



Validating the Enright Forgiveness Inventory in Morocco: Religion and Forgiveness

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Abstract

Forgiveness is associated with one's health and well-being as well as one's religious beliefs. However, an instrument for measuring forgiveness has not been validated among Moroccans. The Enright Forgiveness Inventory–30 (EFI-30) is one of the most used instruments to measure interpersonal forgiveness and has been validated and adapted across various countries and languages. To validate the EFI-30 in the Moroccan context, we translated the original English EFI-30 into Arabic. A self-report measure of religiosity was also included. A sample of 709 adult Moroccans (75.2% women) was obtained. Confirmatory factor analysis showed good fit indices for the original six-factor structure (positive affect, negative affect, positive behavior, negative behavior, positive cognition, and negative cognition) of the EFI-30. The results on the relationship between religion (between Muslim and Christian participants), age and gender, and the forgiveness process are presented. The Arabic EFI-30 has been found to be a valid measure for forgiveness among Moroccans, serving as a useful tool for future research. Moreover, counselors could adopt the EFI-30 to screen clients and evaluate therapy outcomes.

Keywords Forgiveness · EFI-30 · Morocco · Religion · Muslim · Validation

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Introduction

Forgiveness is often understood as a religious idea (Kim et al., 2021). Forgiveness appears in various religions, such as Christianity, Judaism, Confucianism, and Islam (Enright et al., 1992; Kim et al., 2022), and is a core value in the world's major religions (Knight & Hugenberger, 2007; Kuzubova et al., 2021; Russell, 2020; Toussaint et al., 2020). In Christianity it is a central principle (Matuszewski & Moroń, 2022) and the essence of the Christian attitude (Horowski, 2024). Christianity calls for the forgiveness of those who have offended, resulting in forgiveness as an expression of Christian love even when a person has suffered because of the offender (Cheong & DiBlasio, 2007). Likewise, Islam calls for forgiving offenders (Chavez et al., 2024). In this sense, the one who forgives will receive Allah's forgiveness for their own sins (Ayoub, 1997; Tsang et al., 2005) and will be able to have happiness in their present life (Rye et al., 2000; Tsang et al., 2005). For Islam, forgiveness is an attitude that must be ingrained in people (Warsah, 2020). Furthermore, within the scientific field, research has shown that religiosity is related to a person's attitude towards forgiveness and the trait of forgiveness (Matuszewski & Moroń, 2022).

Undoubtedly, forgiveness was for centuries a relevant topic in the fields of philosophy and theology (Warsah, 2020), but not in other disciplines. The strong relationship between forgiveness and religion meant that the scientific and professional world did not consider it an appropriate topic of study (Fariña & Oyhamburu, 2021). In psychological science, it did not begin to be studied until the end of the last century (Gao et al., 2022), when research on moral development took cognitive science as its basis (Fariña et al., 2023). Until 1985, only five articles on forgiveness were published (Fincham, 2022), and none of these were empirically based. The first empirical article on person-to-person forgiving is by Enright et al. (1989). Nevertheless, this changed in the twenty-first century, with a major growth in research and practice focused on forgiveness (Fernández-Capo et al., 2017; Peterson et al., 2017), an interest that continues to the present day (Fincham, 2022).

The behavioral sciences (Abernethy et al., 2022; Woodyatt et al., 2017) have paid particular attention to forgiveness due to its clear relationship to people's well-being (Hill & Allemand, 2011; Lee et al., 2012). As McCullough et al. (2000) stated, "Psychologists in particular, wanted to better understand the processes of forgiveness and its impact on psychosocial health and well-being, especially for those who had experienced significant personal trauma" (Long et al., 2020, p. 2). Research has consistently shown that forgiveness positively affects physical and mental health (Ermer & Proulx, 2016; Long et al., 2020; Rohner et al., 2023). Similarly, forgiveness intervention programs have been shown to be effective (Akhtar & Barlow, 2018; Toussaint et al., 2020; Wade et al., 2018).

From a scientific perspective, forgiveness has been conceptualized as a process that involves very complex psychological changes involving attitudes, emotions, and behaviors (Forster et al., 2020). This process implies that the person who has been offended or violated grants forgiveness voluntarily and renounces the right to resentment, negative judgment, and indifferent behavior towards the person who has unjustly caused them harm, promoting compassion, generosity (Suzuki & Jenkins, 2020), and even love towards the perpetrator (Enright et al., 2000). Thus, this conceptualization of forgiveness coincides with that established by some religions, such as Christianity and Islam.

For Enright et al. (2000), forgiveness requires not only the disappearance or reduction of negative emotions, cognitions, and behaviors towards the offender but also their transformation into positive forms (Fariña & Oyhamburu, 2021). However, as defined by the American Psychological Association (VandenBos, 2007), forgiveness is not the same as

reconciliation with or excusing the person who has offended or harmed, nor does it mean accepting what happened or ceasing to be angry, although it is possible that some or all of these may occur.

The assessment of forgiveness is essential for professionals and researchers working on forgiveness, which has led to the development of various instruments to measure it. Internationally, one of the most widely used instruments to assess interpersonal forgiveness is the Enright Forgiveness Inventory (EFI). It is mainly used in American English, the language in which it was constructed by the authors (Fariña et al., 2023). The EFI was developed by Enright and the Human Development Studies Group at the University of Madison-Wisconsin (Subkoviak et al., 1995). The inventory has proved to be reliably valid for measuring forgiveness in several languages (Subkoviak et al., 1995), but its 60 items were too time consuming for professionals, so Enright et al. (2022) created a shortened version containing 30 items (EFI-30). Like the EFI, the EFI-30 measures interpersonal forgiveness through six first-order factors (positive affect, negative affect, positive behavior, negative behavior, positive cognition, and negative cognition). Enright et al. (2022), using data from eight countries (Austria, Brazil, Israel, Norway, Pakistan, South Korea, Taiwan, and the United States), found an internal consistency between good ($\alpha=0.83$) and excellent ($\alpha=0.95$) for each country for the six scales overall. Similarly, positive and significant correlations were also verified between the six scales of the EFI and the degree to which the person forgives another person who has wronged them unfairly. The same results were achieved in China, the Philippines and Saudi Arabia, and the USA by Song et al. (2024), in Spain and Ecuador by Fariña et al., (2023, 2024a, 2024b), and in Mexico by Novo et al. (in press). Thus, it can be stated that the EFI-30 has consistently proven to be reliable and valid internationally.

Nevertheless, it is necessary to ensure the reliability and validity of the EFI-30 for each culture or country in which it is to be used since forgiveness has not only individual but also cultural aspects (Rohner et al., 2023). Hanke and Vauclair (2016) have shown that there are large differences between countries in the emphasis placed on forgiveness, even among those that share a common language and majority religion, such as Spain, Mexico, and Chile. Accurate measurement of forgiveness across cultures is important to ensure the validity of the measure in research where forgiveness is used as a variable. It is also important in professional settings to determine the clinical effectiveness of forgiveness interventions (Song et al. (2024) as well as of forgiveness education programs and evaluation in restorative justice and therapeutic justice processes. Until the current study, the EFI-30 had only been validated in Arabic with 247 people from Saudi Arabia in a study developed by Song et al. (2024). Although these authors found that the EFI-30 has the same structure and factor loadings across four samples for the four countries compared (United States, China, Philippines, and Saudi Arabia), they also found that the EFI-30 did not work as well with people from Saudi Arabia, who showed higher scores on the forgiveness scale. Therefore, the present study aims to establish the validation of the EFI-30 inventory in Arabic for the Moroccan population.

On the other hand, as forgiveness is determined by different variables, including the religious or spiritual beliefs of the person (Brown et al., 2007; Edwards et al., 2002; Voiss, 2015), we were interested in studying whether having a religious affiliation (Muslim, Christian, other) and the degree of religious practice would relate to the dimensions in the EFI-30 in the Moroccan population. With respect to gender, the research comparing forgiveness in women and men is inconclusive, with conflicting results even between meta-analyses. In this regard, the meta-analysis by Miller et al. (2008) showed differences, albeit with a small effect size, while that of Fehr et al. (2010) did not (Kaleta & Mróz, 2022). Novo et al. (in

press) used the EFI-30 with participants from Mexico and found no gender differences by factor. Hence, this study examined gender differences in the forgiveness item and in the six factors measured by the EFI-30 in the Moroccan population.

Finally, previous studies have shown that people's level of forgiveness increases with age (e.g., Allemand, 2008; Enright et al., 1992; Ghaemmaghami et al., 2011; Krause & Ellison, 2003; Steiner et al., 2011; Tao et al., 2021). The first scientific study developed with the EFI by Subkoviak et al. (1995) found that young adults were less forgiving than their same-gender parents. Since Enright et al. (2022) did not take age into account in the EFI-30, nor did subsequent studies conducted that used this test (Fariña et al., 2023, 2024a; Kasprzak et al., 2023; Novo et al., *in press*; Song et al., 2024), we decided to examine whether this variable would lead to differences in the Moroccan population in the forgiveness item as well as in the six factors that make up the EFI-30.

Method

Participants

A total of 709 Moroccans participated in this study; 20 were excluded because they did not complete all the items or scored 20 or above on the false forgiveness scale, a criterion for invalidity in the protocol in the EFI-30. Of the remaining 689, 518 were female (75.2%), 170 were male (24.7%), and 1 (0.1%) preferred not to report. All participants were over 18 years old. The distribution of age ranges is as follow: from 18–25, 273 respondents (39.6%); from 26–35, 210 (30.5%); from 36–45, 129 (18.7%); from 46–55, 62 (9.0%); from 56–65, 12 (1.7%); and over 65, 3 (0.4%).

Regarding their religious affiliation, 528 (76.6%) of the participants were Muslim, 113 (16.4%) were Christian, and 48 (7.0%) belonged to a religion other than Islam or Christianity. On their degree of religious practice, 146 (21.2%) reported they were very religious, 4.47 (64.9%) moderately religious, 47 (6.8%) not very religious, and 31 (4.5%) not religious, and 18 (2.6%) answered they did not know.

Design and Procedure

The original EFI-30 in English was translated into Arabic using the 'back translation' procedure (Brislin, 1970; Muñiz et al., 2013). Data were collected in digital format. In order to recruit participants, two Muslim cultural researchers from Granada University contacted a wide range of contacts in Morocco (mosques, Qur'anic teaching schools, Mohammed First University of Oujda, Casablanca University, and Moroccan women's associations in Ceuta and Tetouan, as well as organizations that provide aid in crisis and disaster situations). In all these cases, the aims of the research were explained to those responsible for the organization or institution (in the case of the mosques, it was the imam) and their collaboration was requested through the dissemination of a link that gave access to the study, including the informed consent and the questions. All participants had to give informed consent as a requirement for participation.

Participants were informed that this was a research study about how they dealt with interpersonal conflict. The word forgiveness was not mentioned at any point except in the measure of forgiveness presented at the end of the EFI-30. Before data collection began, the present study underwent a thorough review and approval by the Research

Ethics Committee of the Faculty of Education and Sport Sciences, University of Vigo, Spain (Ref. 11–250,322).

Measurement Instruments

The *Enright Forgiveness Inventory* (EFI-30). The Arabic-translated 30-item version of the EFI (Enright et al., 2022) was used. The EFI was developed by considering the degree to which a person forgives another person after a specific situation of offense. The EFI begins with introductory questions that collect information about (1) the degree of pain felt after the offending situation (from no pain [1] to a lot of pain [5]), (2) who caused the pain, and (3) how long ago the offense occurred. In addition, it asks about a brief description of the offense. The 30 questions of the inventory were measured on a 6-point Likert scale (from *strongly disagree* [1] to *strongly agree* [6]) divided into six subscales with five items each: positive affect, negative affect, positive behavior, negative behavior, positive cognition, and negative cognition. All items were to be answered on a 6-point Likert scale of *strongly disagree* (1), *disagree* (2), *slightly disagree* (3), *slightly agree* (4), *agree* (5), and *strongly agree* (6). In addition to the 30 items, the inventory has another five items that make up an internal scale of validity of the responses, called pseudo-forgiveness, which is answered following the same Likert scale. This scale assesses the consistency of the respondent's answers to the presentation and the 30 items. If the participant obtains a total score of 20 or higher on the pseudo-forgiveness scale, they are eliminated from the sample.

Additionally, the EFI includes one item measuring forgiveness (referred to as “the forgiveness item” hereafter: To what extent have you forgiven the person you rated on the Attitude Scale?). This item is assessed on a 5-point Likert-type response scale from *Not at all* (1) to *Forgiveness* (5). The Forgiveness score is expected to correlate positively and significantly (convergent validity) with the scores on the internal scales of the EFI. The translated Arabic EFI-30 questionnaire may be found in the Supplementary Materials.

In addition, applicants were asked to indicate their age range (18–25/26–35/36–45/46–55/56–65/over 65; unit=year), gender (female/male/prefer not to say), religious affiliation (Muslim, Christian, or other), and how religious they considered themselves to be (very religious, moderately religious, not very religious, not religious, I don't know).

Data Analysis

The psychometrics of the EFI-30 were evaluated first. Cronbach's alpha and item-total correlations were used to assess internal consistency. Using R-package lavaan 0.6.17, content validity was tested using confirmatory factor analysis regarding forgiveness in a six-factor model, with a full information maximum likelihood methodology for dealing with missing data treatment. Correlational analyses were further performed to evaluate the relationships between the EFI-30 sub-scores and demographic variables (i.e., age group, gender, religiosity). In order to compare the differences on the EFI-30 sub-scores between Muslims and Christians (i.e., the two largest subgroups), independent samples *t*-tests were used. We only used data from men and women in the analyses related to gender comparisons, given the small number of participants with a nonbinary gender.

Results

As summarized in Table 1, all six of the subscales showed great internal consistency ($\alpha \geq 0.89$) as well as strong item-total correlations ($r > 0.70$). Items' standardized factor loading values were between 0.62 and 0.94, although the model fit was deemed mediocre, robust CFI/TLI = 0.89/0.88, robust RMSEA = 0.09, SRMR = 0.07.

As shown in Table 2, younger participants showed more negative affect and positive cognition. Men showed higher levels of general forgiveness than women. Higher levels

Table 1 Standardized Factor Loadings and Internal Consistency Indices of the Enright Forgiveness Inventory-30 (EFI-30)

Subscale	Item number and name	λ	r
Positive Affect ($\alpha=0.95$)	1. Warm	0.84	0.89
	2. Tender	0.88	0.92
	7. Caring	0.94	0.93
	8. Affection	0.91	0.92
	9. Friendly	0.84	0.88
Negative Affect ($\alpha=0.89$)	3. Unloving	0.66	0.75
	4. Repulsed	0.92	0.92
	5. Cold	0.86	0.88
	6. Dislike	0.89	0.90
Positive Behavior ($\alpha=0.94$)	10. Disgust	0.65	0.72
	11. Show friendship	0.72	0.81
	16. Lend him/her a hand	0.85	0.89
	17. Establish good relations with him/her	0.86	0.90
	19. Do a favor	0.90	0.92
Negative Behavior ($\alpha=0.95$)	20. Aid him/her when in trouble	0.88	0.90
	12. Avoid	0.84	0.89
	13. Ignore	0.93	0.94
	14. Neglect	0.88	0.90
Positive Cognition ($\alpha=0.90$)	15. Not attend to him/her	0.85	0.88
	18. Stay away	0.82	0.88
	22. Of good quality	0.80	0.81
	25. A good person	0.86	0.87
Negative Cognition ($\alpha=0.92$)	27. Wish him/her well	0.73	0.83
	29. Think favorably of him/her	0.82	0.85
	30. Hope he/she succeeds	0.77	0.85
	21. Horrible	0.91	0.92
	23. Dreadful	0.93	0.92
	24. Worthless	0.94	0.93
	26. A bad person	0.84	0.87
	28. Disapprove of him/her	0.62	0.74

$N=689$. λ = standardized factor loading; r = corrected item-total subscale correlation; α = Cronbach's α . All factor loadings and item-total correlations showed statistical significance (i.e., $p < 0.01$).

Table 2 Correlations among study variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Positive Affect	2.95	1.62									
2. Negative Affect	3.19	1.53	-0.49**								
3. Positive Behavior	3.78	1.69	0.68**	-0.37**							
4. Negative Behavior	3.11	1.68	-0.52**	0.67**	-0.43**						
5. Positive Cognition	3.98	1.39	0.71**	-0.37**	0.73**	-0.40**					
6. Negative Cognition	2.51	1.48	-0.57**	0.66**	-0.48**	0.65**	-0.60**				
7. One-item forgiveness score	3.55	1.35	0.43**	-0.42**	0.41**	-0.45**	0.51**	-0.50**			
8. Age	2.04	1.08	-0.06	-0.11**	-0.07	-0.07	-0.10**	0.07	-0.01		
9. Gender			0.03	0.01	-0.01	-0.02	0.05	-0.01	0.12**	-0.01	
10. Religiosity	2.11	0.74	0.13**	-0.10**	0.07	-0.13**	0.06	-0.12**	0.16**	0.08*	0.00

* $p < 0.05$. ** $p < 0.01$. Age: 1 = 18–25 years, 2 = 26–35 years, 3 = 36–45 years, 4 = 46–55 years, 5 = 56–65 years, and 6 = over 65 years. Gender: 1 = man, 0 = woman. Religiosity: larger values reflect more religious engagement

of religiosity were related to more positive affect and general forgiveness and to less negative affect, behavior, and cognition as well as older age.

While the Muslim subsample showed higher one-item forgiveness scores, $t(599)=2.70$, $p=0.007$, the Christian subsample showed a higher level of positive behavior, $t(100.35)=-2.01$, $p=0.047$ (see Table 3).

Discussion

The results of this study provide psychometric evidence for the use of the Arabic-language version of the Enright Forgiveness Inventory (EFI-30) in Morocco, consistent with previous studies in other countries and languages (e.g., Enright et al., 2022; Fariña et al., 2023, 2024a, 2024b; Kasprzak et al., 2023; Novo et al., *in press*; Song et al., 2024). The six first-order factors (with high internal consistency, $\alpha \geq 0.89$) proposed by the model (positive affect, negative affect, positive behavior, negative behavior, positive cognition, and negative cognition), which have been systematically verified in countries where the scale has been validated (Enright et al., 2022; Fariña et al., 2023; Fariña et al., 2024a, 2024b; Kasprzak et al., 2023; Novo et al., *in press*; Song et al., 2024), were confirmed. Furthermore, correlations with the forgiveness item align with expectations: negative scales negatively correlate with forgiveness, and positive scales positively correlate with forgiveness.

In line with the findings of major religions, including Islam and Christianity (Chavez et al., 2024; Cheong & DiBlasio, 2007; Horowski, 2024; Matuszewski & Morón, 2022; Warsaw, 2020), this study found that higher levels of religiosity were related to more general forgiveness. Consistent with this, it was also found that higher levels of religiosity were related to more positive affect and to less negative affect. These results reinforce the assertions of Matuszewski and Morón (2022) that religion can foster forgiveness of others. In this sense, forgiveness may have a deeper root in religion and spirituality (Haikola, 2023). On the other hand, in this study, religiosity was not found to be related to positive behavior and positive cognition. That is, of the six factors established by Enright's model of forgiveness, there is no evidence that the level of religiosity is related to these two factors. This finding could be due to the fact that people with a high level of religiosity are able, by religious mandate, to forgive, as well as to increase positive affect and decrease negative affect, behavior, and cognition towards the person

Table 3 Construct Comparisons Between Muslim and Christian Participants

	Muslim <i>M (SD)</i>	Christian <i>M (SD)</i>	<i>p</i>
Positive Affect	2.93 (1.62)	2.98 (1.44)	0.791
Negative Affect	3.15 (1.55)	3.46 (1.42)	0.102
Positive Behavior	3.68 (1.71)	4.07 (1.51)	0.047
Negative Behavior	3.08 (1.69)	3.30 (1.62)	0.313
Positive Cognition	3.96 (1.41)	3.93 (1.35)	0.839
Negative Cognition	2.50 (1.47)	2.67 (1.55)	0.377
One-item forgiveness score	3.62 (1.35)	3.16 (1.27)	0.007

p reflects the significance level of independent *t*-tests between the two groups.

who harmed them, but do not manage to increase positive behavior and cognition. Forgiveness is a socially desirable response when one is hurt by another, especially among religious people (Tsang et al., 2005). If so, a high level of religiosity would not lead to full and genuine forgiveness since it did not show up in all six factors of Enright's model. This result, although it needs to be confirmed by future studies, could be of great interest to clinicians applying forgiveness therapy, as well as to other professionals and researchers considering forgiveness in their interventions.

Additionally, the present study showed that between Muslims and Christians there are only differences in the level of interpersonal forgiveness measured with the forgiveness item, with Muslims reporting a higher level of forgiveness than Christians, and in positive behavior, with Christians reporting a higher level of positive behavior than Muslims. Forgiveness could be determined by different variables in addition to a person's religious or spiritual beliefs (Brown et al., 2007; Edwards et al., 2002; Voiss, 2015), such as the culture of the country. Since all participants in this study were from Morocco, more research in different countries is needed for conclusive statements about the differences between Muslims and Christians in their ability to forgive.

As for age, no significant differences were found between age groups on the forgiveness item, contrary to expectations (e.g., Ghaemmaghami et al., 2011; Steiner et al., 2011). Significant differences were obtained on two factors of the EFI-30 (negative affect and positive cognition). Consistent with the literature (e.g., Allemand, 2008; Enright et al., 1992; Ghaemmaghami et al., 2011; Krause & Ellison, 2003; Steiner et al., 2011; Tao et al., 2021), younger participants showed more negative affect. However, it was also found that younger participants showed more positive cognition, which was not in line with expectations. Since this is the first study to use the EFI-30 to analyze whether age affects the forgiveness process, the results cannot be considered conclusive, even more so considering that the study lacks older adult participants. Finally, it was found that men showed higher scores on the forgiveness item than women did, and no significant differences were found in any of the six factors measured by the EFI-30. It should not be forgotten that the forgiveness item is a single item that forms an independent scale for the convergent validation of the construct of Enright et al. (2022). As found by Novo et al. (in press) with a Mexican population, these results do not reveal gender differences by factor, so if gender differences were found with other Moroccan samples, one could consider the possibility of gender differences rather than measurement bias (Novo et al., in press), which should be tested in future research. Hence, like many studies comparing women and men, the current results do not show that women are more forgiving than men (Kaleta & Mróz, 2022).

Given the robust validity of the EFI-30, it could be used during pastoral counseling in Morocco as a tool used before and after counseling sessions to screen cases and to ascertain progress. For example, the EFI-30 median based on the total sum score could be used as in a previous study (Záhorcová et al., 2020): scores below or around the median (e.g., 105 among a Slovakian sample) suggest that the client could benefit from forgiveness counseling; scores well above the median (e.g., ≥ 130) at screening would suggest that the client does not need to forgive the person identified on the EFI-30.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s11089-024-01170-7>.

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Declarations

Conflicts of Interest The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethics Statement Prior to the data collection, the present study was reviewed and approved by the Research Ethics Committee of the Faculty of Education and Sports Sciences, University of Vigo, Spain (Ref. 11–250322). All participants provided informed consent.

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