

## Factor Structure of Forgivingness Questionnaire and its Relation with Mental Health: A Report from Iran

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**Objective:** The Forgivingness questionnaire has been designed to assess forgivingness in a variety of cultural contexts. This questionnaire was based on common Western conceptualizations of forgiveness. In Western communities, when one is the victim of an intentional offense, a feeling of resentment seems logical. The intensity and duration of this feeling of resentment usually depends on the circumstances of the offense, the attitude of the offender and the personality of the victim. This study explored the factor structure of forgiveness in an Iranian sample and the relationship between forgiveness and mental health among the Iranian participants .

**Method:** Two hundred ninety two university students participated in this study. The Forgivingness Questionnaire and General Health Questionnaire were used .

**Results:** The forgivingness items indicated Cronbach's alpha of .94 for the total scale. An exploratory factor analysis was conducted on the raw data for the whole sample. Using the scree test, three interpretable factors emerged that accounted for %66.34 of the variance. Correlation coefficients between FQ and GHQ ( $r = -0.59, p < 0.01$ ).

**Conclusion:** Our results were consistent with what had been obtained in several European and Asian samples. However, they were different from the findings of Kadiangandu et al., who reported two factors in their Congo sample: revenge versus forgiveness and personal and social circumstances.

### Key Words:

*Factor analysis, Iran, Mental health, Questionnaire, Validation studies*

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The concept of forgiveness has long been a focus of the world's religions (2); nevertheless, only during the last decade psychologists developed a sustained interest on this topic. Recent work has shed light on the social-psychological precursors to forgiveness (3-8), the personality processes underlying forgiveness (9, 10), the process by which reasoning about forgiveness develops as people age (11, 12), the effects of forgiveness on physiological parameters such as blood pressure and respiration (13), and even the efficacy of clinical interventions for promoting forgiveness (14, 15).

As a prolegomenon to research in this area, most researchers have sought to specify what they mean by the term forgiveness. Many of the definitions they have proffered share only a modest degree of resemblance. Consider the three following examples: 1) Enright and colleagues defined forgiveness as "the overcoming of negative affect and judgment toward the offender, not by denying ourselves the right to such affect and judgment, but by endeavoring to view the offender with compassion, benevolence, and love" (15); 2) Exline and Baumeister defined forgiveness as the "cancellation of a debt" by "the person who has been

hurt or wronged" (3) ; 3) McCullough et al defined forgiveness as "the set of motivational changes whereby one becomes (a) decreasingly motivated to retaliate against an offending relationship partner: (b) decreasingly motivated to maintain estrangement from the offender and (c) increasingly motivated by conciliation and goodwill for the offender, despite the offender's hurtful actions (8).

Despite the obvious differences among such definitions, they share an important feature –the assumption that forgiveness involves prosocial change regarding a transgressor on the part of the transgression recipient. Indeed, nearly every theorist appears to concur that when people forgive, their responses (i.e., thoughts, feelings, behavioral inclinations, or actual behaviors) toward a transgressor become more positive and/or less negative. This point of consensus led McCullough, Pargament, and Thoresen to propose that intraindividual prosocial change toward a transgressor is a foundational and uncontroversial feature of forgiveness (17).

There is agreement among researchers that the experience of perceived wrongdoing is inherently stressful for the victim, and forgiveness attitudes,

cognitions and behaviors are thought to have consequences for the victim's health. More specifically, using a variety of mental health indices (using measures of depression, anxiety, somatic symptoms, social dysfunction, anger, well-being, stress, happiness, hope) forgiving thoughts, cognitions and behaviors are associated with indices of better mental health, and failure to forgive is associated with poorer mental health (18-22).

Sandage and Williamson have conducted a complete review of research on the effect of context and culture on forgiveness and concluded that very few studies have been conducted on this topic in non-Western samples (23).

The study of cross-cultural differences on willingness to forgive has been even scarcer. Recently, the same research examined the possible differences between Iranian and French participants in their willingness to forgive. This research was conducted between persons who have been brought up in a collectivistic culture (French culture) and persons who have been educated in a less collectivistic culture (Iranian culture); no strong differences were observed in the both samples, the participants appeared to be sensitive to the circumstances of the offenses (the Iranians slightly less than the French), moderately forgiving, and not very resentful or not very revengeful (the Iranians slightly more than the French). Among the Iranians, the forgivingness constructs were, overall, more closely related in compare with the French sample (24).

Using factorial techniques, Mullet, et al. have shown that individual differences concerning the intensity of resentment were sufficiently notable to help identify a separate factor: lasting resentment (25, 26). This factor coincides with the concept of unforgiveness suggested by Worthington and Wade (27) and is highly reminiscent of the concept of rumination proposed by Caprara (28), the concept of avoidance of the offender used by McCullough and Hoyt (10), and the concept of presence/absence of negative thoughts suggested by Rye, Pargament, Ali, Beck, Dorff and Hallisey (2).

Mullet et al., have also shown that the individual differences in relation with sensitivity to circumstances were sufficiently important to help identify another separate factor: sensitivity to personal and social circumstances. Finally, they have shown that individual differences concerning the forgiveness response were sufficiently notable to help identify a third separate factor: willingness to forgive (25, 26). This factor is highly reminiscent of the concept of dissipation proposed by Caprara (28) and of the concept of presence of positive thoughts suggested by Rye et al. (20).

The aim of the present study was twofold. First, we developed a reliable and valid Persian version of the Forgivingness Questionnaire (26). The internal consistency of the questionnaire (FQ) was examined. Next, convergent validity was assessed by correlating the Forgivingness Questionnaire scores with the General Health Questionnaire scores (GHQ). Second,

we discriminated the relation between forgiveness and mental health, and examined the strength of the correlations between the scores on the FQ and the scores on the GHQ and its subscales.

This study was aimed to explore the factor structure of the Forgivingness Questionnaire (26) between Iranian participants. A reliable and valid Farsi version of the Forgivingness Questionnaire and discriminating the relation between forgiveness and mental health will undoubtedly be beneficial for future research on the Forgiveness issue. Our first research question was: "Will the factors structure that has been evidenced among several Western-European samples and one Western-Asian sample be repeated in the Iranian sample?"

We expected that the same three factors (lasting resentment, sensitivity to circumstances and willingness to forgive-willingness to avenge) or the same two factors (revenge versus forgiveness & personal and social circumstances) would be evidenced among the Iranian participants. Furthermore, Muslims constitute the largest community in Iran. The study by Azar and Mullet (29) and also Suwartono, Prawasti and Mullet (30) conducted among the Muslim and Christian Lebanese and Indonesians showed that the three-factor structure was present in the both samples. Our second research question was: "Is willingness to forgive related to mental health levels?"

## Materials and Method

### Participants

The total number of participants was 292 (138 men and 154 female) with a mean age of 23.27 (SD = 6.33). All the participants were selected from the Iranian undergraduate students at the University of Shiraz in Iran. All the participants were unpaid volunteers.

The participants were tested by one of the two research assistants who were psychology students and trained on the technique of the questionnaires. The research assistants contacted the possible participants at the university or their dormitories, explained the study, asked them to participate, and, if they agreed, administered the questionnaire.

### Instruments

*The Forgivingness Questionnaire:* The material consisted of twenty seven items of the FQ that was used by Mullet et al. (26). Kadiangandu, Mullet & Vinsonne reported two factors for 27 items. The first factor explained %30 of the variance and was identified as the revenge versus forgiveness factor already found in the Mullet et al study. (26). The second factor explained %9 of the variance and was identified as the personal and social circumstances factor (1).

Suwartono et al., used twenty of the best items in their examination and explored the three factors. These items expressed willingness to forgive under various circumstances. Four items corresponding to the willingness to forgive factor were included. Six items corresponding to the lasting resentment factor and six

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items corresponding to the sensitivity to circumstances factor were also included. On the topics of lasting resentment and sensitivity to circumstances, items involving apologies and begging for forgiveness were systematically included (30).

In designing the Farsi version of the items, guidelines proposed in the literature on cross-cultural methodology (31) were followed as closely as possible (e.g., independent, blind back-translations, educated translation, small-scale pretests). In addition, two English language professors fluent in Farsi and English detected any inconsistencies in the material. As forgiveness has the same basic meaning in both the Muslim and Christian traditions (2), it was easy to find equivalent terms in Farsi and English. Items were rated on a 5-point Likert-type scale (1= strongly disagree, 5= strongly agree).

*The General Health Questionnaire-28:* Each of these scales consisted of 7-item measures of depressive symptoms (e.g. 'Felt that life is entirely hopeless' [item 23]), anxiety symptoms (e.g. 'Feel scared or panicked for no good reason' [item 12]), social dysfunction (e.g. 'Taking longer over the things you do' [item 16]) and somatic symptoms (e.g. 'Feeling run down and out of sorts' [item 3]). The scale demonstrates satisfactory reliability and validity across a number of samples (32).

The reliability and validity of this questionnaire were examined. In Iran, Tagavi (33) studied the validity of this questionnaire using test-retest, split-half, and Cronbach's alpha method. Validity coefficients of 0.72, 0.93, and 0.90 were obtained respectively.

### Procedure

Each participant individually answered the questions in a quiet room at the dormitory or at the university. One version of the questionnaire, which included direct and inverse items expressed in a similar order, was used for all the participants.

The experimenter explained the procedure to each participant individually. He/she was to read a certain number of sentences expressing a feeling or a belief about forgiveness and rate his/her degree of agreement with the content of each sentence. The experimenter was, in all the cases, present when the participants

filled out the questionnaire. It took approximately 45 minutes to complete the questionnaire.

## Results

### Descriptive Findings

Each rating by each participant was converted to a numerical value expressing distance (number of points from 0 to5) between the point on the response scale and the left anchor. These numerical values were then subjected to graphic and statistical analyses. Results about on means, standard deviations and range of the observed scores of the forgiveness questionnaire and also GHQ are reported in Table 1 .

Furthermore, the difference among males and females concerning the and males mean of the scores have been accounted but no significant difference was not observed between the two genders ( $t=-0.06$ ,  $p=0.94$ ).

### Reliability Indexes

Forgiveness items indicated Cronbach's alpha of 0.94 for the total scale. By the Split method the obtained Spearman-Brown .was .75 and also, Guttman .was 0.75. The split method computed the alpha of 0.90 for part 1 and alpha of 0.94 for part 2.

### Exploratory Factor Analyses

An exploratory factor analysis was conducted on the raw data for the whole sample. Using the scree test, three interpretable factors emerged that accounted for %66.34 of the variance. Each factor had an eigenvalueEigen value higher than 9 and higher than 0.80 loaded at nine items. This orthogonal three-factor solution was retained and subjected to varimax rotation .The First factor with 9 items explained %26.57 of the variance and was identified as the lasting resentment factor already found in Suwartono et al., (30). The second factor explained %23.59 of the variance and was identified as the sensitivity to circumstances factor (with 11 items), with the same items that extracted by Suwartono et al. (30).

Finally, five items in the third factor explained %16.17 of the variance and was therefore the third factor was identified as the Willingness to forgive factor, the same

**Table 1. Means, standard deviations and range of the observed scores of the Forgiveness Questionnaire and General Health Questionnaire**

	Forgiveness Questionnaire			GHQ		
	Female	Man	Total	Female	Man	Total
<b>Mean</b>	93.96	94.13	94.04	23.7	18.79	21.37
<b>Std. Deviation</b>	18.09	25.23	21.72	16.8	13.53	15.51
<b>Maximum</b>	27	13	13	3	5	3
<b>Minimum</b>	133	133	133	84	67	84

*N* = 138 (Males), *N* = 154 (females)

Table 2. Factor Loads in this study and previous studies in Congo &amp; France.

Items	Factor Loads		
	Iran	Congo	France
1. I cannot forgive if the offender has not apologized.	0.85	0.68	0.66
2. I cannot forgive if the consequences of harm have not canceled.	0.71	0.66	0.51
3. I cannot forgive if the consequences of harm are serious.	0.82	0.66	0.73
4. I cannot forgive if the offender has not begged for forgiveness.	0.84	0.64	0.63
5. I always apply the lex Talionis.	0.85	0.63	0.74
6. The way I consider the world has brought me to never forgive.	0.84	0.59	0.70
7. I cannot forgive even if the offender has apologized.	0.74	0.57	0.55
8. I cannot forgive even if my family or friends have invited me to do so.	0.72	0.57	0.60
9. I cannot forgive even if a religious figure has asked me to do so.	0.84	0.57	0.42
10. I cannot forgive if the harm has been done intentionally.	0.56	0.56	0.55
11. I can truly forgive only if I have been able to take revenge on the offender.	0.66	0.55	0.66
12. I cannot forgive even if the consequences of harm have canceled.	0.75	0.53	0.64
13. I cannot forgive even if the consequences of harm are minimal.	0.77	0.52	0.56
14. My personal philosophy does not bring me to forgive.	0.68	0.48	0.62
15. I forgive easily even when I feel bad.	0.80	-0.52	-0.27
16. My personal philosophy or my faith has brought me to always forgive.	0.68	-0.58	-0.55
17. I think it is better to forgive than to seek revenge.	0.84	-0.60	-0.52
18. I can forgive easily even when the offender has not begged for	0.46	-0.64	-0.49
19. I can forgive easily even if the consequences of harm have not canceled.	0.66	-0.65	-0.52
20. I can truly forgive even if the consequences of harm are serious.	0.79	-0.65	-0.56
21. I can easily forgive even when the offender has not apologized.	0.76	-0.70	-0.53
22. I forgive more easily if the offender has apologized.	0.67	0.71	0.63
23. I forgive more easily if the offender has begged for forgiveness.	0.68	0.68	0.62
24. I feel it is easier to forgive once the consequences of harm have canceled.	0.75	0.61	0.46
25. I forgive more easily when I feel good.	0.67	0.59	0.68
26. I feel it is easier to forgive when my family or friends have invited me to do	0.83	0.39	0.58
27. I forgive more easily if a religious figure has invited me to do so.	0.44	0.30	0.64

Table 3. Items of Four Factors extracted in present research and Three Factors in study's 2006.

Items	No. of Factor in study's 2006
<b>Lasting resentment</b>	
5. I always apply the lex Talionis.	*
6. The way I consider the world has brought me to never forgive.	*
7. I cannot forgive even if the offender has apologized.	1
8. I cannot forgive even if my family or friends have invited me to do so.	1
9. I cannot forgive even if a religious figure has asked me to do so.	1
11. I can truly forgive only if I have been able to take revenge on the offender.	1
12. I cannot forgive even if the consequences of harm have canceled.	1
13. I cannot forgive even if the consequences of harm are minimal.	1
14. My personal philosophy does not bring me to forgive.	*
<b>Sensitivity to circumstances</b>	
15. I forgive easily even when I feel bad.	*
16. My personal philosophy or my faith has brought me to always forgive.	*
17. I think it is better to forgive than to seek revenge.	*
19. I can forgive easily even if the consequences of harm have not canceled.	*
20. I can truly forgive even if the consequences of harm are serious.	*
21. I can easily forgive even when the offender has not apologized.	*
22. I forgive more easily if the offender has apologized.	2
23. I forgive more easily if the offender has begged for forgiveness.	2
24. I feel it is easier to forgive once the consequences of harm have canceled.	2
25. I forgive more easily when I feel good.	2
26. I feel it is easier to forgive when my family or friends have invited me to do	2
<b>Willingness to forgive</b>	
1. I cannot forgive if the offender has not apologized.	3
2. I cannot forgive if the consequences of harm have not canceled.	3
3. I cannot forgive if the consequences of harm are serious.	3
4. I cannot forgive if the offender has not begged for forgiveness.	3
10. I cannot forgive if the harm has been done intentionally.	3

† This items not included 20 items.

Table 4. Correlation among subscales of FQ and GHQ.

	Subscales of FQ			Subscales of GHQ				FQ
	1	2	3	1	2	3	4	
<b>Subscales of FQ</b>								
2	0.65**							
3	0.55**	0.70**						
<b>Subscales of GHQ</b>								
1	-0.04	0.08	.03					
2	-0.42**	-0.37**	-.37**	0.93**				
3	-0.40**	-0.39**	-.34**	0.69**	0.67**			
4	-0.44**	-0.45**	-.36**	0.89**	0.90**	0.61**		
<b>FQ</b>	0.84**	0.91**	.83**	-0.43**	-0.44**	0.35**	-0.48**	
<b>GHQ</b>	-0.46**	-0.53**	-.58**	0.73**	0.74**	0.28**	0.77**	-0.59**

\*\* p<0.01

items of the third factor was extracted in a study's study conducted by Suwartono et al., (30). Table 2 demonstrates these items of each factor, their factor loads, mean, and standard deviations in this study and in the two previous studies. Table.3 illustrates items related to each extracted factors in the present study and those which are reported in the Suwartono's study (30)30). The value of Kaiser Meyer-Olkin (KMO) coefficient was calculated as 0.584 and Bartlett test was significant (p <0.0001).

**Construct Validity**

The construct validity of the forgiveness questionnaire was computed through by calculating its correlation with the General Health questionnaire (GHQ) that was presented to participants accompanied by the original questionnaire. Result The results presented in Table 4 indicated r=-0.59 (p<0.01) correlation between FQ and GHQ was indicated .

**Discussion**

The primary aim of this study was to develop a factor structure for forgiveness questionnaire for an Iranian sample. Our results were consistent with what had been evidenced in European and Asian samples. These results were consistent with those of Azar and Mullet (29), and Suwartono, Prawasti and Mullet (30), however, our finding was different from the findings of Fu et al., who reported only two factors in their Chinese sample: lasting resentment (that they identified with Forgiveness) and sensitivity to circumstances(34). It was also different from the findings of Kadiangandu et al. (1) who reported two factors in their Congo sample: revenge versus forgiveness and personal and social circumstances (1).

Findings indicated that the extracted first factor (lasting resentment) was exactly consistent with the first factor (lasting resentment) in the study of Suwartono, Prawasti and Mullet (30). The second factor (sensitivity to circumstances) was also consistent with the second factor (sensitivity to circumstances) in the study of Suwartono et al (30) and the third factor (Willingness to forgive ) .

The second objective of this study was to explore the relationship between willingness to forgive and mental health dimensions. Our results indicated a negative correlation between willingness to forgive and mental health dimensions. Therefore, our findings corresponded with what was reported by Berry & Worthington (17); Maltby, Macaskill, & Day (18); Rye et al. (20); Rye & Pargament (21); Toussaint, Williams, Musick, & Everson (22); Nateghian et al. (24).

An appropriate relation was observed between the mental health score and willingness to forgive. A considerable point about the results is the existence of the highest correlation between mental health subscales and forgiveness subscales. Moreover, the highest negative correlation is between the fourth factor of mental health (depression) and the second factor of forgiveness (sensitivity circumstances).

In other words, this finding suggests that the more depression symptoms, the less is the willingness to forgive. In the next stage, a negative correlation is observed between the third factor of mental health (social dysfunctional) and sensitivity circumstances. Namely, there is a relationship between higher social dysfunction and lower sensitivity to forgiveness circumstances .

The assessment of reliability of the Forgiveness questionnaire showed a high coefficient (a = 0.94). It indicates that the questionnaire has a good constancy and is expected to obtain the same results if the questionnaire is implemented on other samples.

Therefore, the results of this study demonstrate that the forgiveness questionnaire produced by Mullet et al. (26) that was implemented on Western samples and Eastern samples is also applicable for an Iranian sample. Moreover, findings indicate that the translated version of the questionnaire is as clear and valid as the original version.

Future studies can compare the rates of willingness to forgive in Iranian samples and Western samples. Considering the observed relation between the sensitivity circumstances and mental health factors, the rate of willingness to forgive in clinical samples can be studied in the clinical studies just as what we studied previously in combat veterans with PTSD (35) and

what we predicted about the existence of a relationship between their marital satisfaction and severity of PTSD and their willingness to forgive.

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