establecer contacto si necesito obtener más información o ayuda?**

Mediante la aceptación de este formulario, asiente que ha sido informado de las características del estudio, ha entendido la información y se le han aclarado todas sus dudas.

En caso de sufrir un daño relacionado con el estudio o tener cualquier pregunta que pueda surgir durante la investigación, contacte con:

Silvia Recoder: [srecoder@uic.es](mailto:srecoder@uic.es)

Universitat Internacional de Catalunya

C/Josep Trueta, s/n, 08195, Sant Cugat del Vallès

Nº de teléfono: 93.504.20.00





## PROTOCOL OF STUDY 2.1

**Código participante**

### **Datos demográficos**

**Sexo:**

- Hombre
- Mujer

**Nacionalidad:** \_\_\_\_\_

**Fecha de nacimiento (dd.mm.aaa):** \_\_\_\_\_

Por favor crea un código anónimo a partir de las siguientes indicaciones.

1. La primera letra de tu ciudad de nacimiento
2. La segunda letra del nombre de tu madre
3. La tercera letra de tu nombre
4. La última letra del nombre de tu padre
5. La primera letra del mes de tu nacimiento

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Por favor recuerda a alguien que te haya hecho daño o que te haya ofendido profundamente. Sin escribir su nombre, escribe una breve descripción sobre quién lo hizo, qué es lo que te hizo daño o te ofendió de la persona e indica cuánto tiempo hace que ocurrió. (Nota: si la persona ha hecho muchas cosas es importante tener en cuenta **un acontecimiento específico** para focalizarte en él).

**¿Quién fue el ofensor?** (hermano, amigo, jefe...)

---

**¿Cuánto tiempo hace aproximadamente que ocurrió?**

---

A continuación escriba una breve descripción para recordar el acontecimiento.

**TRIM-18**

A continuación, responde a las siguientes afirmaciones en base a lo que experimentas hacia la persona que te ha ofendido. Utiliza la siguiente escala para indicar tu grado de acuerdo con cada una de las afirmaciones:

1. Totalmente en desacuerdo
2. En desacuerdo
3. Neutro
4. De acuerdo
5. Totalmente de acuerdo

1	Hago que pague por lo que hizo	1	2	3	4	5
2	Mantengo entre nosotros/as la mayor distancia posible	1	2	3	4	5
3	A pesar de que sus acciones me han herido, igualmente le deseo lo mejor	1	2	3	4	5
4	Deseo que le suceda algo malo	1	2	3	4	5
5	Vivo como si él/ella no existiera, como si no estuviera cerca	1	2	3	4	5
6	Dejo de lado el rencor para que retomemos nuestra relación	1	2	3	4	5
7	No confié en él/ella	1	2	3	4	5
8	A pesar de lo que me hizo, deseo que volvamos a tener una buena relación	1	2	3	4	5
9	Deseo que obtenga su merecido	1	2	3	4	5
10	Me cuesta ser cariñoso/a con él/ella	1	2	3	4	5
11	Le/a evito	1	2	3	4	5
12	A pesar de que me hizo daño, dejo el dolor de lado para retomar nuestra relación	1	2	3	4	5
13	Planeo vengarme	1	2	3	4	5
14	Dejo atrás el dolor y el resentimiento	1	2	3	4	5
15	Corto la relación con él/ella	1	2	3	4	5
16	Dejo atrás la rabia para trabajar en intentar rehacer nuestra relación	1	2	3	4	5
17	Quiero verlo/a sufrir y en estado de miseria	1	2	3	4	5
18	Me alejo de él/ella	1	2	3	4	5

**DTFS**

Teniendo presente la ofensa que acabas de recordar, contesta el siguiente cuestionario. Puntúa del 1 al 5 cada afirmación teniendo en cuenta que:

1. **Fuertemente en desacuerdo**
2. **En desacuerdo**
3. **Neutro**
4. **De acuerdo**
5. **Fuertemente de acuerdo**

1	He decidido perdonarle	1	2	3	4	5
2	Me he comprometido a perdonarle	1	2	3	4	5
3	Me he hecho a la idea de perdonarle	1	2	3	4	5
4	Mi elección es perdonarle	1	2	3	4	5
5	Mi elección es liberarme de cualquier sentimiento negativo que tenga	1	2	3	4	5

**Según lo contestado anteriormente, subraya la afirmación que mejor describe tu situación:**

**NO** me he decidido a perdonarle / **DUDO** en mi decisión / **SÍ** me he decidido a perdonarle

**Por favor, selecciona la puntuación que mejor describe cómo te sientes ahora mismo respecto a la persona que te hizo daño, teniendo en cuenta que:**

0= No considero la opción del perdón; 4= Ya le he perdonado

0                      1                      2                      3                      4

**¡Gracias por su participación!**

**PROTOCOL OF STUDY 2.2**

**Código participante**

**Datos demográficos**

**Sexo:**

- Hombre
- Mujer

**Nacionalidad:** \_\_\_\_\_

**Fecha de nacimiento (dd.mm.aaa):** \_\_\_\_\_

Por favor crea un código anónimo a partir de las siguientes indicaciones.

6. La primera letra de tu ciudad de nacimiento
7. La segunda letra del nombre de tu madre
8. La tercera letra de tu nombre
9. La última letra del nombre de tu padre
10. La primera letra del mes de tu nacimiento

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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**TRIM-18**

**Por favor, recuerda la situación que describiste en tu anterior participación. Recuerda quién es la persona que te ha ofendido y qué es lo que ha hecho para ofenderte.**

**A continuación, responde a las siguientes afirmaciones en base a lo que experimentas hacia la persona que te ha ofendido. Utiliza la siguiente escala para indicar tu grado de acuerdo con cada una de las afirmaciones:**

- 1. Totalmente en desacuerdo**
- 2. En desacuerdo**
- 3. Neutro**
- 4. De acuerdo**
- 5. Totalmente de acuerdo**

1	Hago que pague por lo que hizo	1	2	3	4	5
2	Mantengo entre nosotros/as la mayor distancia posible	1	2	3	4	5
3	A pesar de que sus acciones me han herido, igualmente le deseo lo mejor	1	2	3	4	5
4	Deseo que le suceda algo malo	1	2	3	4	5
5	Vivo como si él/ella no existiera, como si no estuviera cerca	1	2	3	4	5
6	Dejo de lado el rencor para que retomemos nuestra relación	1	2	3	4	5
7	No confió en él/ella	1	2	3	4	5
8	A pesar de lo que me hizo, deseo que volvamos a tener una buena relación	1	2	3	4	5
9	Deseo que obtenga su merecido	1	2	3	4	5
10	Me cuesta ser cariñoso/a con él/ella	1	2	3	4	5
11	Le/a evito	1	2	3	4	5
12	A pesar de que me hizo daño, dejo el dolor de lado para retomar nuestra relación	1	2	3	4	5
13	Planeo vengarme	1	2	3	4	5
14	Dejo atrás el dolor y el resentimiento	1	2	3	4	5
15	Corto la relación con él/ella	1	2	3	4	5
16	Dejo atrás la rabia para trabajar en intentar rehacer nuestra relación	1	2	3	4	5
17	Quiero verlo/a sufrir y en estado de miseria	1	2	3	4	5
18	Me alejo de él/ella	1	2	3	4	5

**DTFS**

Teniendo presente la ofensa que acabas de recordar, contesta el siguiente cuestionario. Puntúa del 1 al 5 cada afirmación teniendo en cuenta que:

- 1. Fuertemente en desacuerdo**
- 2. En desacuerdo**
- 3. Neutro**
- 4. De acuerdo**
- 5. Fuertemente de acuerdo**

1	He decidido perdonarle	1	2	3	4	5
2	Me he comprometido a perdonarle	1	2	3	4	5
3	Me he hecho a la idea de perdonarle	1	2	3	4	5
4	Mi elección es perdonarle	1	2	3	4	5
5	Mi elección es liberarme de cualquier sentimiento negativo que tenga	1	2	3	4	5

**¡Gracias por su participación!**





## PROTOCOL OF STUDY 2.3

### Datos demográficos

**Sexo:**

- Hombre
- Mujer

**Nacionalidad:** \_\_\_\_\_

**Fecha de nacimiento (dd.mm.aaa):** \_\_\_\_\_

**Grado que estudias:** \_\_\_\_\_

Por favor recuerda a alguien que te haya hecho daño o que te haya ofendido profundamente. Sin escribir su nombre, escribe una breve descripción sobre quién lo hizo, qué es lo que te hizo daño o te ofendió de la persona e indica cuánto tiempo hace que ocurrió. (Nota: si la persona ha hecho muchas cosas es importante tener en cuenta **un acontecimiento específico** para focalizarte en él).

**¿Quién fue el ofensor?** (hermano, amigo, jefe...)

**¿Cuánto tiempo hace aproximadamente que ocurrió?**

A continuación escriba una breve descripción para recordar el acontecimiento.

**La persona que te ofendió, ¿te ha pedido disculpas?**

- Sí, se disculpó
- No, no se disculpó

En una escala de 0 a 6, por favor indica el grado de proximidad de tu relación con la persona que te ofendió **ANTES** de la ofensa.

<i>Nada cercana</i>							<i>Extremadamente cercana</i>
0	1	2	3	4	5		6

En una escala de 0 a 6, por favor indica el grado de proximidad de tu relación con la persona que te ofendió **ACTUALMENTE**.

<i>Nada cercana</i>							<i>Extremadamente cercana</i>
0	1	2	3	4	5		6

**TRIM-18**

**A continuación, responde a las siguientes afirmaciones en base a lo que experimentas hacia la persona que te ha ofendido. Utiliza la siguiente escala para indicar tu grado de acuerdo con cada una de las afirmaciones:**

- 1. Totalmente en desacuerdo**
- 2. En desacuerdo**
- 3. Neutro**
- 4. De acuerdo**
- 5. Totalmente de acuerdo**

1	Hago que pague por lo que hizo	1	2	3	4	5
2	Mantengo entre nosotros/as la mayor distancia posible	1	2	3	4	5
3	A pesar de que sus acciones me han herido, igualmente le deseo lo mejor	1	2	3	4	5
4	Deseo que le suceda algo malo	1	2	3	4	5
5	Vivo como si él/ella no existiera, como si no estuviera cerca	1	2	3	4	5
6	Dejo de lado el rencor para que retomemos nuestra relación	1	2	3	4	5
7	No confió en él/ella	1	2	3	4	5
8	A pesar de lo que me hizo, deseo que volvamos a tener una buena relación	1	2	3	4	5
9	Deseo que obtenga su merecido	1	2	3	4	5
10	Me cuesta ser cariñoso/a con él/ella	1	2	3	4	5
11	Le/a evito	1	2	3	4	5
12	A pesar de que me hizo daño, dejo el dolor de lado para retomar nuestra relación	1	2	3	4	5
13	Planeo vengarme	1	2	3	4	5
14	Dejo atrás el dolor y el resentimiento	1	2	3	4	5
15	Corto la relación con él/ella	1	2	3	4	5
16	Dejo atrás la rabia para trabajar en intentar rehacer nuestra relación	1	2	3	4	5
17	Quiero verlo/a sufrir y en estado de miseria	1	2	3	4	5
18	Me alejo de él/ella	1	2	3	4	5

**DTFS**

Teniendo presente la ofensa que acabas de recordar, contesta el siguiente cuestionario. Puntúa del 1 al 5 cada afirmación teniendo en cuenta que:

1. **Fuertemente en desacuerdo**
2. **En desacuerdo**
3. **Neutro**
4. **De acuerdo**
5. **Fuertemente de acuerdo**

1	He decidido perdonarle	1	2	3	4	5
2	Me he comprometido a perdonarle	1	2	3	4	5
3	Me he hecho a la idea de perdonarle	1	2	3	4	5
4	Mi elección es perdonarle	1	2	3	4	5
5	Mi elección es liberarme de cualquier sentimiento negativo que tenga	1	2	3	4	5

**Según lo contestado anteriormente, subraya la afirmación que mejor describe tu situación:**

**NO** me he decidido a perdonarle / **DUDO** en mi decisión / **SÍ** me he decidido a perdonarle

**Por favor, selecciona la puntuación que mejor describe cómo te sientes ahora mismo respecto a la persona que te hizo daño, teniendo en cuenta que:**

0= No considero la opción del perdón; 4= Ya le he perdonado

0                      1                      2                      3                      4

**SCS**

Este es un cuestionario que mide una variedad de sentimientos y comportamientos en varias situaciones. A continuación se presentan una serie de afirmaciones. Lea cada una como si se refiriera a usted. **Rodee con un círculo el número que mejor expresa su nivel de acuerdo o desacuerdo.** Por favor responda cada una de las afirmaciones teniendo en cuenta que:

1. **Fuertemente en desacuerdo**
2. **En desacuerdo**
3. **Algo en desacuerdo**
4. **Ni acuerdo ni desacuerdo**
5. **Algo de acuerdo**
6. **De acuerdo**
7. **Fuertemente de acuerdo**

1	Disfruto siendo único y diferente de los demás en muchos aspectos	1	2	3	4	5	6	7
2	Puedo hablar abiertamente con alguien que acabo de conocer, aunque sea mucho mayor que yo	1	2	3	4	5	6	7
3	Aun cuando no estoy de acuerdo con los miembros del grupo, evito una confrontación	1	2	3	4	5	6	7
4	Respeto a las personas de autoridad con las que mantengo interacción	1	2	3	4	5	6	7
5	Hago lo que me parece bien a mí, sin tener en cuenta lo que piensan los demás	1	2	3	4	5	6	7
6	Respeto la gente que demuestran ser modestos de sí mismos	1	2	3	4	5	6	7
7	Siento que es importante comportarme como una persona independiente	1	2	3	4	5	6	7
8	Sacrificaré mi propio interés para el beneficio del grupo en el que estoy	1	2	3	4	5	6	7
9	Preferiría decir “no” directamente, antes que arriesgarme a ser malinterpretado	1	2	3	4	5	6	7
10	Es importante para mí tener una imaginación viva	1	2	3	4	5	6	7
11	Es importante para mí tener en cuenta el consejo de mis padres con respecto a mis estudios o planes de carrera	1	2	3	4	5	6	7
12	Siento que mi destino está enlazado con el destino de aquellos a mi alrededor	1	2	3	4	5	6	7
13	Prefiero ser directo y franco cuando trato con gente que acabo de conocer	1	2	3	4	5	6	7

14	Me siento a gusto cuando colaboro con los demás	1	2	3	4	5	6	7
15	Me siento a gusto si soy escogido para recibir un elogio o un premio	1	2	3	4	5	6	7
16	Si mi hermano o mi hermana fracasara, me sentiría responsable	1	2	3	4	5	6	7
17	Frecuentemente siento que mis relaciones con los demás son más importantes que mis propios logros	1	2	3	4	5	6	7
18	Hablar enfrente de los demás en una clase (o en una junta) no es un problema para mí	1	2	3	4	5	6	7
19	Le ofrecería mi asiento en un autobús a mi profesor (o mi jefe)	1	2	3	4	5	6	7
20	Actúo de la misma manera esté con quien esté	1	2	3	4	5	6	7
21	Mi felicidad depende de la felicidad de los que me rodean	1	2	3	4	5	6	7
22	Valoro estar bien de salud más que cualquier otra cosa	1	2	3	4	5	6	7
23	Me quedo con un grupo si me necesitan, aunque no me sienta contento	1	2	3	4	5	6	7
24	Trato de hacer lo que es mejor para mí, sin tener en cuenta cómo le podría afectar a los demás	1	2	3	4	5	6	7
25	Poder cuidarme bien es lo más importante para mí	1	2	3	4	5	6	7
26	Es importante para mí respetar las decisiones tomadas por el grupo	1	2	3	4	5	6	7
27	Mantener mi identidad personal, independientemente de los demás, es muy importante para mí	1	2	3	4	5	6	7
28	Para mí es importante mantener la armonía dentro de mi grupo	1	2	3	4	5	6	7
29	Actúo de la misma manera en casa que en la escuela (o en el trabajo)	1	2	3	4	5	6	7
30	Normalmente hago lo que los demás quieren hacer, aun cuando me gustaría hacer algo diferente	1	2	3	4	5	6	7

**TECA**

Las siguientes frases se refieren a sus sentimientos y pensamientos en una variedad de situaciones. Indique **cómo le describe** cada situación eligiendo la puntuación de 1 a 5 como se indica. Cuando haya elegido su respuesta rodee con un círculo el número correspondiente. Lea cada frase cuidadosamente antes de responder. Conteste honestamente con lo que más se identifique, ya que no hay respuestas correctas o incorrectas. No deje ninguna frase por contestar.

1. **Totalmente en desacuerdo**
2. **Algo en desacuerdo**
3. **Neutro**
4. **Algo de acuerdo**
5. **Totalmente de acuerdo**

1	Me resulta fácil darme cuenta de las intenciones de los que me rodean	1	2	3	4	5
2	Me siento bien si los demás se divierten	1	2	3	4	5
3	No me pongo triste sólo porque un amigo lo esté	1	2	3	4	5
4	Si un amigo consigue un trabajo muy deseado, me entusiasmo con él	1	2	3	4	5
5	Me afectan demasiado los programas de sucesos	1	2	3	4	5
6	Antes de tomar una decisión intento tener en cuenta todos los puntos de vista	1	2	3	4	5
7	Rara vez reconozco cómo se siente una persona con sólo mirarla	1	2	3	4	5
8	Me afecta poco escuchar desgracias sobre personas desconocidas	1	2	3	4	5
9	Me hace ilusión ver que un amigo nuevo se encuentra a gusto en nuestro grupo	1	2	3	4	5
10	Me es difícil entender cómo se siente una persona ante una situación que no he vivido	1	2	3	4	5
11	Cuando un amigo se ha portado mal conmigo intento entender sus motivos	1	2	3	4	5
12	Salvo que se trate de algo muy grave, me cuesta llorar con lo que les sucede a otros	1	2	3	4	5
13	Reconozco fácilmente cuándo alguien está de mal humor	1	2	3	4	5
14	No siempre me doy cuenta cuando la persona que tengo al lado se siente mal	1	2	3	4	5
15	Intento ponerme en el lugar de los demás para saber cómo actuarán	1	2	3	4	5
16	Cuando a alguien le sucede algo bueno siento alegría	1	2	3	4	5
17	Si tengo una opinión formada no presto mucha atención a los argumentos de los demás	1	2	3	4	5



18	A veces sufro más con las desgracias de los demás que aquellos mismos	1	2	3	4	5
19	Me siento feliz sólo con ver felices a otras personas	1	2	3	4	5
20	Cuando alguien tiene un problema intento imaginarme cómo me sentiría si estuviera en su piel	1	2	3	4	5
21	No siento especial alegría si alguien me cuenta que ha tenido un golpe de suerte	1	2	3	4	5
22	Cuando veo que alguien recibe un regalo no puedo reprimir una sonrisa	1	2	3	4	5
23	No puedo evitar llorar con los testimonios de personas desconocidas	1	2	3	4	5
24	Cuando conozco gente nueva me doy cuenta de la impresión que se ha llevado sobre mí	1	2	3	4	5
25	Cuando mis amigos me cuentan que les va bien, no le doy mucha importancia	1	2	3	4	5
26	Encuentro difícil ver las cosas desde el punto de vista de las otras personas	1	2	3	4	5
27	Entender cómo se siente otra persona es algo muy fácil para mí	1	2	3	4	5
28	No soy de esas personas que se deprimen con los problemas ajenos	1	2	3	4	5
29	Intento comprender mejor a mis amigos mirando las situaciones desde su perspectiva	1	2	3	4	5
30	Me considero una persona fría porque no me conmuevo fácilmente	1	2	3	4	5
31	Me doy cuenta cuando las personas cercanas a mí están especialmente contentas sin que me hayan contado el motivo	1	2	3	4	5
32	Me resulta difícil ponerme en el lugar de personas con las que no estoy de acuerdo	1	2	3	4	5
33	Me doy cuenta cuando alguien intenta esconder sus verdaderos sentimientos	1	2	3	4	5

**STAXI-2**

A continuación se presentan una serie de afirmaciones que la gente usa para describirse a sí misma. Lea cada afirmación y rodee con un círculo una de las letras que encontrará a la derecha, la letra que mejor indique **cómo se siente ahora mismo**, utilizando la siguiente escala de valoración:

- A: No, en absoluto**  
**B: Algo**  
**C: Moderadamente**  
**D: Mucho**

Cómo me siento en este momento					
1	Estoy furioso	A	B	C	D
2	Me siento irritado	A	B	C	D
3	Me siento enfadado	A	B	C	D
4	Le pegaría a alguien	A	B	C	D
5	Estoy quemado	A	B	C	D
6	Me gustaría decir tacos	A	B	C	D
7	Estoy cabreado	A	B	C	D
8	Daría puñetazos a la pared	A	B	C	D
9	Me dan ganas de maldecir a gritos	A	B	C	D
10	Me dan ganas de gritarle a alguien	A	B	C	D
11	Quiero romper algo	A	B	C	D
12	Me dan ganas de gritar	A	B	C	D
13	Le tiraría algo a alguien	A	B	C	D
14	Tengo ganas de abofetear a alguien	A	B	C	D
15	Me gustaría echarle la bronca a alguien	A	B	C	D

**BAI**

A continuación, se presenta un listado de síntomas comunes de la ansiedad. Lea cada uno de los ítems atentamente e indique **cuánto le han afectado en la última semana incluyendo hoy**, teniendo en cuenta que:

- 0. Nada en absoluto**
- 1. Levemente**
- 2. Moderadamente**
- 3. Severamente**

1	Torpe o entumecido	0	1	2	3
2	Acalorado	0	1	2	3
3	Con temblor en las piernas	0	1	2	3
4	Incapaz de relajarse	0	1	2	3
5	Con temor a que ocurra lo peor	0	1	2	3
6	Mareado o que se le va la cabeza	0	1	2	3
7	Con latidos del corazón fuertes y acelerados	0	1	2	3
8	Inestable	0	1	2	3
9	Atemorizado o asustado	0	1	2	3
10	Nervioso	0	1	2	3
11	Con sensación de bloqueo	0	1	2	3
12	Con temblores en las manos	0	1	2	3
13	Inquieto, inseguro	0	1	2	3
14	Con miedo a perder el control	0	1	2	3
15	Con sensación de ahogo	0	1	2	3
16	Con temor a morir	0	1	2	3
17	Con miedo	0	1	2	3
18	Con problemas digestivos	0	1	2	3
19	Con desvanecimientos	0	1	2	3
20	Con rubor facial	0	1	2	3
21	Con sudores, fríos o calientes	0	1	2	3

**BDI**

Este cuestionario consta de 21 grupos de enunciados. Por favor, lea cada uno de ellos cuidadosamente. Luego elija **uno** de cada grupo, el que mejor describa el modo como se ha sentido la **últimas dos semanas, incluyendo el día de hoy**. Marque con un círculo el número correspondiente al enunciado elegido. Si varios enunciados de un mismo grupo le parecen igualmente apropiados, marque el número más alto. Verifique que no haya elegido más de uno por grupo, incluyendo en ítem 16 (Cambio en los hábitos de Sueño) y el ítem 18 (Cambios en el Apetito).

**1. Tristeza**

0. No me siento triste
1. Me siento triste gran parte del tiempo
2. Estoy triste todo el tiempo
3. Estoy tan triste o soy tan infeliz que no puedo soportarlo

**2. Pesimismo**

0. No estoy desanimado respecto a mi futuro
1. Me siento más desanimado respecto a mi futuro que lo que solía estarlo
2. No espero que las cosas funcionen para mí
3. Siento que no hay esperanza para mi futuro y que sólo puede empeorar

**3. Fracaso**

0. No me siento como un fracasado
1. He fracasado más de lo que hubiera debido
2. Cuando miro hacia atrás veo muchos fracasos
3. Siento que como persona soy un fracaso total

**4. Pérdida de Placer**

0. Obtengo tanto placer como siempre por las cosas de las que disfruto
1. No disfruto tanto de las cosas como solía hacerlo
2. Obtengo muy poco placer de las cosas de las que solía disfrutar
3. No puedo obtener ningún placer de las cosas de las que solía disfrutar

**5. Sentimientos de Culpa**

0. No me siento particularmente culpable
1. Me siento culpable respecto de varias cosas que he hecho o que debería haber hecho
2. Me siento bastante culpable la mayor parte del tiempo
3. Me siento culpable todo el tiempo

**6. Sentimientos de Castigo**

0. No siento que estoy siendo castigado
1. Siento que tal vez pueda ser castigado
2. Espero ser castigado
3. Siento que estoy siendo castigado

**7. Disconformidad con Uno Mismo**

0. Siento acerca de mí lo mismo que siempre
1. He perdido la confianza en mí mismo
2. Estoy decepcionado conmigo mismo
3. No me gusta a mí mismo

**8. Autocrítica**

0. No me critico ni me culpo más de lo habitual
1. Estoy más crítico conmigo mismo de lo que solía estarlo
2. Me critico a mí mismo por todos mis errores
3. Me culpo a mí mismo por todo lo malo que sucede

**9. Pensamientos o Deseos Suicidas**

0. No tengo ningún pensamiento de suicidarme
1. He tenido pensamientos de suicidarme, pero no lo haría
2. Querría suicidarme
3. Me suicidaría si tuviera la oportunidad de hacerlo

**10. Llanto**

0. No lloro más de lo que solía hacerlo
1. Lloro más de lo que solía hacerlo
2. Lloro por cualquier pequeñez
3. Siento ganas de llorar pero no puedo

**11. Agitación**

0. No estoy más inquieto o tenso que lo habitual
1. Me siento más inquieto o tenso que lo habitual
2. Estoy tan inquieto o agitado que me es difícil quedarme quieto
3. Estoy tan inquieto o agitado que tengo que estar siempre en movimiento o haciendo algo

**12. Pérdida de Interés**

0. No he perdido el interés en otras actividades o personas
1. Estoy menos interesado que antes en otras personas o cosas
2. He perdido casi todo el interés en otras personas o cosas
3. Me es difícil interesarme por algo

**13. Indecisión**

0. Tomo mis decisiones tan bien como siempre
1. Me resulta más difícil que de costumbre tomar decisiones
2. Encuentro mucha más dificultad que antes para tomar decisiones
3. Tengo problemas para tomar cualquier decisión

**14. Desvalorización**

0. No siento que yo no sea valioso
1. No me considero a mí mismo tan valioso y útil como solía considerarme
2. Me siento menos valioso cuando me comparo con otros
3. Siento que no valgo nada

**15. Pérdida de Energía**

0. Tengo tanta energía como siempre
1. Tengo menos energía que la que solía tener
2. No tengo suficiente energía para hacer demasiado
3. No tengo energía suficiente para hacer nada

**16. Cambios en los Hábitos de Sueño**

0. No he experimentado ningún cambio en mis hábitos de sueño
- 
1. 1a. Duermo un poco más que lo habitual  
1b. Duermo un poco menos que lo habitual
- 
2. 2a. Duermo mucho más que lo habitual  
2b. Duermo mucho menos que lo habitual
- 
3. 3a. Duermo la mayor parte del día  
3b. Me despierto 1-2 horas más temprano y no puedo volver a dormirme

**17. Irritabilidad**

0. No estoy más irritable que lo habitual
1. Estoy más irritable que lo habitual
2. Estoy mucho más irritable que lo habitual
3. Estoy irritable todo el tiempo

**18. Cambios en el Apetito**

0. No he experimentado ningún cambio en mi apetito
- 
1. 1a. Mi apetito es un poco menos que lo habitual  
1b. Mi apetito es un poco mayor que lo habitual
- 
2. 2a. Mi apetito es mucho menos que antes  
2b. Mi apetito es mucho mayor que lo habitual
- 
3. 3a. No tengo apetito en absoluto  
3b. Quiero comer todo el tiempo

**19. Dificultad de Concentración**

0. Puedo concentrarme tan bien como siempre
1. No puedo concentrarme tan bien como habitualmente
2. Me es difícil mantener la mente en algo por mucho tiempo
3. Encuentro que no puedo concentrarme en nada

**20. Cansancio o Fatiga**

0. No estoy más cansado o fatigado que lo habitual
1. Me fatigo o me canso más fácilmente que lo habitual
2. Estoy demasiado fatigado o cansado para hacer muchas de las cosas que solía hacer
3. Estoy demasiado fatigado o cansado para hacer la mayoría de cosas que solía hacer

**21. Pérdida de Interés en el Sexo**

0. No he notado ningún cambio reciente en mi interés por el sexo
1. Estoy menos interesado en el sexo de lo que solía estarlo
2. Ahora estoy mucho menos interesado en el sexo
3. He perdido completamente el interés en el sexo

**SWLS**

A continuación hay cinco afirmaciones con las cuales usted puede estar de acuerdo o en desacuerdo. Lea cada una de ellas y después seleccione la respuesta que mejor describa en qué grado está de acuerdo o en desacuerdo, teniendo en cuenta que:

1. **Fuertemente en desacuerdo**
2. **En desacuerdo**
3. **Ligeramente en desacuerdo**
4. **Ni de acuerdo ni en desacuerdo**
5. **Ligeramente de acuerdo**
6. **De acuerdo**
7. **Fuertemente de acuerdo**

1	En la mayoría de los aspectos, mi vida se acerca a mi ideal	1	2	3	4	5	6	7
2	Las condiciones de mi vida son excelentes	1	2	3	4	5	6	7
3	Estoy completamente satisfecho/a con mi vida	1	2	3	4	5	6	7
4	Hasta ahora, he conseguido las cosas más importantes que quiero en la vida	1	2	3	4	5	6	7
5	Si pudiera vivir mi vida de nuevo, no cambiaría nada	1	2	3	4	5	6	7

**RRS**

Las personas piensan y hacen distintas cosas cuando se sienten tristes, deprimidas o abatidas. Por favor lee cada una de las frases a continuación y rodea con un círculo si *casi nunca, algunas veces, a menudo o casi siempre* piensas o actúas de esa manera **cuando estás abatido, triste o deprimido**. Por favor, indica lo que **generalmente** haces, no lo que crees que deberías hacer.

1. **Casi nunca**
2. **Algunas veces**
3. **A menudo**
4. **Casi siempre**

1	Piensas en lo solo/a que te sientes	1	2	3	4
2	Piensas: “No seré capaz de hacer mi trabajo/tarea si no soy capaz de quitarme esto de encima”	1	2	3	4
3	Piensas en tus sensaciones de fatiga y molestias	1	2	3	4
4	Piensas en lo duro que te resulta concentrarte	1	2	3	4
5	Piensas: “¿Qué he hecho yo para merecerme esto?”	1	2	3	4
6	Piensas en lo pasivo/a y desmotivado/a que te sientes	1	2	3	4
7	Analizas los sucesos recientes para entender por qué estás deprimido	1	2	3	4
8	Piensas acerca de cómo parece no sentir ya nada	1	2	3	4
9	Piensas: “¿Por qué no puedo conseguir hacer las cosas?”	1	2	3	4
10	Piensas: “¿Por qué siempre reacciono de esta forma?”	1	2	3	4
11	Te vas por ahí solo/a y piensas en por qué te sientes así	1	2	3	4
12	Escribes lo que estás pensando y lo analizas	1	2	3	4
13	Piensas acerca de una situación reciente, anhelando que hubiera ido mejor	1	2	3	4
14	Piensas: “No seré capaz de concentrarme si continúo sintiéndome de esta manera”	1	2	3	4
15	Piensas: “Por qué tengo problemas que el resto de las personas no tienen”	1	2	3	4
16	Piensas: “¿Por qué no puedo controlar las cosas mejor?”	1	2	3	4
17	Piensas en lo triste que te sientes	1	2	3	4
18	Piensas sobre todos tus defectos, debilidades, fallos y equivocaciones	1	2	3	4
19	Piensas sobre cómo no te apetece hacer nada	1	2	3	4
20	Analizas tu forma de ser para intentar comprender por qué estás deprimido/a	1	2	3	4
21	Te vas solo/a a algún sitio para pensar sobre cómo te sientes	1	2	3	4
22	Piensas en cómo estás de irritado contigo mismo/a	1	2	3	4

**¡Gracias por su participación!**





### **ANNEXES STUDY 3**

- **INFORMED CONSENT STUDY 3**
- **PROTOCOL STUDY 3 (TIME 1)**
- **PROTOCOL STUDY 3 (TIME2-TIME 5)**



### INFORMED CONSENT STUDY 3

Director/a del Proyecto: Professor Dr. Everett Worthington y Dra. Maria Fernández-Capo  
Investigador/a: Silvia Recoder Fernández  
Departamento: Ciencias Básicas. Área de Psicología

Yo, el Sr./la Sra.:.....

- He recibido información verbal sobre el estudio y he leído la información escrita que se adjunta, de la cual he obtenido una copia.
- He entendido lo que se me ha explicado, y los posibles riesgos y beneficios de participar en el estudio.
- He podido comentar el estudio y hacer preguntas al profesional responsable.
- Doy mi consentimiento para participar en el estudio y asumo que mi participación es totalmente voluntaria.
- Entiendo que podré retirarme en cualquier momento.

Mediante la firma de este formulario de consentimiento informado, doy mi consentimiento para que mis datos personales se puedan utilizar como se ha descrito en este formulario de consentimiento, que se ajusta al que dispone la Ley orgánica 15/1999, del 13 de diciembre, de protección de datos de carácter personal.

\_\_\_\_\_  
Firma del participante

\_\_\_\_\_  
Fecha de la firma

Núm. de DNI

\_\_\_\_\_

\_\_\_\_\_

Firma del investigador

Fecha de la firma

Nombre: Silvia Recoder

**DOCUMENTO DE INFORMACIÓN AL SUJETO PARTICIPANTE DEL**  
**ESTUDIO DE INVESTIGACIÓN**

Director/a del Proyecto: Professor Dr. Everett Worthington y Dra. Maria Fernández-Capo

Investigador/a: Silvia Recoder Fernández

Departamento: Ciencias Básicas. Área de Psicología

Hemos solicitado su participación en un estudio de investigación. Antes de decidir si acepta participar, es importante que comprenda los motivos por los cuales se lleva a cabo la investigación: cómo se utilizará su información, en qué consistirá el estudio y los posibles beneficios, riesgos y molestias que pueda comportar.

**¿Cuáles son los antecedentes y el objetivo de este estudio?**

El siguiente estudio se centra en los conflictos en las relaciones interpersonales y consta de 6 fases. La primera se presenta a continuación de este consentimiento. Está compuesta por una serie de cuestionarios y se completa en un tiempo estimado de 50-60 minutos. El objetivo principal del estudio es analizar una serie de respuestas que presenta la gente al experimentar una ofensa, es por eso, que le pedimos que en el momento en el que alguien le ofenda o le produzca algún daño, se ponga en contacto con la investigadora principal (srecoder@uic.es) para poder completar las siguientes fases de la encuesta. Es importante que el participante se ponga en contacto **el mismo día** que experimente la ofensa o al día siguiente como tarde. Una vez establecido el contacto, se le enviarán los links para completar las siguientes fases del estudio. Éstas tardan unos 15-20 minutos en completarse y se realizarán 5 días diferentes comprendidos en un intervalo de 15 días.

Agradeceríamos que contestara todos los cuestionarios, tanto los que presentan a continuación, como los que se le enviarán los próximos días.

En todas las fases es posible interrumpir el proceso y retomarlo más tarde. Igualmente, en cualquier momento que usted no se sienta cómodo respondiendo, podrá abandonar el estudio libremente.

Los cuestionarios se presentan en una plataforma virtual que es accesible tanto desde el ordenador, la tablet o cualquier dispositivo móvil.

**¿Tengo la obligación de participar?**

La decisión sobre participar o no en la investigación le corresponde a usted.

**¿Cuáles son mis obligaciones?**

Una vez dado su consentimiento empezará el proceso. La primera fase consistirá en rellenar una serie de cuestionarios que se presentan a continuación. Una vez finalizada ésta, el participante deberá contactar con el investigador principal ([srecoder@uic.es](mailto:srecoder@uic.es)) cuando reciba alguna ofensa. A partir de entonces deberá cumplimentar el resto de cuestionarios que se le enviarán por correo electrónico.

**¿Cuáles son los posibles efectos secundarios, riesgos o molestias asociados a la participación?**

Este estudio no conlleva riesgos para su persona, sin embargo, ante cualquier problema puede ponerse en contacto con el investigador principal Silvia Recoder ([srecoder@uic.es](mailto:srecoder@uic.es))

**¿Cuáles son los posibles beneficios de participar?**

Si participa en el estudio y completa las 5 fases de éste, entrará en el sorteo de un vale de 10€ para gastar en librerías Garbí. Además, los resultados que se obtengan en el estudio podrían beneficiar a la comunidad. La información podrá facilitarse a profesionales y a programas que trabajan directa o indirectamente en el campo las relaciones interpersonales.

**¿Cómo se utilizarán mis datos en el estudio?**

El trato de la comunicación y donación de los datos de carácter personal de los sujetos participantes en el ensayo se ajustan al que dispone la Ley orgánica 15/1999, de 13 de diciembre, de protección de datos de carácter personal.

Estos datos no incluyen ni su nombre de su dirección, sino que se asignará un código. Solamente el equipo investigador tendrá acceso a la clave del código que permite el acceso a la llave del código que permite asociar los datos del estudio con usted. No obstante, las autoridades reguladoras, el comité de ética independiente u otras entidades de supervisión podrán revisar sus datos personales. El objetivo de las revisiones comentadas es garantizar la dirección adecuada del estudio o la calidad de los datos del estudio.

Si retiran el consentimiento de utilizar sus datos en el estudio, no podrán continuar participando en la investigación. Tienen que tener en cuenta que los resultados del estudio pueden aparecer publicados en la bibliografía, si bien su identidad no será revelada.

**¿Cómo puedo establecer contacto si necesito obtener más información o ayuda?**

Mediante la aceptación de este formulario, asiente que ha sido informado de las características del estudio, ha entendido la información y se le han aclarado todas sus dudas.

En caso de sufrir un daño relacionado con el estudio o tener cualquier pregunta que pueda surgir durante la investigación, contacte con:

Silvia Recoder: [srecoder@uic.es](mailto:srecoder@uic.es)

Universitat Internacional de Catalunya

C/Josep Trueta, s/n, 08195, Sant Cugat del Vallès

Nº de teléfono: 93.504.20.00

**PROTOCOL STUDY 3 (TIME 1)**

**Código participante**

**Datos demográficos**

**Sexo:**

- Hombre
- Mujer

**Nacionalidad:** \_\_\_\_\_

**Correo electrónico:** \_\_\_\_\_

**Fecha de nacimiento (dd.mm.aaa):** \_\_\_\_\_

Por favor crea un código anónimo a partir de las siguientes indicaciones.

11. La primera letra de tu lugar de nacimiento
12. La segunda letra del nombre de tu madre
13. La tercera letra de tu nombre
14. La última letra del nombre de tu padre
15. La primera letra del mes de tu nacimiento

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Por favor recuerda a alguien que te haya hecho daño o que te haya ofendido profundamente. Sin escribir su nombre, escribe una breve descripción sobre quién lo hizo, qué es lo que te hizo daño o te ofendió de la persona e indica cuánto tiempo hace que ocurrió. (Nota: si la persona ha hecho muchas cosas es importante tener en cuenta **un acontecimiento específico** para focalizarte en él).

**¿Quién fue el ofensor?** (hermano, amigo, jefe...)

**¿Cuándo ocurrió?**

- Ayer
- Hoy

A continuación escriba una breve descripción para recordar el acontecimiento.

**La persona que te ofendió, ¿te ha pedido disculpas?**

- Sí, se disculpó
- No, no se disculpó

En una escala de 0 a 6, por favor indica el grado de proximidad de tu relación con la persona que te ofendió **ANTES** de la ofensa.

<i>Nada cercana</i>							<i>Extremadamente cercana</i>
0	1	2	3	4	5		6

En una escala de 0 a 6, por favor indica el grado de proximidad de tu relación con la persona que te ofendió **ACTUALMENTE**.

<i>Nada cercana</i>							<i>Extremadamente cercana</i>
0	1	2	3	4	5		6

En una escala de 0 a 6, por favor indica en qué grado consideras la ofensa **dolorosa**.

<i>Nada cercana</i>							<i>Extremadamente cercana</i>
0	1	2	3	4	5		6

**TRIM-18**

**A continuación, responde a las siguientes afirmaciones en base a lo que experimentas hacia la persona que te ha ofendido actualmente.** Utiliza la siguiente escala para indicar tu grado de acuerdo con cada una de las afirmaciones:

- 1. Totalmente en desacuerdo**
- 2. En desacuerdo**
- 3. Neutro**
- 4. De acuerdo**
- 5. Totalmente de acuerdo**

1	Hago que pague por lo que hizo	1	2	3	4	5
2	Mantengo entre nosotros/as la mayor distancia posible	1	2	3	4	5
3	A pesar de que sus acciones me han herido, igualmente le deseo lo mejor	1	2	3	4	5
4	Deseo que le suceda algo malo	1	2	3	4	5
5	Vivo como si él/ella no existiera, como si no estuviera cerca	1	2	3	4	5
6	Dejo de lado el rencor para que retomemos nuestra relación	1	2	3	4	5
7	No confió en él/ella	1	2	3	4	5
8	A pesar de lo que me hizo, deseo que volvamos a tener una buena relación	1	2	3	4	5
9	Deseo que obtenga su merecido	1	2	3	4	5
10	Me cuesta ser cariñoso/a con él/ella	1	2	3	4	5
11	Le/a evito	1	2	3	4	5
12	A pesar de que me hizo daño, dejo el dolor de lado para retomar nuestra relación	1	2	3	4	5
13	Planeo vengarme	1	2	3	4	5
14	Dejo atrás el dolor y el resentimiento	1	2	3	4	5
15	Corto la relación con él/ella	1	2	3	4	5
16	Dejo atrás la rabia para trabajar en intentar rehacer nuestra relación	1	2	3	4	5
17	Quiero verlo/a sufrir y en estado de miseria	1	2	3	4	5
18	Me alejo de él/ella	1	2	3	4	5

**DTFS**

Teniendo presente la ofensa que acabas de recordar, contesta el siguiente cuestionario.  
Puntúa del 1 al 5 cada afirmación teniendo en cuenta que:

- 1. Fuertemente en desacuerdo**
- 2. En desacuerdo**
- 3. Neutro**
- 4. De acuerdo**
- 5. Fuertemente de acuerdo**

1	He decidido perdonarle	1	2	3	4	5
2	Me he comprometido a perdonarle	1	2	3	4	5
3	Me he hecho a la idea de perdonarle	1	2	3	4	5
4	Mi elección es perdonarle	1	2	3	4	5
5	Mi elección es liberarme de cualquier sentimiento negativo que tenga	1	2	3	4	5

**BAI**

A continuación, se presenta un listado de síntomas comunes de la ansiedad. Lea cada uno de los ítems atentamente e indique **cuánto le han afectado en la última semana incluyendo hoy**, teniendo en cuenta que:

- 0. Nada en absoluto**
- 1. Levemente**
- 2. Moderadamente**
- 3. Severamente**

1	Torpe o entumecido	0	1	2	3
2	Acalorado	0	1	2	3
3	Con temblor en las piernas	0	1	2	3
4	Incapaz de relajarse	0	1	2	3
5	Con temor a que ocurra lo peor	0	1	2	3
6	Mareado o que se le va la cabeza	0	1	2	3
7	Con latidos del corazón fuertes y acelerados	0	1	2	3
8	Inestable	0	1	2	3
9	Atemorizado o asustado	0	1	2	3
10	Nervioso	0	1	2	3
11	Con sensación de bloqueo	0	1	2	3
12	Con temblores en las manos	0	1	2	3
13	Inquieto, inseguro	0	1	2	3
14	Con miedo a perder el control	0	1	2	3
15	Con sensación de ahogo	0	1	2	3
16	Con temor a morir	0	1	2	3
17	Con miedo	0	1	2	3
18	Con problemas digestivos	0	1	2	3
19	Con desvanecimientos	0	1	2	3
20	Con rubor facial	0	1	2	3
21	Con sudores, fríos o calientes	0	1	2	3

**STAXI-2**

A continuación se presentan una serie de afirmaciones que la gente usa para describirse a sí misma. Lea cada afirmación y **rodee con un círculo** una de las letras que encontrará a la derecha, la letra que mejor indique **cómo se siente ahora mismo**, utilizando la siguiente escala de valoración:

- A. No, en absoluto**
- B. Algo**
- C. Moderadamente**
- D. Mucho**

Cómo me siento en este momento					
1	Estoy furioso	A	B	C	D
2	Me siento irritado	A	B	C	D
3	Me siento enfadado	A	B	C	D
4	Le pegaría a alguien	A	B	C	D
5	Estoy quemado	A	B	C	D
6	Me gustaría decir tacos	A	B	C	D
7	Estoy cabreado	A	B	C	D
8	Daría puñetazos a la pared	A	B	C	D
9	Me dan ganas de maldecir a gritos	A	B	C	D
10	Me dan ganas de gritarle a alguien	A	B	C	D
11	Quiero romper algo	A	B	C	D
12	Me dan ganas de gritar	A	B	C	D
13	Le tiraría algo a alguien	A	B	C	D
14	Tengo ganas de abofetear a alguien	A	B	C	D
15	Me gustaría echarle la bronca a alguien	A	B	C	D

**BDI**

Este cuestionario consta de 21 grupos de enunciados. Por favor, lea cada uno de ellos cuidadosamente. Luego elija **uno** de cada grupo, el que mejor describa el modo como se ha sentido la **últimas dos semanas, incluyendo el día de hoy**. Marque con un círculo el número correspondiente al enunciado elegido. Si varios enunciados de un mismo grupo le parecen igualmente apropiados, marque el número más alto. Verifique que no haya elegido más de uno por grupo, incluyendo en ítem 16 (Cambio en los hábitos de Sueño) y el ítem 18 (Cambios en el Apetito).

**1. Tristeza**

0. No me siento triste
1. Me siento triste gran parte del tiempo
2. Estoy triste todo el tiempo
3. Estoy tan triste o soy tan infeliz que no puedo soportarlo

**2. Pesimismo**

0. No estoy desanimado respecto a mi futuro
1. Me siento más desanimado respecto a mi futuro que lo que solía estarlo
2. No espero que las cosas funcionen para mí
3. Siento que no hay esperanza para mi futuro y que sólo puede empeorar

**3. Fracaso**

0. No me siento como un fracasado
1. He fracasado más de lo que hubiera debido
2. Cuando miro hacia atrás veo muchos fracasos
3. Siento que como persona soy un fracaso total

**4. Pérdida de Placer**

0. Obtengo tanto placer como siempre por las cosas de las que disfruto
1. No disfruto tanto de las cosas como solía hacerlo
2. Obtengo muy poco placer de las cosas de las que solía disfrutar
3. No puedo obtener ningún placer de las cosas de las que solía disfrutar

**5. Sentimientos de Culpa**

0. No me siento particularmente culpable
1. Me siento culpable respecto de varias cosas que he hecho o que debería haber hecho
2. Me siento bastante culpable la mayor parte del tiempo
3. Me siento culpable todo el tiempo

**6. Sentimientos de Castigo**

0. No siento que estoy siendo castigado
1. Siento que tal vez pueda ser castigado
2. Espero ser castigado
3. Siento que estoy siendo castigado

**7. Disconformidad con Uno Mismo**

0. Siento acerca de mí lo mismo que siempre
1. He perdido la confianza en mí mismo
2. Estoy decepcionado conmigo mismo
3. No me gusta a mí mismo

**8. Autocrítica**

0. No me critico ni me culpo más de lo habitual
1. Estoy más crítico conmigo mismo de lo que solía estarlo
2. Me critico a mí mismo por todos mis errores
3. Me culpo a mí mismo por todo lo malo que sucede

**9. Pensamientos o Deseos Suicidas**

0. No tengo ningún pensamiento de suicidarme
1. He tenido pensamientos de suicidarme, pero no lo haría
2. Querría suicidarme
3. Me suicidaría si tuviera la oportunidad de hacerlo

**10. Llanto**

0. No lloro más de lo que solía hacerlo
1. Lloro más de lo que solía hacerlo
2. Lloro por cualquier pequeñez
3. Siento ganas de llorar pero no puedo

**11. Agitación**

0. No estoy más inquieto o tenso que lo habitual
1. Me siento más inquieto o tenso que lo habitual
2. Estoy tan inquieto o agitado que me es difícil quedarme quieto
3. Estoy tan inquieto o agitado que tengo que estar siempre en movimiento o haciendo algo

**12. Pérdida de Interés**

0. No he perdido el interés en otras actividades o personas
1. Estoy menos interesado que antes en otras personas o cosas
2. He perdido casi todo el interés en otras personas o cosas
3. Me es difícil interesarme por algo

**13. Indecisión**

0. Tomo mis decisiones tan bien como siempre
1. Me resulta más difícil que de costumbre tomar decisiones
2. Encuentro mucha más dificultad que antes para tomar decisiones
3. Tengo problemas para tomar cualquier decisión

**14. Desvalorización**

0. No siento que yo no sea valioso
1. No me considero a mí mismo tan valioso y útil como solía considerarme
2. Me siento menos valioso cuando me comparo con otros
3. Siento que no valgo nada

**15. Pérdida de Energía**

0. Tengo tanta energía como siempre
1. Tengo menos energía que la que solía tener
2. No tengo suficiente energía para hacer demasiado
3. No tengo energía suficiente para hacer nada

**16. Cambios en los Hábitos de Sueño**

0. No he experimentado ningún cambio en mis hábitos de sueño
- 
1. 1a. Duermo un poco más que lo habitual  
1b. Duermo un poco menos que lo habitual
- 
2. 2a. Duermo mucho más que lo habitual  
2b. Duermo mucho menos que lo habitual
- 
3. 3a. Duermo la mayor parte del día  
3b. Me despierto 1-2 horas más temprano y no puedo volver a dormirme

**17. Irritabilidad**

0. No estoy más irritable que lo habitual
1. Estoy más irritable que lo habitual
2. Estoy mucho más irritable que lo habitual
3. Estoy irritable todo el tiempo

**18. Cambios en el Apetito**

0. No he experimentado ningún cambio en mi apetito
- 
1. 1a. Mi apetito es un poco menos que lo habitual  
1b. Mi apetito es un poco mayor que lo habitual
- 
2. 2a. Mi apetito es mucho menos que antes  
2b. Mi apetito es mucho mayor que lo habitual
- 
3. 3a. No tengo apetito en absoluto  
3b. Quiero comer todo el tiempo

**19. Dificultad de Concentración**

0. Puedo concentrarme tan bien como siempre
1. No puedo concentrarme tan bien como habitualmente
2. Me es difícil mantener la mente en algo por mucho tiempo
3. Encuentro que no puedo concentrarme en nada

**20. Cansancio o Fatiga**

0. No estoy más cansado o fatigado que lo habitual
1. Me fatigo o me canso más fácilmente que lo habitual
2. Estoy demasiado fatigado o cansado para hacer muchas de las cosas que solía hacer
3. Estoy demasiado fatigado o cansado para hacer la mayoría de cosas que solía hacer

**21. Pérdida de Interés en el Sexo**

0. No he notado ningún cambio reciente en mi interés por el sexo
1. Estoy menos interesado en el sexo de lo que solía estarlo
2. Ahora estoy mucho menos interesado en el sexo
3. He perdido completamente el interés en el sexo



**PANAS**

El cuestionario de afecto positivo y negativo consiste en una serie de palabras que describen diferentes sentimientos y emociones. Lea cada palabra y seleccione la respuesta apropiada en cada caso, indicando en qué medida **se ha sentido de esa manera durante la última semana**, teniendo en cuenta que:

1. **Muy ligeramente o nunca**
2. **Un poco**
3. **Moderadamente**
4. **Bastante**
5. **Extremadamente**

1	Interesado	1	2	3	4	5
2	Afligido	1	2	3	4	5
3	Excitado	1	2	3	4	5
4	Alterado	1	2	3	4	5
5	Enérgico	1	2	3	4	5
6	Culpable	1	2	3	4	5
7	Asustado	1	2	3	4	5
8	Hostil	1	2	3	4	5
9	Entusiasta	1	2	3	4	5
10	Orgullosa	1	2	3	4	5
11	Irritable	1	2	3	4	5
12	Espabilado	1	2	3	4	5
13	Avergonzado	1	2	3	4	5
14	Inspirado	1	2	3	4	5
15	Nervioso	1	2	3	4	5
16	Resuelto	1	2	3	4	5
17	Atento	1	2	3	4	5
18	Agitado	1	2	3	4	5
19	Activo	1	2	3	4	5
20	Miedoso	1	2	3	4	5

**PSS**

Las preguntas en esta escala hacen referencia a sus sentimientos y pensamientos durante el **último mes**. En cada caso, por favor indique con una “X” cómo usted se ha sentido o ha pensado en cada situación. Tenga en cuenta que:

- 0. Nunca**
- 1. Casi nunca**
- 2. De vez en cuando**
- 3. A menudo**
- 4. Muy a menudo**

1	En el último mes, ¿con qué frecuencia ha estado afectado por algo que ha ocurrido inesperadamente?	0	1	2	3	4
2	En el último mes, ¿con qué frecuencia se ha sentido incapaz de controlar las cosas importantes en su vida?	0	1	2	3	4
3	En el último mes, ¿con qué frecuencia se ha sentido nervioso o estresado?	0	1	2	3	4
4	En el último mes, ¿con qué frecuencia ha manejado con éxito los pequeños problemas irritantes de la vida?	0	1	2	3	4
5	En el último mes, ¿con qué frecuencia ha sentido que ha afrontado efectivamente los cambios importantes que han estado ocurriendo en su vida?	0	1	2	3	4
6	En el último mes, ¿con qué frecuencia ha estado seguro sobre su capacidad para manejar sus problemas personales?	0	1	2	3	4
7	En el último mes, ¿con qué frecuencia ha sentido que las cosas le van bien?	0	1	2	3	4
8	En el último mes, ¿con qué frecuencia ha sentido que no podía afrontar todas las cosas que tenía que hacer?	0	1	2	3	4
9	En el último mes, ¿con qué frecuencia ha podido controlar las dificultades de su vida?	0	1	2	3	4
10	En el último mes, ¿con qué frecuencia se ha sentido que tenía todo bajo control?	0	1	2	3	4
11	En el último mes, ¿con qué frecuencia ha estado enfadado porque las cosas que le han ocurrido estaban fuera de su control?	0	1	2	3	4
12	En el último mes, ¿con qué frecuencia ha pensado sobre las cosas que le quedan por hacer?	0	1	2	3	4
13	En el último mes, ¿con qué frecuencia ha podido controlar la forma de pasar el tiempo?	0	1	2	3	4
14	En el último mes, ¿con qué frecuencia ha sentido que las dificultades se acumulan tanto que no puede superarlas?	0	1	2	3	4

**RRS**

Las personas piensan y hacen distintas cosas cuando se sienten tristes, deprimidas o abatidas. Por favor lee cada una de las frases a continuación y rodea con un círculo si *casi nunca, algunas veces, a menudo o casi siempre* piensas o actúas de esa manera **cuando estás abatido, triste o deprimido**. Por favor, indica lo que **generalmente** haces, no lo que crees que deberías hacer.

1. **Casi nunca**
2. **Algunas veces**
3. **A menudo**
4. **Casi siempre**

1	Piensas en lo solo/a que te sientes	1	2	3	4
2	Piensas: “No seré capaz de hacer mi trabajo/tarea si no soy capaz de quitarme esto de encima”	1	2	3	4
3	Piensas en tus sensaciones de fatiga y molestias	1	2	3	4
4	Piensas en lo duro que te resulta concentrarte	1	2	3	4
5	Piensas: “¿Qué he hecho yo para merecerme esto?”	1	2	3	4
6	Piensas en lo pasivo/a y desmotivado/a que te sientes	1	2	3	4
7	Analizas los sucesos recientes para entender por qué estás deprimido	1	2	3	4
8	Piensas acerca de cómo parece no sentir ya nada	1	2	3	4
9	Piensas: “¿Por qué no puedo conseguir hacer las cosas?”	1	2	3	4
10	Piensas: “¿Por qué siempre reacciono de esta forma?”	1	2	3	4
11	Te vas por ahí solo/a y piensas en por qué te sientes así	1	2	3	4
12	Escribes lo que estás pensando y lo analizas	1	2	3	4
13	Piensas acerca de una situación reciente, anhelando que hubiera ido mejor	1	2	3	4
14	Piensas: “No seré capaz de concentrarme si continúo sintiéndome de esta manera”	1	2	3	4
15	Piensas: “Por qué tengo problemas que el resto de las personas no tienen”	1	2	3	4
16	Piensas: “¿Por qué no puedo controlar las cosas mejor?”	1	2	3	4
17	Piensas en lo triste que te sientes	1	2	3	4
18	Piensas sobre todos tus defectos, debilidades, fallos y equivocaciones	1	2	3	4
19	Piensas sobre cómo no te apetece hacer nada	1	2	3	4
20	Analizas tu forma de ser para intentar comprender por qué estás deprimido/a	1	2	3	4
21	Te vas solo/a a algún sitio para pensar sobre cómo te sientes	1	2	3	4
22	Piensas en cómo estás de irritado contigo mismo/a	1	2	3	4

**TECA**

Las siguientes frases se refieren a sus sentimientos y pensamientos en una variedad de situaciones. Indique **cómo le describe** cada situación eligiendo la puntuación de 1 a 5 como se indica. Cuando haya elegido su respuesta rodee con un círculo el número correspondiente. Lea cada frase cuidadosamente antes de responder. Conteste honestamente con lo que más se identifique, ya que no hay respuestas correctas o incorrectas. No deje ninguna frase por contestar.

1. **Totalmente en desacuerdo**
2. **Algo en desacuerdo**
3. **Neutro**
4. **Algo de acuerdo**
5. **Totalmente de acuerdo**

1	Me resulta fácil darme cuenta de las intenciones de los que me rodean	1	2	3	4	5
2	Me siento bien si los demás se divierten	1	2	3	4	5
3	No me pongo triste sólo porque un amigo lo esté	1	2	3	4	5
4	Si un amigo consigue un trabajo muy deseado, me entusiasmo con él	1	2	3	4	5
5	Me afectan demasiado los programas de sucesos	1	2	3	4	5
6	Antes de tomar una decisión intento tener en cuenta todos los puntos de vista	1	2	3	4	5
7	Rara vez reconozco cómo se siente una persona con sólo mirarla	1	2	3	4	5
8	Me afecta poco escuchar desgracias sobre personas desconocidas	1	2	3	4	5
9	Me hace ilusión ver que un amigo nuevo se encuentra a gusto en nuestro grupo	1	2	3	4	5
10	Me es difícil entender cómo se siente una persona ante una situación que no he vivido	1	2	3	4	5
11	Cuando un amigo se ha portado mal conmigo intento entender sus motivos	1	2	3	4	5
12	Salvo que se trate de algo muy grave, me cuesta llorar con lo que les sucede a otros	1	2	3	4	5
13	Reconozco fácilmente cuándo alguien está de mal humor	1	2	3	4	5
14	No siempre me doy cuenta cuando la persona que tengo al lado se siente mal	1	2	3	4	5
15	Intento ponerme en el lugar de los demás para saber cómo actuarán	1	2	3	4	5
16	Cuando a alguien le sucede algo bueno siento alegría	1	2	3	4	5

17	Si tengo una opinión formada no presto mucha atención a los argumentos de los demás	1	2	3	4	5
18	A veces sufro más con las desgracias de los demás que aquellos mismos	1	2	3	4	5
19	Me siento feliz sólo con ver felices a otras personas	1	2	3	4	5
20	Cuando alguien tiene un problema intento imaginarme cómo me sentiría si estuviera en su piel	1	2	3	4	5
21	No siento especial alegría si alguien me cuenta que ha tenido un golpe de suerte	1	2	3	4	5
22	Cuando veo que alguien recibe un regalo no puedo reprimir una sonrisa	1	2	3	4	5
23	No puedo evitar llorar con los testimonios de personas desconocidas	1	2	3	4	5
24	Cuando conozco gente nueva me doy cuenta de la impresión que se ha llevado sobre mí	1	2	3	4	5
25	Cuando mis amigos me cuentan que les va bien, no le doy mucha importancia	1	2	3	4	5
26	Encuentro difícil ver las cosas desde el punto de vista de las otras personas	1	2	3	4	5
27	Entender cómo se siente otra persona es algo muy fácil para mí	1	2	3	4	5
28	No soy de esas personas que se deprimen con los problemas ajenos	1	2	3	4	5
29	Intento comprender mejor a mis amigos mirando las situaciones desde su perspectiva	1	2	3	4	5
30	Me considero una persona fría porque no me conmuevo fácilmente	1	2	3	4	5
31	Me doy cuenta cuando las personas cercanas a mí están especialmente contentas sin que me hayan contado el motivo	1	2	3	4	5
32	Me resulta difícil ponerme en el lugar de personas con las que no estoy de acuerdo	1	2	3	4	5
33	Me doy cuenta cuando alguien intenta esconder sus verdaderos sentimientos	1	2	3	4	5

**SWLS**

A continuación hay cinco afirmaciones con las cuales usted puede estar de acuerdo o en desacuerdo. Lea cada una de ellas y después seleccione la respuesta que mejor describa en qué grado está de acuerdo o en desacuerdo, teniendo en cuenta que:

1. **Fuertemente en desacuerdo**
2. **En desacuerdo**
3. **Ligeramente en desacuerdo**
4. **Ni de acuerdo ni en desacuerdo**
5. **Ligeramente de acuerdo**
6. **De acuerdo**
7. **Fuertemente de acuerdo**

1	En la mayoría de los aspectos, mi vida se acerca a mi ideal	1	2	3	4	5	6	7
2	Las condiciones de mi vida son excelentes	1	2	3	4	5	6	7
3	Estoy completamente satisfecho/a con mi vida	1	2	3	4	5	6	7
4	Hasta ahora, he conseguido las cosas más importantes que quiero en la vida	1	2	3	4	5	6	7
5	Si pudiera vivir mi vida de nuevo, no cambiaría nada	1	2	3	4	5	6	7

**¡Gracias por su participación!**



**PROTOCOL STUDY 3 (TIME2-TIME 5)**

**Código participante**

**Datos demográficos**

**Sexo:**

- Hombre
- Mujer

**Nacionalidad:** \_\_\_\_\_

**Correo electrónico:** \_\_\_\_\_

**Fecha de nacimiento (dd.mm.aaa):** \_\_\_\_\_

Por favor crea un código anónimo a partir de las siguientes indicaciones.

- 16. La primera letra de tu lugar de nacimiento
- 17. La segunda letra del nombre de tu madre
- 18. La tercera letra de tu nombre
- 19. La última letra del nombre de tu padre
- 20. La primera letra del mes de tu nacimiento

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Por favor recuerda la situación que describiste en la participación anterior. Recuerda quién es la persona que te ofendió y qué es lo que hizo para ofenderte.

¿Ha habido algún cambio en la situación desde la última participación en este estudio? (Algún tipo de comunicación con el ofensor, algún agravante, etc.). Escríbelo a continuación.

**La persona que te ofendió, ¿te ha pedido disculpas?**

- Sí, se ha disculpado
- No, no se ha disculpado

**TRIM-18**

**A continuación, responde a las siguientes afirmaciones en base a lo que experimentas hacia la persona que te ha ofendido actualmente.** Utiliza la siguiente escala para indicar tu grado de acuerdo con cada una de las afirmaciones:

- 1. Totalmente en desacuerdo**
- 2. En desacuerdo**
- 3. Neutro**
- 4. De acuerdo**
- 5. Totalmente de acuerdo**

1	Hago que pague por lo que hizo	1	2	3	4	5
2	Mantengo entre nosotros/as la mayor distancia posible	1	2	3	4	5
3	A pesar de que sus acciones me han herido, igualmente le deseo lo mejor	1	2	3	4	5
4	Deseo que le suceda algo malo	1	2	3	4	5
5	Vivo como si él/ella no existiera, como si no estuviera cerca	1	2	3	4	5
6	Dejo de lado el rencor para que retomemos nuestra relación	1	2	3	4	5
7	No confió en él/ella	1	2	3	4	5
8	A pesar de lo que me hizo, deseo que volvamos a tener una buena relación	1	2	3	4	5
9	Deseo que obtenga su merecido	1	2	3	4	5
10	Me cuesta ser cariñoso/a con él/ella	1	2	3	4	5
11	Le/a evito	1	2	3	4	5
12	A pesar de que me hizo daño, dejo el dolor de lado para retomar nuestra relación	1	2	3	4	5
13	Planeo vengarme	1	2	3	4	5
14	Dejo atrás el dolor y el resentimiento	1	2	3	4	5
15	Corto la relación con él/ella	1	2	3	4	5
16	Dejo atrás la rabia para trabajar en intentar rehacer nuestra relación	1	2	3	4	5
17	Quiero verlo/a sufrir y en estado de miseria	1	2	3	4	5
18	Me alejo de él/ella	1	2	3	4	5

**DTFS**

Teniendo presente la ofensa que acabas de recordar, contesta el siguiente cuestionario.  
Puntúa del 1 al 5 cada afirmación teniendo en cuenta que:

- 1. Fuertemente en desacuerdo**
- 2. En desacuerdo**
- 3. Neutro**
- 4. De acuerdo**
- 5. Fuertemente de acuerdo**

1	He decidido perdonarle	1	2	3	4	5
2	Me he comprometido a perdonarle	1	2	3	4	5
3	Me he hecho a la idea de perdonarle	1	2	3	4	5
4	Mi elección es perdonarle	1	2	3	4	5
5	Mi elección es liberarme de cualquier sentimiento negativo que tenga	1	2	3	4	5

**BAI**

A continuación, se presenta un listado de síntomas comunes de la ansiedad. Lea cada uno de los ítems atentamente e indique **cuánto le han afectado en la última semana incluyendo hoy**, teniendo en cuenta que:

- 0. Nada en absoluto**
- 1. Levemente**
- 2. Moderadamente**
- 3. Severamente**

1	Torpe o entumecido	0	1	2	3
2	Acalorado	0	1	2	3
3	Con temblor en las piernas	0	1	2	3
4	Incapaz de relajarse	0	1	2	3
5	Con temor a que ocurra lo peor	0	1	2	3
6	Mareado o que se le va la cabeza	0	1	2	3
7	Con latidos del corazón fuertes y acelerados	0	1	2	3
8	Inestable	0	1	2	3
9	Atemorizado o asustado	0	1	2	3
10	Nervioso	0	1	2	3
11	Con sensación de bloqueo	0	1	2	3
12	Con temblores en las manos	0	1	2	3
13	Inquieto, inseguro	0	1	2	3
14	Con miedo a perder el control	0	1	2	3
15	Con sensación de ahogo	0	1	2	3
16	Con temor a morir	0	1	2	3
17	Con miedo	0	1	2	3
18	Con problemas digestivos	0	1	2	3
19	Con desvanecimientos	0	1	2	3
20	Con rubor facial	0	1	2	3
21	Con sudores, fríos o calientes	0	1	2	3

**STAXI-2**

A continuación se presentan una serie de afirmaciones que la gente usa para describirse a sí misma. Lea cada afirmación y **rodee con un círculo** una de las letras que encontrará a la derecha, la letra que mejor indique **cómo se siente ahora mismo**, utilizando la siguiente escala de valoración:

- A. No, en absoluto**
- B. Algo**
- C. Moderadamente**
- D. Mucho**

Cómo me siento en este momento					
1	Estoy furioso	A	B	C	D
2	Me siento irritado	A	B	C	D
3	Me siento enfadado	A	B	C	D
4	Le pegaría a alguien	A	B	C	D
5	Estoy quemado	A	B	C	D
6	Me gustaría decir tacos	A	B	C	D
7	Estoy cabreado	A	B	C	D
8	Daría puñetazos a la pared	A	B	C	D
9	Me dan ganas de maldecir a gritos	A	B	C	D
10	Me dan ganas de gritarle a alguien	A	B	C	D
11	Quiero romper algo	A	B	C	D
12	Me dan ganas de gritar	A	B	C	D
13	Le tiraría algo a alguien	A	B	C	D
14	Tengo ganas de abofetear a alguien	A	B	C	D
15	Me gustaría echarle la bronca a alguien	A	B	C	D

**BDI**

Este cuestionario consta de 21 grupos de enunciados. Por favor, lea cada uno de ellos cuidadosamente. Luego elija **uno** de cada grupo, el que mejor describa el modo como se ha sentido la **últimas dos semanas, incluyendo el día de hoy**. Marque con un círculo el número correspondiente al enunciado elegido. Si varios enunciados de un mismo grupo le parecen igualmente apropiados, marque el número más alto. Verifique que no haya elegido más de uno por grupo, incluyendo en ítem 16 (Cambio en los hábitos de Sueño) y el ítem 18 (Cambios en el Apetito).

**1. Tristeza**

0. No me siento triste
1. Me siento triste gran parte del tiempo
2. Estoy triste todo el tiempo
3. Estoy tan triste o soy tan infeliz que no puedo soportarlo

**2. Pesimismo**

0. No estoy desanimado respecto a mi futuro
1. Me siento más desanimado respecto a mi futuro que lo que solía estarlo
2. No espero que las cosas funcionen para mí
3. Siento que no hay esperanza para mi futuro y que sólo puede empeorar

**3. Fracaso**

0. No me siento como un fracasado
1. He fracasado más de lo que hubiera debido
2. Cuando miro hacia atrás veo muchos fracasos
3. Siento que como persona soy un fracaso total

**4. Pérdida de Placer**

0. Obtengo tanto placer como siempre por las cosas de las que disfruto
1. No disfruto tanto de las cosas como solía hacerlo
2. Obtengo muy poco placer de las cosas de las que solía disfrutar
3. No puedo obtener ningún placer de las cosas de las que solía disfrutar

**5. Sentimientos de Culpa**

0. No me siento particularmente culpable
1. Me siento culpable respecto de varias cosas que he hecho o que debería haber hecho
2. Me siento bastante culpable la mayor parte del tiempo
3. Me siento culpable todo el tiempo

**6. Sentimientos de Castigo**

0. No siento que estoy siendo castigado
1. Siento que tal vez pueda ser castigado
2. Espero ser castigado
3. Siento que estoy siendo castigado

**7. Disconformidad con Uno Mismo**

0. Siento acerca de mí lo mismo que siempre
1. He perdido la confianza en mí mismo
2. Estoy decepcionado conmigo mismo
3. No me gusta a mí mismo

**8. Autocrítica**

0. No me critico ni me culpo más de lo habitual
1. Estoy más crítico conmigo mismo de lo que solía estarlo
2. Me critico a mí mismo por todos mis errores
3. Me culpo a mí mismo por todo lo malo que sucede

**9. Pensamientos o Deseos Suicidas**

0. No tengo ningún pensamiento de suicidarme
1. He tenido pensamientos de suicidarme, pero no lo haría
2. Querría suicidarme
3. Me suicidaría si tuviera la oportunidad de hacerlo

**10. Llanto**

0. No lloro más de lo que solía hacerlo
1. Lloro más de lo que solía hacerlo
2. Lloro por cualquier pequeñez
3. Siento ganas de llorar pero no puedo

**11. Agitación**

0. No estoy más inquieto o tenso que lo habitual
1. Me siento más inquieto o tenso que lo habitual
2. Estoy tan inquieto o agitado que me es difícil quedarme quieto
3. Estoy tan inquieto o agitado que tengo que estar siempre en movimiento o haciendo algo

**12. Pérdida de Interés**

0. No he perdido el interés en otras actividades o personas
1. Estoy menos interesado que antes en otras personas o cosas
2. He perdido casi todo el interés en otras personas o cosas
3. Me es difícil interesarme por algo

**13. Indecisión**

0. Tomo mis decisiones tan bien como siempre
1. Me resulta más difícil que de costumbre tomar decisiones
2. Encuentro mucha más dificultad que antes para tomar decisiones
3. Tengo problemas para tomar cualquier decisión

**14. Desvalorización**

0. No siento que yo no sea valioso
1. No me considero a mí mismo tan valioso y útil como solía considerarme
2. Me siento menos valioso cuando me comparo con otros
3. Siento que no valgo nada

**15. Pérdida de Energía**

0. Tengo tanta energía como siempre
1. Tengo menos energía que la que solía tener
2. No tengo suficiente energía para hacer demasiado
3. No tengo energía suficiente para hacer nada

**16. Cambios en los Hábitos de Sueño**

0. No he experimentado ningún cambio en mis hábitos de sueño
- 
1. 1a. Duermo un poco más que lo habitual  
1b. Duermo un poco menos que lo habitual
- 
2. 2a. Duermo mucho más que lo habitual  
2b. Duermo mucho menos que lo habitual
- 
3. 3a. Duermo la mayor parte del día  
3b. Me despierto 1-2 horas más temprano y no puedo volver a dormirme

**17. Irritabilidad**

0. No estoy más irritable que lo habitual
1. Estoy más irritable que lo habitual
2. Estoy mucho más irritable que lo habitual
3. Estoy irritable todo el tiempo

**18. Cambios en el Apetito**

0. No he experimentado ningún cambio en mi apetito
- 
1. 1a. Mi apetito es un poco menos que lo habitual  
1b. Mi apetito es un poco mayor que lo habitual
- 
2. 2a. Mi apetito es mucho menos que antes  
2b. Mi apetito es mucho mayor que lo habitual
- 
3. 3a. No tengo apetito en absoluto  
3b. Quiero comer todo el tiempo

**19. Dificultad de Concentración**

0. Puedo concentrarme tan bien como siempre
1. No puedo concentrarme tan bien como habitualmente
2. Me es difícil mantener la mente en algo por mucho tiempo
3. Encuentro que no puedo concentrarme en nada

**20. Cansancio o Fatiga**

0. No estoy más cansado o fatigado que lo habitual
1. Me fatigo o me canso más fácilmente que lo habitual
2. Estoy demasiado fatigado o cansado para hacer muchas de las cosas que solía hacer
3. Estoy demasiado fatigado o cansado para hacer la mayoría de cosas que solía hacer

**21. Pérdida de Interés en el Sexo**

0. No he notado ningún cambio reciente en mi interés por el sexo
1. Estoy menos interesado en el sexo de lo que solía estarlo
2. Ahora estoy mucho menos interesado en el sexo
3. He perdido completamente el interés en el sexo



**PANAS**

El cuestionario de afecto positivo y negativo consiste en una serie de palabras que describen diferentes sentimientos y emociones. Lea cada palabra y seleccione la respuesta apropiada en cada caso, indicando en qué medida **se ha sentido de esa manera durante la última semana**, teniendo en cuenta que:

1. **Muy ligeramente o nunca**
2. **Un poco**
3. **Moderadamente**
4. **Bastante**
5. **Extremadamente**

1	Interesado	1	2	3	4	5
2	Afligido	1	2	3	4	5
3	Excitado	1	2	3	4	5
4	Alterado	1	2	3	4	5
5	Enérgico	1	2	3	4	5
6	Culpable	1	2	3	4	5
7	Asustado	1	2	3	4	5
8	Hostil	1	2	3	4	5
9	Entusiasta	1	2	3	4	5
10	Orgulloso	1	2	3	4	5
11	Irritable	1	2	3	4	5
12	Espabilado	1	2	3	4	5
13	Avergonzado	1	2	3	4	5
14	Inspirado	1	2	3	4	5
15	Nervioso	1	2	3	4	5
16	Resuelto	1	2	3	4	5
17	Atento	1	2	3	4	5
18	Agitado	1	2	3	4	5
19	Activo	1	2	3	4	5
20	Miedoso	1	2	3	4	5

**PSS**

Las preguntas en esta escala hacen referencia a sus sentimientos y pensamientos durante el **último mes**. En cada caso, por favor indique con una “X” cómo usted se ha sentido o ha pensado en cada situación. Tenga en cuenta que:

1. **Nunca**
2. **Casi nunca**
3. **De vez en cuando**
4. **A menudo**
5. **Muy a menudo**

1	En el último mes, ¿con qué frecuencia ha estado afectado por algo que ha ocurrido inesperadamente?	0	1	2	3	4
2	En el último mes, ¿con qué frecuencia se ha sentido incapaz de controlar las cosas importantes en su vida?	0	1	2	3	4
3	En el último mes, ¿con qué frecuencia se ha sentido nervioso o estresado?	0	1	2	3	4
4	En el último mes, ¿con qué frecuencia ha manejado con éxito los pequeños problemas irritantes de la vida?	0	1	2	3	4
5	En el último mes, ¿con qué frecuencia ha sentido que ha afrontado efectivamente los cambios importantes que han estado ocurriendo en su vida?	0	1	2	3	4
6	En el último mes, ¿con qué frecuencia ha estado seguro sobre su capacidad para manejar sus problemas personales?	0	1	2	3	4
7	En el último mes, ¿con qué frecuencia ha sentido que las cosas le van bien?	0	1	2	3	4
8	En el último mes, ¿con qué frecuencia ha sentido que no podía afrontar todas las cosas que tenía que hacer?	0	1	2	3	4
9	En el último mes, ¿con qué frecuencia ha podido controlar las dificultades de su vida?	0	1	2	3	4
10	En el último mes, ¿con qué frecuencia se ha sentido que tenía todo bajo control?	0	1	2	3	4
11	En el último mes, ¿con qué frecuencia ha estado enfadado porque las cosas que le han ocurrido estaban fuera de su control?	0	1	2	3	4
12	En el último mes, ¿con qué frecuencia ha pensado sobre las cosas que le quedan por hacer?	0	1	2	3	4
13	En el último mes, ¿con qué frecuencia ha podido controlar la forma de pasar el tiempo?	0	1	2	3	4
14	En el último mes, ¿con qué frecuencia ha sentido que las dificultades se acumulan tanto que no puede superarlas?	0	1	2	3	4

**RRS**

Las personas piensan y hacen distintas cosas cuando se sienten tristes, deprimidas o abatidas. Por favor lee cada una de las frases a continuación y rodea con un círculo si *casi nunca, algunas veces, a menudo o casi siempre* piensas o actúas de esa manera **cuando estás abatido, triste o deprimido**. Por favor, indica lo que **generalmente** haces, no lo que crees que deberías hacer.

1. **Casi nunca**
2. **Algunas veces**
3. **A menudo**
4. **Casi siempre**

1	Piensas en lo solo/a que te sientes	1	2	3	4
2	Piensas: “No seré capaz de hacer mi trabajo/tarea si no soy capaz de quitarme esto de encima”	1	2	3	4
3	Piensas en tus sensaciones de fatiga y molestias	1	2	3	4
4	Piensas en lo duro que te resulta concentrarte	1	2	3	4
5	Piensas: “¿Qué he hecho yo para merecerme esto?”	1	2	3	4
6	Piensas en lo pasivo/a y desmotivado/a que te sientes	1	2	3	4
7	Analizas los sucesos recientes para entender por qué estás deprimido	1	2	3	4
8	Piensas acerca de cómo parece no sentir ya nada	1	2	3	4
9	Piensas: “¿Por qué no puedo conseguir hacer las cosas?”	1	2	3	4
10	Piensas: “¿Por qué siempre reacciono de esta forma?”	1	2	3	4
11	Te vas por ahí solo/a y piensas en por qué te sientes así	1	2	3	4
12	Escribes lo que estás pensando y lo analizas	1	2	3	4
13	Piensas acerca de una situación reciente, anhelando que hubiera ido mejor	1	2	3	4
14	Piensas: “No seré capaz de concentrarme si continúo sintiéndome de esta manera”	1	2	3	4
15	Piensas: “Por qué tengo problemas que el resto de las personas no tienen”	1	2	3	4
16	Piensas: “¿Por qué no puedo controlar las cosas mejor?”	1	2	3	4
17	Piensas en lo triste que te sientes	1	2	3	4
18	Piensas sobre todos tus defectos, debilidades, fallos y equivocaciones	1	2	3	4
19	Piensas sobre cómo no te apetece hacer nada	1	2	3	4
20	Analizas tu forma de ser para intentar comprender por qué estás deprimido/a	1	2	3	4
21	Te vas solo/a a algún sitio para pensar sobre cómo te sientes	1	2	3	4
22	Piensas en cómo estás de irritado contigo mismo/a	1	2	3	4

**TECA**

Las siguientes frases se refieren a sus sentimientos y pensamientos en una variedad de situaciones. Indique **cómo le describe** cada situación eligiendo la puntuación de 1 a 5 como se indica. Cuando haya elegido su respuesta rodee con un círculo el número correspondiente. Lea cada frase cuidadosamente antes de responder. Conteste honestamente con lo que más se identifique, ya que no hay respuestas correctas o incorrectas. No deje ninguna frase por contestar.

1. **Totalmente en desacuerdo**
2. **Algo en desacuerdo**
3. **Neutro**
4. **Algo de acuerdo**
5. **Totalmente de acuerdo**

1	Me resulta fácil darme cuenta de las intenciones de los que me rodean	1	2	3	4	5
2	Me siento bien si los demás se divierten	1	2	3	4	5
3	No me pongo triste sólo porque un amigo lo esté	1	2	3	4	5
4	Si un amigo consigue un trabajo muy deseado, me entusiasmo con él	1	2	3	4	5
5	Me afectan demasiado los programas de sucesos	1	2	3	4	5
6	Antes de tomar una decisión intento tener en cuenta todos los puntos de vista	1	2	3	4	5
7	Rara vez reconozco cómo se siente una persona con sólo mirarla	1	2	3	4	5
8	Me afecta poco escuchar desgracias sobre personas desconocidas	1	2	3	4	5
9	Me hace ilusión ver que un amigo nuevo se encuentra a gusto en nuestro grupo	1	2	3	4	5
10	Me es difícil entender cómo se siente una persona ante una situación que no he vivido	1	2	3	4	5
11	Cuando un amigo se ha portado mal conmigo intento entender sus motivos	1	2	3	4	5
12	Salvo que se trate de algo muy grave, me cuesta llorar con lo que les sucede a otros	1	2	3	4	5
13	Reconozco fácilmente cuándo alguien está de mal humor	1	2	3	4	5
14	No siempre me doy cuenta cuando la persona que tengo al lado se siente mal	1	2	3	4	5
15	Intento ponerme en el lugar de los demás para saber cómo actuarán	1	2	3	4	5
16	Cuando a alguien le sucede algo bueno siento alegría	1	2	3	4	5

17	Si tengo una opinión formada no presto mucha atención a los argumentos de los demás	1	2	3	4	5
18	A veces sufro más con las desgracias de los demás que aquellos mismos	1	2	3	4	5
19	Me siento feliz sólo con ver felices a otras personas	1	2	3	4	5
20	Cuando alguien tiene un problema intento imaginarme cómo me sentiría si estuviera en su piel	1	2	3	4	5
21	No siento especial alegría si alguien me cuenta que ha tenido un golpe de suerte	1	2	3	4	5
22	Cuando veo que alguien recibe un regalo no puedo reprimir una sonrisa	1	2	3	4	5
23	No puedo evitar llorar con los testimonios de personas desconocidas	1	2	3	4	5
24	Cuando conozco gente nueva me doy cuenta de la impresión que se ha llevado sobre mí	1	2	3	4	5
25	Cuando mis amigos me cuentan que les va bien, no le doy mucha importancia	1	2	3	4	5
26	Encuentro difícil ver las cosas desde el punto de vista de las otras personas	1	2	3	4	5
27	Entender cómo se siente otra persona es algo muy fácil para mí	1	2	3	4	5
28	No soy de esas personas que se deprimen con los problemas ajenos	1	2	3	4	5
29	Intento comprender mejor a mis amigos mirando las situaciones desde su perspectiva	1	2	3	4	5
30	Me considero una persona fría porque no me conmuevo fácilmente	1	2	3	4	5
31	Me doy cuenta cuando las personas cercanas a mí están especialmente contentas sin que me hayan contado el motivo	1	2	3	4	5
32	Me resulta difícil ponerme en el lugar de personas con las que no estoy de acuerdo	1	2	3	4	5
33	Me doy cuenta cuando alguien intenta esconder sus verdaderos sentimientos	1	2	3	4	5

**SWLS**

A continuación hay cinco afirmaciones con las cuales usted puede estar de acuerdo o en desacuerdo. Lea cada una de ellas y después seleccione la respuesta que mejor describa en qué grado está de acuerdo o en desacuerdo, teniendo en cuenta que:

- 1. Fuertemente en desacuerdo**
- 2. En desacuerdo**
- 3. Ligeramente en desacuerdo**
- 4. Ni de acuerdo ni en desacuerdo**
- 5. Ligeramente de acuerdo**
- 6. De acuerdo**
- 7. Fuertemente de acuerdo**

1	En la mayoría de los aspectos, mi vida se acerca a mi ideal	1	2	3	4	5	6	7
2	Las condiciones de mi vida son excelentes	1	2	3	4	5	6	7
3	Estoy completamente satisfecho/a con mi vida	1	2	3	4	5	6	7
4	Hasta ahora, he conseguido las cosas más importantes que quiero en la vida	1	2	3	4	5	6	7
5	Si pudiera vivir mi vida de nuevo, no cambiaría nada	1	2	3	4	5	6	7

**¡Gracias por su participación!**



## **ANNEX 4**

- **ARTICLE PUBLISHED IN ANALES DE PSICOLOGÍA**





## Exploring the dimensionality and the psychometric properties of the TRIM-18 in the Spanish context

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**Título:** Exploración de la dimensionalidad y de las propiedades psicométricas del TRIM-18 en contexto Español.

**Resumen:** *Introducción:* La escala *Transgression-Related Interpersonal Motivations* (TRIM-18) es un instrumento diseñado para evaluar perdón específico compuesto por tres subescalas: evitación, venganza y benevolencia. En el presente estudio se examina la dimensionalidad de la versión española del TRIM-18 (TRIM-18-S). Se presentan evidencias de fiabilidad y de validez de constructo de la interpretación de las puntuaciones. *Método:* Un total de 943 sujetos completaron el TRIM-18-S. Una submuestra de 94 participantes completaron la escala otra vez dos semanas después para el cálculo de la estabilidad temporal, y 277 participantes completaron medidas adicionales de empatía, ira e información relacionada con el tipo de ofensor para el cálculo de la validez de constructo. *Resultados:* El TRIM-18-S mostró buenas propiedades psicométricas. El análisis factorial confirmatorio reveló una estructura tridimensional. Los valores del alfa de Cronbach variaron entre .80 y .90. Los valores obtenidos para la fiabilidad test-retest variaron entre .74 y .84. Se hallaron evidencias de validez de constructo a partir de las correlaciones con el ítem único de medida de perdón y con empatía, ira, cercanía con el ofensor y tipo de relación. *Conclusiones:* La escala presenta propiedades psicométricas adecuadas para su uso en población española.

**Palabras clave:** perdón; episódico; escala; validación; castellano.

**Abstract:** *Introduction:* The *Transgression-Related Interpersonal Motivations Inventory* (TRIM-18) is an instrument that assesses episodic forgiveness composed of three subscales: avoidance, revenge and benevolence. In the present study we examined the dimensionality of the Spanish version of the TRIM-18 (TRIM-18-S). We provided evidences of estimated reliability and construct validity of the interpretation of the scores. *Method:* A total of 943 participants completed the TRIM-18-S. A subset of 94 participants completed the measure again to allow computation of two-week estimated temporal stability, and 277 participants completed additional measures of empathy, anger, and information regarding the relation with the offender to allow computations supporting construct validity. *Results:* The TRIM-18-S showed good psychometric properties. Confirmatory factor analysis revealed a three-factor structure. Alphas ranged from .80 to .90. Two week estimated test-retest correlations ranged from .74 to .84. Construct validity was supported by correlations with a single-item measuring forgiveness and with empathy, state anger, and closeness and type of relationship. *Conclusions:* The scale presents adequate psychometric properties for its potential use in Spanish population.

**Keywords:** forgiveness; episodic; scale; validation; Spanish.

### Introduction

Forgiveness has become a frequent topic of research in the past 20 years (McCullough, Worthington, & Rachal, 1997). Constructed as a human strength, forgiveness has positive consequences for healthy human development (for reviews, see Toussaint, Worthington, & Williams, 2015) and for social relationships (Tsang, McCullough, & Fincham, 2006).

Forgiveness is distinguished from condoning, excusing, reconciling and forgetting (Baskin & Enright, 2004). Although there is no universal definition of forgiveness, it is generally accepted that when a person forgives, his or her thoughts, feelings, and behaviors toward the offender become less negative and more positive (McCullough, Kilpatrick, Emmons, & Larson, 2001). However, some authors (e.g., North, 1987; for a review see Worthington, 2005) highlight forgiveness as the reduction of negative responses toward the offender (i.e., anger, rumination, revenge) while others emphasize the experience of positive affect (i.e., sympathy, benevolence, love) toward the transgressor as a critical part of complete forgiveness (Enright & Fitzgibbons, 2014; Worthington, 2006). Worthington (2005) observed that when the offenders are strangers, in poor, non-valued,

or non-continuing relationships, the focus is on reducing negative emotions and motives. However, when people are in valued, continuing relationships, the focus is on both reducing the negative and then increasing the positive.

Forgiveness is sometimes complex and especially difficult when harm is severe (Karremans, Van Lange, & Holland, 2005) and offenders are unrepentant (Bono, McCullough, & Root, 2008). Worthington (2006) distinguished two basic types of transgressions: hurts and offenses. The first violate people's physical or psychological boundaries. Offenses or "wrongs" violate moral boundaries. Forgiveness is usually correlated with higher empathy and lower anger states (Fehr, Gelfand, & Nag, 2010; McCullough et al., 1997). Also, McCullough et al. (1998) suggested that relationship closeness might facilitate forgiveness. Thus, multiple characteristics of the forgiver, the transgressor, the relationship and the offense affect whether forgiveness is experienced (for a review, see Fehr et al., 2010). Considering the different conceptualizations and the high interest in forgiveness, diverse measures have been developed to assess several types and aspects of forgiveness (for a review, see Worthington, et al., 2015). According to Worthington et al. (2015), the specificity with which forgiveness is assessed includes dispositional (i.e., stable personality trait), episodic (i.e., linked to a particular offense), and dyadic (i.e., unique offenses that occur within that relationship) forgiveness.

Within episodic forgiveness, some scales focus on the negative dimension, that means reduction of anger, venge-

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ance, etc., (e.g., Marital Offense Specific Forgiveness Scale; Paleari, Regalia, & Fincham, 2009); while others also consider positive dimensions of forgiveness as benevolence (e.g., Rye Forgiveness Scale; Rye, Loiacono, Folck, Olszewski, Heim, & Madia, 2001). The Transgression-Related Interpersonal Motivations Inventory (TRIM) is the most used instrument (Worthington et al., 2015). The first version (TRIM-12) was developed by McCullough et al. (1998). It assesses revenge (5 items) and avoidance (7 items) motivations following a perceived interpersonal offense by a particular person. These subscales measure two negative dimensions of forgiveness. Afterwards, six items were added, making the TRIM-18 (McCullough & Hoyt, 2002; McCullough, Root, & Cohen, 2006). The new items assessed benevolence, one of the positive dimensions of forgiveness. The authors proposed a tridimensional structure for TRIM-18; however exploratory factor analyses revealed a two factor solution; the revenge factor, composed by the same 5 items of the TRIM-12, and another factor called avoidance versus benevolence, composed by the remaining 13 items. Subsequent Rasch analyses had shown that the TRIM-18 can be portrayed as having one dimension (i.e., forgiveness, with revenge and avoidance items being reverse scored; McCullough, Luna, Berry, Tabak, & Bono, 2010). Which structure is apparent in factor analytic solutions likely depends on the nature of the relationships being considered in the particular samples analyzed. For example, people in close marriages likely show little revenge motivation. People offended by crimes or former spouses with whom they no longer interact likely show little motivation towards benevolence.

When trying to translate the TRIM-18 into Chinese and evaluate the psychometric support for it, Wong, Chu, and Chan (2013) used exploratory factor analysis (EFA) and obtained a two-factor solution. The first factor appeared to be a unidimensional scale composed of the avoidance and revenge items (i.e., unforgiveness); whereas the second factor comprised the remaining 6 items of benevolence. Because the inclusion of the benevolence construct within the definition of forgiveness was taken to be debatable, Wong et al. decided to keep only the first factor in the final scale, called Chinese-TRIM (C-TRIM). They treated the second factor as an independent scale to assess benevolence motivations.

Also, there has been a previous published validation of TRIM-18 in a Chilean sample (Guzmán, Tapia, Tejada, & Valenzuela, 2014). The authors translated the TRIM-18 into Spanish and presented results showing acceptable estimated internal consistency and a good fit of the data to a tridimensional factorial structure. However it was adapted for specific use within couples. The final version of the instrument included only 15 items from the 18 of the original English-version scale. First, they did not include item 15 “*I cut off the relationship with him/her*” because it was not clear its applicability in ongoing relationships. Second, they removed item 3 “*Even though his/her actions hurt me, I have goodwill for him/her*” because it cross-loaded on both revenge and benevolence

subscales. Finally, they excluded item 1 “*I’ll make him/her pay*” because it loaded on the avoidance factor instead of on its original factor, revenge, which for committed couples seems logically consistent. Whereas the Chilean version had adequate psychometric support within its intended use with couples, there is a need for a Spanish-language version that is more broadly applicable.

Although none of the previous studies supported the tridimensional structure of the TRIM-18 (including all the items), nowadays the TRIM-18 is often used and interpreted considering each of the three subscales separately. Thus, the objective of the present study is to explore the dimensionality of the 18-item Spanish version of TRIM-18 (TRIM-18-S). We hope to provide psychometric evidence related to the estimated reliability of scores and to offer evidence of the (construct) validity of interpreting the scores as assessing the construct of forgiveness. Specifically, we aimed to test the three different models proposed in previous studies (unidimensional, bi-dimensional or tri-dimensional) to figure out which one defines better the dimensionality of the TRIM-18 in the Spanish population without restricting the relationship in which the transgression occurred. We also examined the internal structure and the estimated temporal stability of the scale and provided evidence of construct validity by studying the relationship of TRIM-18-S scores (and subscale scores) with a single-item rating of forgiveness and with other related constructs like empathy, state anger, closeness of the actual relationship, and type of offender.

Some existing instruments measure forgiveness within Spanish population. However they were focused on divorced people (CPD-S; Yáñez-Yaben & Comino, 2012), or they measure dispositional forgiveness (CAPER; Casullo & Fernandez-Liporace, 2005). Thus, instruments assessing episodic forgiveness within the Spanish context are still lacking. Because forgiveness is a topic of increasing interest, and the design of interventions to promote forgiveness is becoming popular (see Wade, Hoyt, Kidwell, & Worthington, 2014, for a meta-analysis of interventions), a psychometrically sound measure that is generally available regardless of type of relationship will allow both researchers and clinical professionals to study forgiveness in the Spanish population.

## Method

### Participants

943 participants completed the TRIM-18-S (34.9% males and 65.1% females), ranging in age from 18 to 73 ( $M = 30.86$ ,  $SD = 12.94$ ). The inclusion criteria were that participants must be both Spanish and 18 years old or over. To avoid burdening participants, we selected subsamples based on power analyses to complete additional measures. Of these 943 participants, 300 were selected at random, and 277 of those (33.9% males and 66.1% females;  $M_{age} = 32.69$ ,  $SD = 13.28$ ) completed additional measures to provide evidence pertinent to the validity of interpreting scores. We selected

at random 100 other participants and of those, 94 (31.5% males and 64.9% females;  $M_{age} = 27.11$ ,  $SD = 10.00$ ) completed the TRIM-18-S to assess estimated two-week test-retest reliability.

### Instruments

*Transgression-Related Interpersonal Motivations Inventory* (TRIM-18; McCullough et al., 2006). The TRIM-18 consists of 18 items that measure avoidance, revenge and benevolence motivations toward a particular offender for a particular offense (i.e., episodic forgiveness). Participants are instructed to think about a hurtful transgression and then indicate their agreement with each item using a 5-point response option ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicate higher motivations.

*Spanish version of the State-Trait Anger Expression Inventory-2* (STAXI-2; psychometric data provided by Miguel-Tobal, Casado, Cano-Vindel, & Spielberger, 2001). This self-report instrument evaluates the general disposition to feel and express anger. The Spanish version consists of 49 items and 6 subscales, measured using 4-point response options (1 = *not at all* to 4 = *very much so*). For the present study, we used the *state anger* subscale (15 items; e.g., "I am furious"). The STAXI-2 is a psychometrically well-supported anger-assessment instrument that has good psychometric properties in adults without psychological disorders (alphas ranging from .69 to .89).

*Test de Empatía Cognitiva y Afectiva* (TECA; López-Pérez, Fernández-Pinto, & Abad, 2008). Served as a self-report measure, it suggests an overall assessment of cognitive and affective empathy (e.g., "Me siento bien si los demás se divierten") through four scales: perspective adoption, emotional understanding, empathic stress and empathic joy. The scale also permits one to obtain a total score. This instrument consists of 33 items (scores range from 33 to 165), which are answered according to a 5-point response option where 1 = *I totally disagree*, and 5 = *I totally agree*. Scores on the TECA had a Cronbach's alpha of .86.

*Single item of forgiveness*: Participants answered a single-item measure (used by McCullough et al., 1998) to indicate the extent to which they had forgiven their offender. The 6-point response option ranged from 0 = *none* to 5 = *completely*.

*Closeness of actual relationship*: Actual relational closeness was assessed answering "On a scale from 1 to 5, please indicate how close you are right now to the person who hurt you?" (1 = *no at all* to 5 = *extremely close*, Tsang et al., 2006).

*Offender type*: Through the reported offense of the participants, we categorized the type of offender taking into account if the relationship was valued (e.g., family member, friend, partner) or non-valued (e.g. employees, workmates, neighbor).

### Procedure

After obtaining the permission from the author of the English version of the TRIM, the Spanish translation of the TRIM-18 was done by two bilingual licensed psychologists whose first language was Spanish and second English. After this, two bilingual licensed psychologists (first language English and second Spanish) independently did the back-translation into English. Then, the possible discrepancies between the new version and the original were solved by consensus. By the time we started the study we were not aware of the Chilean version of the TRIM. However, when we discovered that version we analyzed their similarities and differences. Because our version was similar to the Chilean one except for the verb tense in items 6, 14, and 16 (e.g., *he dejado* vs *dejó*), we ran a pilot study as suggested by Muñiz, Elosua, and Hambleton (2013) to test which formulation of the items was more understandable. Ten pilot study participants indicated which items they comprehended better. The Chilean items were slightly preferred; thus, we used them. In addition, we added the three items removed by Guzmán et al. (2014) to extend the use of the questionnaire to contexts beyond the couples.

The sample was recruited using snowball-sampling technique. Participation was voluntary and anonymous. Participants accessed the questionnaires online. After giving their informed consent and supplying demographic information, participants were instructed to recall a specific offense, write it down, and complete the TRIM-18-S regarding that offense. The 100 randomly chosen participants were recontacted two weeks later to complete the TRIM-18-S a second time. 94 responses were obtained and used to estimate two-week test-retest reliability. Participation lasted 10 minutes.

Participants ( $N = 300$ ) selected to evaluate evidence supporting construct validity received an envelope with the TRIM-18-S and the measures presented in the instruments section. Of those selected, 277 participated. To avoid biases caused by the influence of the other measures (e.g., empathy), the TRIM was always presented first. The protocol took around 20 minutes.

### Data Analysis

Data was cleaned and study measures were created using IBM Statistics SPSS – Version 22 (IBM Corp., 2013). The data was checked for lack of normality, lack of linearity, and heteroscedasticity through the examination of basic statistics and histograms. We found no outliers, nor were there any missing values. Univariate and multivariate kurtosis were found, thus we applied the Satorra-Bentler scaled maximum likelihood (ML) correction (Satorra & Bentler, 1988) to adjust the model Chi-square. For the analysis of the dimensionality of TRIM-18-S, *Mplus* version 6 (Muthén & Muthén, 1998-2011) was used to perform a confirmatory factor analysis (CFA). Given the sensitivity of the Chi-square statistic to sample size, model fit was evaluated also based on the

comparative fit index (CFI), root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), and evaluation of parameter estimates (Hoyle & Panter, 1995). CFI values above .90 indicate good fit. RMSEA values below .08 indicated a reasonable fit; whereas values below .05 are considered a good fit. SRMR values are expected to be below .06 (Hu & Bentler, 1999). The Chi-square values for Satorra-Bentler scaled ML cannot be used for Chi-square difference testing directly, thus, we computed the adjusted Chi-square difference (Statmodel.com, 2016) to make comparison between models. To explore the psychometric properties of the TRIM-18-S different indicators were computed. Intraclass correlation coefficient (ICC) is a measure of agreement and was calculated for estimated test-retest reliability analysis, following recommendations by González, Villegas, Atucha, and Fajardo (2014). Also, Cronbach's alpha was used to estimate internal consistency of scores. Pearson correlation coefficient was used to assess the relationship between the TRIM-18-S and empathy, state anger and single item of forgiveness. Closeness of the actual relationship was treated as an ordinal variable and thus we used Spearman correlation to assess the relationship of this variable with the TRIM-18-S scores. An independent samples *t*-test with benevolence as dependent variable and type of the offender as independent variable was used to analyze the data. Finally, to test whether the TRIM-18-S improved the assessment of forgiveness in

comparison to TRIM-12 and to TRIM-15 (Chilean version) we conducted two hierarchical regression analyses. All these analysis, together with descriptive information, were performed using the SPSS statistical package.

## Results

### Factor Structure

After verifying the sample adequacy to conduct factor analysis (KMO = .951; Bartlett:  $\chi^2 = 11042.001$ ;  $df = 153$ ;  $p < .001$ ), we conducted confirmatory factor analysis to test the different models. In Table 1, we present the results for all models—uni-dimensional, bi-dimensional, and tri-dimensional and a second order model. We found an inadequate fit of model to the data for the unidimensional (Model 1) and for the two-factor model (Model 2) as indicated by too-small (i.e., less than .90) CFI values (CFI = .81/.89), and too high (more than .08) RMSEA values (RMSEA = .12/.09), respectively. In contrast, the model fit was considerably improved when fitting the three-factor model (Model 3), CFI = .93, RMSEA = .07, and SRMR = .06. Although the Chi-square value was significant, it is usually due to high sensitivity of Chi-square value to *N*. The CFI, RMSEA, and SRMR were all acceptable. The tri-dimensional model fit was good.

**Table 1.** Summary of model fit information for all models tested.

Model	$\chi^2(df)$	CFI	TLI	RMSEA (90%C.I.)	SRMR
Model 1 (1-factor)	1869.570 (135)***	.805	.779	.117 (.112-.121)	.092
Model 2 (2-factor)	1157.860 (134)***	.885	.869	.090 (.085-.095)	.064
Model 3 (3-factor)	655.117 (132)***	.941	.932	.065 (.060-.070)	.058
Model 4 (2 <sup>o</sup> order)	655.117 (132)***	.938	.928	.065 (.060-.070)	.058

$\chi^2(df)$ : Chi-square (degrees of freedom); CFI: Comparative Fit Index; TLI: Tucker-Lewis Index; RMSEA: Root Mean Squared Error of Approximation; SRMR: Standardized Root Mean squared Residual.

\*\*\* $p < .001$ .

When comparing the different models (see Table 2) significant differences were obtained for the adjusted Chi square differences and the increments in the CFI and TLI were higher than .05 in all cases, indicating that the Model 3 is the one that best fits the data.

**Table 2.** Comparison of the different models of the TRIM-18-S.

Models compared	Adjusted $\chi^2$ Difference Test	$\Delta df$	$\Delta CFI$	$\Delta TLI$
1-factor against 2-factor	259.863***	1	.080	.090
1-factor against 3-factor	218.972***	3	.136	.153
2-factor against 3-factor	178.206***	2	.056	.063

In Table 3, we show the standardized factor loadings, all of them significant, and between moderate and high strength for items 2, 5, 7, 10, 11, 15, and 18 on avoidance, for items

1, 4, 9, 13, and 17 on revenge, and for items 3, 6, 8, 12, 14, and 16 on benevolence. The correlations of avoidance with revenge and benevolence factors were  $r = .52$ ,  $p < .001$ ; and  $r = -.85$ ,  $p < .001$  respectively, and the correlation between revenge and benevolence factors was  $r = -.51$ ,  $p < .001$ . Because the TRIM-18 is a measure of forgiveness, obtaining a total score instead of three different punctuations may be interesting. Thus, we tested a second-order model (Model 4) defining a general factor of forgiveness formed by the three subscales: avoidance, revenge, and benevolence. The Model 4 was equivalent to Model 3 ( $\chi^2_{\text{Model3-Model4}} = .000$ ) (because of the same number of degrees of freedom and so the number of parameters) but instead of obtaining correlations among factors, these were replaced by factor loadings (Table 3).

**Table 3.** TRIM-18-S items and their confirmatory factor loadings for the second-order model.

Items	Standardized Factor Loadings			
	Avoidance	Revenge	Benevolence	Forgiveness
2. Mantengo entre nosotros/as la mayor distancia posible	.82			
5. Vivo como si él/ella no existiera, como si no estuviera cerca	.76			
7. No confío en él/ella	.70			
10. Me cuesta ser cariñoso/a con él/ella	.69			
11. Le/a evito	.82			
15. Corto la relación con él/ella	.88			
18. Me alejo de él/ella	.88			
1. Hago que pague por lo que hizo		.57		
4. Deseo que le suceda algo malo		.74		
9. Deseo que él/ella obtenga su merecido		.72		
13. Planeo vengarme		.67		
17. Quiero verle/a sufrir y en estado de miseria		.72		
3. A pesar de que sus acciones me han herido, igualmente le deseo lo mejor			.56	
6. He dejado de lado el rencor para que retomemos nuestra relación			.84	
8. A pesar de lo que me hizo, deseo que volvamos a tener una buena relación			.85	
12. A pesar de que me hizo daño, he dejado el dolor de lado para retomar nuestra relación			.90	
14. He dejado atrás el dolor y el resentimiento			.47	
16. He dejado atrás la rabia para trabajar en intentar rebacer nuestra relación			.85	
<b>Factors</b>				
Avoidance ( <i>Evitación</i> )				-.93
Revenge ( <i>Venganza</i> )				-.56
Benevolence ( <i>Benevolencia</i> )				.92

Because Model 4 presented adequate fit it was possible to establish a total score of forgiveness. To do so, we reverse coded the items of both the avoidance and revenge subscales and then summed the direct scores of each of the subscales. A Total Forgiveness score (TF) was obtained, in which higher scores indicated higher forgiveness.

### Estimated Reliabilities of Scores

Estimated internal consistency was computed using Cronbach's alpha coefficients. Alphas were .90 for avoidance, .80 for revenge, .89 for benevolence, and .94 for TF. We also assessed 2-week estimated test-retest reliability using the intraclass correlation coefficient (ICC). ICCs for each subscale were .71 for avoidance, .81 for revenge, .74 for benevolence, and .81 for TF.

### Sex Differences

Sex differences were found for revenge motivations, but not for avoidance, benevolence or total forgiveness. Males scored significantly higher on revenge ( $M_{male} = 8.89$ ,  $SD_{male} = 3.90$ ) than females ( $M_{female} = 7.90$ ,  $SD_{female} = 3.40$ ),  $t(1, 928) = 3.87$ ,  $p < .001$ . In addition, females rated significantly higher on empathy ( $M_{female} = 123.63$ ,  $SD_{female} = 13.21$ ) than males ( $M_{male} = 117.41$ ,  $SD_{male} = 14.54$ ),  $t(1, 261) = 3.47$ ,  $p = .001$ .

### Associations between TRIM-18-S and Related Variables

The TRIM-18-S subscales correlated in the predicted direction with all the measures. Because the variables compris-

ing revenge, the single item measuring forgiveness, and the STAXI did not distribute normally, we used Spearman correlations (recommended for non-normal distributions) in the analyses that include those variables. As expected, the single item measuring forgiveness was negatively correlated with avoidance ( $r = -.57$ ,  $p < .001$ ), revenge ( $r = -.54$ ,  $p < .001$ ), and positively correlated with benevolence ( $r = .63$ ,  $p < .001$ ), and TF ( $r = .63$ ,  $p < .001$ ). TECA (i.e., empathy) was negatively correlated with avoidance ( $r = -.15$ ,  $p = .018$ ), and revenge ( $r = -.21$ ,  $p = .001$ ), and positively correlated with benevolence ( $r = .19$ ,  $p = .002$ ), and TF ( $r = .19$ ,  $p = .002$ ). Finally, state anger was positively correlated with revenge ( $r = .21$ ,  $p = .003$ ) but not with the remaining subscales. Spearman correlation was also used to assess the relation between the TRIM-18-S scores and the closeness of actual relationship. Close relationships were negatively correlated with avoidance ( $r = -.63$ ,  $p < .001$ ), revenge ( $r = -.35$ ,  $p < .001$ ), and positively correlated with benevolence ( $r = .54$ ,  $p < .001$ ) and TF ( $r = .62$ ,  $p < .001$ ). To test whether benevolence differed depending on the type of offender (i.e., valued versus non-valued person) in those participants with low scores on unforgiveness, we conducted an independent samples  $t$ -test. We computed a global unforgiveness score by summing avoidance and revenge subscales and selected those with scores below 24<sup>1</sup>. There was a significant difference in benevolence scores between positively valued relationship ( $M = 25.37$ ,  $SD = 4.22$ ) and non-valued relationships ( $M = 22.48$ ,  $SD = 5.97$ ) conditions;  $t(1, 181) = 3.21$ ,  $p = .015$ , indicating that people offended by a valued person

<sup>1</sup> Scores reflecting disagreement range from 7 to 14 in the avoidance subscale and from 5 to 10 in the revenge subscale. Thus, scores ranging from 12 to 24 reflect low unforgiveness.

are more benevolent than those offended in a non-valued relationship.

To test whether TRIM-18-S improved the assessment of forgiveness in comparison to TRIM-12, we conducted a hierarchical regression (see Table 4) with the single item measuring forgiveness as criterion variable and including avoidance and revenge in a first step, and benevolence in a second step. The effects of avoidance and revenge accounted for the 40% of the variance ( $R^2 = .40, p < .001$ ), and the benevolence subscale accounted for an additional 10% ( $\Delta R^2 = .10, p < .001$ ). Both models were significant although the second showed a significantly higher predictive capability. We conducted another hierarchical regression (Table 4) to see whether TRIM-18-S improved the assessment of forgiveness with respect to the Chilean TRIM-15. The single item measuring forgiveness was the criterion variable, TRIM-15 was entered in Step 1, and the remaining three items were entered in Step 2. The effects of the TRIM-15 accounted for the 47% of the variance ( $R^2 = .47, p < .001$ ), but the remaining three items accounted for an additional 3% ( $\Delta R^2 = .03, p = .01$ ). Again, both models were significant but the second showed significantly higher predictive capability.

**Table 4.** Results of Hierarchical Regression Analyses predicting Forgiveness.

Step	Variables	B	SE	$\beta$	$t$	$\Delta R^2$
Single item of forgiveness on avoidance, revenge and benevolence						
1	(Constant)	5.85	.19		31.10*	.40*
	Avoidance	-.06	.01	-.42	-5.98*	
	Revenge	-.11	.03	-.29	-4.16*	
2	(Constant)	2.30	.63		3.67*	.10*
	Avoidance	.01	.01	.01	.09	
	Revenge	-.09	.02	-.25	-3.78*	
	Benevolence	.11	.02	.56	5.92*	
Single item of forgiveness on TRIM-15 and TRIM-18						
1	(Constant)	2.94	.56		5.23*	.47*
	Avoidance	-.01	.02	-.06	-.63	
	Revenge	-.11	.03	-.23	-4.09*	
	Benevolence	.10	.02	.49	5.47*	
2	(Constant)	2.05	.65		3.14*	.03*
	Avoidance	-.00	.02	-.02	-.14	
	Revenge	-.06	.03	-.13	-1.83	
	Benevolence	.10	.02	.45	4.62*	
	Item 1	-.13	.07	-.12	-1.84	
	Item 3	.19	.07	.20	2.80*	
	Item 15	-.02	.09	-.02	-.20	

Note. \* $p < .05$ .

## Discussion

The main objectives of this study were two. First, to explore the dimensionality of the TRIM-18-S by testing the different models of forgiveness proposed in previous studies. Second, to provide evidence of estimated reliability of the scores, and support for validity of interpreting the TRIM-18-S scale to assess revenge, avoidance, and benevolence after a transgression (i.e., construct validity). Besides, a further ob-

jective was to measure whether the TRIM-18-S was better assessing forgiveness than TRIM-12 (in Spanish) and the Chilean version (TRIM-15).

Our results obtained in the CFA analyses supported the interpretation that the TRIM-18-S has a three-factor structure in accordance with the original structure proposed by McCullough and Hoyt (2002). The Chi-square value obtained for the most saturated model differed significantly from the Chi-square values of Models 1 and 2, suggesting that the fit to the data of the other solutions could be considered less optimal. We explored the possibility of a second-order factor of forgiveness representing those motivations as an overall forgiveness. Model 4 did not explain the structure of the TRIM-18-S any better than Model 3; fit indices were comparable. Model 3 was simpler in structure, but the second order solution of Model 4 permitted computation of a total forgiveness score in addition to the three factors. We also found sex differences in revenge, suggesting that the three factors do not behave completely as a simple unidimensional scale. Model 4, nevertheless, can be interpreted to fit generally with the proposal of McCullough et al. (2010). They posit (and demonstrate using item analysis) that the TRIM-18-S can be interpreted to measure a unidimensional factor of forgiveness. We were able to add a second-order factor that allows obtaining a Total Forgiveness score. Large factor loadings indicating strong relationships between the items and the first-order factors with their respective underlying latent factor were obtained, thus supporting content validity of the TRIM-18-S (Rios & Wells, 2014). Therefore, our findings suggest, practically speaking, that the Spanish version can support either a single-dimension or three-dimension interpretation, depending on the hypotheses and proposed use by investigators.

The estimated internal consistency of the scores on the TRIM-18-S is very close to the original version ( $\alpha \geq .85$ ; McCullough & Hoyt, 2002), and we obtained generally stronger alphas than the Chilean study (whose  $\alpha$ s ranged from .67-.94). Alpha values were all larger than .80 in the TRIM-18-S, suggesting sufficient estimated reliability for use in social, personality, and health research. Our findings with the TRIM-18-S are consistent with the evaluation of Worthington et al. (2015) who evaluated English versions of all forgiveness measures. Also, all intraclass correlation coefficients obtained were above .71, supporting evidence of strong test-retest stability over a two-week period.

High and significant correlations (above .53) among the TRIM-18-S and the single item measuring forgiveness indicate sufficient criterion validity (Muñiz, Hidalgo, Garcia-Cueto, Martínez, & Moreno, 2005). Also, meaningful associations were found between the TRIM-18-S scores and closeness of actual relationship. The more positive and close the relationship was, the more one forgives (McCullough et al., 1998). Significant correlations were found between empathy and TRIM-18-S (McCullough et al., 1997) even though they were lower than expected. Finally, state anger correlated with the revenge subscale (Allred, 1999). All these

results are good indicators of construct validity. Moreover, the TRIM-18-S helps investigators understand how individuals forgive depending on the role of the offender as a non-valued or positively-valued person (Worthington, 2005). Although the inclusion of a benevolent dimension within the construct of forgiveness is still debatable by a few investigators (Wong et al., 2013; cf. Worthington, 2005), we obtained significantly higher scores on benevolence for the forgivers with valued relationships (versus non-valued relationships). This is in line with Worthington's (2005) observation stating that when the offenders are strangers or people in non-valued relationships, the focus is on reducing the negative while in valued relationships, the focus is on both reducing the negative and increasing the positive.

TRIM-18-S improves the assessment of forgiveness in comparison to TRIM-12 (in Spanish). The results obtained in our regression analysis showed that the benevolence dimension has incremental effects on predicting forgiveness (i.e., incremental validity). The addition of the benevolence subscale into the instrument permits going further in the assessment of forgiveness. The TRIM-18-S allows assessing both the reduction of unforgiveness (i.e., avoidance and revenge) and the increase of forgiveness (i.e., benevolence). Because the positive dimension of benevolence in forgiveness plays an important role, at least in close relationships, having a psychometrically well-supported instrument will facilitate the evaluation of interventions in forgiveness.

When compared to the Chilean version (TRIM-15), the regression results indicated that the prediction of forgiveness significantly improved when the three remaining items were added. The TRIM-18-S retains all the original items and can be used in all types of relationships and for cross-cultural studies. In addition, it permits investigators to obtain a total score; this would significantly simplify the evaluation of forgiveness interventions.

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## Limitations and Future Directions

Although the present work demonstrates that the TRIM-18-S has good psychometric properties for its use within a general Spanish population, the sampling method (i.e., snowball sampling) was not optimal. This sampling method did not provide a probabilistic sample allowing easy generalization of results to a sample. We attempted to draw as large a sample as possible to ensure the best sampling we could achieve with the snowball method. However, we urge users of TRIM-18-S to do so with circumspection. Future research should test the dimensionality of the TRIM-18-S in other type of groups like clinical samples, satisfied and troubled couples, and situations involving crimes or abuse. Additionally, although the TRIM-18-S correlated in the expected direction with empathy, state anger, and closeness of the actual relationship, future studies should more deeply explore its association with other external variables—like gold standards of behavior like reconciliation or divorce after an affair—to provide more evidence of convergent and discriminant validity, respectively. The TRIM-18-S includes the same 18 items as did the original scale in English, allowing the instrument to be involved in comparisons across different populations. However, cross-cultural testing for measurement invariance needs to be done.

In conclusion, the present study reported data supporting the conclusion that the TRIM-18-S is a psychometrically well-supported scale with evidence both for estimated reliability (internal and test-retest) and for supporting construct validity in interpreting the scores for the evaluation of episodic forgiveness in general population. It is hoped that this instrument will be used in the Spanish context as a basis for further studies of forgiveness with the aim of developing specialized intervention strategies that help people to forgive.



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