

## PRELIMINARY PSYCHOMETRIC PROPERTIES OF RELATIONAL BETRAYAL TRAUMA SCALE

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### ABSTRACT

*The present study aimed to construct and validate an indigenous scale of relational betrayal trauma for young adults. Initially, 60 items were generated through deductive and inductive methods. A pilot study was conducted on university students and retained 39 items. Factorial validity of the scale was determined on a sample of (N=359) 115 male & 244 female young adults, age ranged between 19 to 35 years from different universities of Punjab. Exploratory factor analysis was run on 28 items that were retained after pilot study. Subsequently, confirmatory factor analysis was run on a sample of (N=600) 300 male & 300 female young adults and 20 items were retained for the final scale. Furthermore, convergent and divergent validity of the scale was determined by using Berlin Social support Scale and Betrayal Response Scale respectively. The results show that relational betrayal trauma is a psychometrically valid measure to evaluate painful experiences of young adults in their nonromantic relationships in the context of Pakistani culture.*

**Keywords:** Relational betrayal trauma, Young adults, Factorial validity, Painful experiences, Non-romantic relationship.

### INTRODUCTION

Any type of relationship context might experience betrayal if one or both parties break important relationship expectations or the rules in some other way. For instance, close friends have expectations for one another's actions based on their shared perceptions of the laws of friendship (Wiseman & Duck, 1995). The effects of betrayal are described as feelings of being wronged by someone who was thought to be a trustworthy and loyal friend, relative, spouse, coworker, or companion (Rachman, 2010).

As a social dimension of trauma (Freyd, 1991, 1994, 1996) betrayal trauma happens when the institutions or people on which a person depends for survival dramatically betray that person's trust or well-being (Freyd, 2008). Especially by those ones is dependent on, this type of trauma has distinct emotional, psychological, and cognitive consequences. Any form of abuse, oppression, or violence can be traumatic. However, because of the betrayal involved in the violation of fundamental assumptions of interpersonal and societal connections, traumas that happen in the context of interpersonal relationships can be extremely harmful and painful (Freyd, 1996).

The impacts of trauma, particularly the fear, anxiety, and panic brought on by traumatic situations, have been extensively discussed. However, very little research has been done on the consequences of breaching human bonds and the effects of losing significant human connections. Professionals have been attempting to help the victims of different traumas but very few research studies have been conducted to explore the relational betrayal trauma in young adults. As per my knowledge there is no indigenous scale available that measures the trauma in relational betrayal. To fill the research gap, a relational betrayal trauma scale was constructed and validated for young adults.

Betrayal Trauma Inventory ((BTI) by (Freyd, DePrince & Zurbriggen, 2001) was used to measure Betrayal trauma in natural trauma patients. Brief Betrayal Trauma Survey (BTT) by (Goldberg & Freyd ,2006) To rapidly assess BTT, it is adapted from the BTI. For traumatic situations including sexual, physical, and emotional abuse, this survey has 11 distinct items. It covers if the subject was a close friend or involved in a social gathering or event before age of 18 years. Sultan and Muazzam

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(2017) developed and validated a native self-report measure of intimate relationship betrayal for married women. It measures the romantic relationship of partners.

Betrayal Response Scale by Komolafe (2016) was developed to accurately measure psychosocial impairment following a trauma-betrayal incident. Overall, there has not yet been any reported indigenous literature or scale discovered on the trauma caused by relational betrayal in non-romantic relationships. It follows that the current study will be the first to assess relational betrayal trauma.

### **Objectives of the Study**

- To construct an indigenous self-reported measure of relational betrayal trauma for young adults in Pakistani perspective.
- To determine the psychometric properties of the scale.

The present study carried out in two phases. Phase 1 was comprised of III steps. In step I, initially through deductive and inductive methods, an item pool was generated, and to select the items for the scale, committee approach was used. A pilot study was conducted to try out the initially selected items. In steps II, exploratory factor analysis (EFA) was run to determine the validity and in step III the confirmatory factor analysis (CFA) was run to confirm the factor structure. In study 2, both convergent and divergent validity were established.

## **METHODS**

### **Phase 1: Construction of the Scale**

#### **Step I: Item Pool Generation**

Initially, an item pool generation for the scale was done in Urdu language. Items were generated according to the guideline by (Burisch,1984) deductive and inductive methods.15 semi structured interviews were conducted with young adults and 60 items were generated from relevant literature and content of interviews. A committee consisted of 5 experts (two campus counsellors, one psychologist, one psychiatrist, one Professor, one assistant professor) from relevant departments reviewed items. 39 items were retained after the mutual consensus of the experts using Likert type response format (1= strongly disagree, 2=disagree, 3=neutral, 4= agree and 5= strongly agree) (Gregory, 2015).

**Step II:** Through expert rating on items a content validity index (CVI) was determined using 4-point rating scale (1= not relevant and clear, 2= item need some revision, 3= relevant or clear but need minor revision, 4= very relevant and clear). Item content validity index (I-CVI) was computed by dividing the sum of experts 'rating on every item by the total number of experts. To retain item content validity index is .78 to 1 (Lynn, 1986). Scale content validity index was computed by formula:

$S-CVI = \text{Total items CVIs} / \text{Total no of items}$

$S-CVI = 53.35/60$

$S-CVI = .88$

39 items were retained after CVI.

#### **Step III: Pilot Study.**

A purposive sample (N=60) with equal distribution of young adults (30 female & 30 male university students) age ranged from 19 to 35 years was recruited from different universities (e.g., Lahore and Faisalabad. Normality of items was checked by kolmogorov-Smirnov test (Hair et al., 2006). 11 out of 39 items were deleted due to non-normality and redundancy. Finally, 28 items were retained after modification of items.

### **Phase II: Factor Structure and Internal Consistency of the Scale**

A purposive sample (N=359) of young adults (244 female & 115 male university students), age ranged from 19 to 35 years was recruited from different universities of Punjab (e.g., Lahore and Faisalabad).

#### **Procedure**

Before administering the scale, permission from the institutions was taken. Informed consent was taken from participants and they were briefed about the current study. Participants were assured about the confidentiality of their information and informed that they have right to quit at any time. The Participants were instructed to fill the questionnaire if they have experience of betrayal events in non-romantic relationship at any stage of life. SPSS version 23.0 was used for data analysis.

#### **Exploratory Factor Analysis (EFA)**

28 items were chosen based on their clarity and relevance to the operational definition of the construct. The data was then collected from the chosen sample, with a sample ratio of 10:1 against each item

(Osborne & Costello, 2004). Principal Components Analysis (PCA) method was used to analyze 28 items of the relational betrayal trauma scale. This is the most recommended method to develop a psychometric scale (Rattray & Jones, 2005). Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Kaiser, 1970) were also assessed to ensure that the pattern of correlation within the data meet the criteria necessary to conduct a PCA. A sample of 359 young adults were using Varimax rotation method. Kaiser-Meyers-Olkin (KMO) (.88) indicates that there was enough correlation to generate clear and well-defined factors with Bartlett test of sphericity ( $X^2 (378) = 6134.85$ ) significant at  $p < .001$ . Sample was 5 times greater than the total number of items (Field, 2005). 8 items were removed after running EFA on 28 items of the scale because of the ambiguity, disseminated and loadings were similar on more than one factor. subsequently EFA was run on 20 items, 4 factors (Emotional Reactivity, Avoidant Reactivity, Interpersonal problem & Self Perception) were extracted with Eigen value  $> 1.0$ .

The model was fixed on 4 factors as recommended by Scree plot (Cattell, 1966). Clear, well defined and relevant factors were extracted. Minimum factor loading was .43 and maximum was .98. Most of the items loaded  $> .3$  on Factor 1 (Emotional Reactivity), Factor 2 (Avoidant Reactivity), Factor 3 (Interpersonal problem) and factor 4 (Self Perception) with Eigen value greater than  $> 1.0$ . 8 items were loaded on factor 1 with 8.25 Eigen value, rotated sum is 4.8 which explains 17% variance. 3 items loaded on factor 2 with 4.11 eigen value, rotated sum is 4.1 which explains 32 % variance. 6 items were loaded on factor 3 with 1.94 Eigen value, rotated sum is 3.8 which explains 45 % variance. Factor 4 comprised of 3 items with 1.44 eigen vale, rotated sum is 2.9 which explain 56% variance. According to the Beavers et al. (2003) this explains good cumulative variance.

### **Phase III: Confirmatory Factor Analysis (CFA)**

A purposive sample of (N=600) 300 female and 300 male young adults was taken to confirm the factor structure of relational betrayal trauma scale. CFA by using AMOS version 21.0 was used to confirm the factor structure and dimensionality of the newly developed indigenous scale. To explain the model fit , indices root mean square error of approximation (RMSEA  $< .05$ ) was used. Goodness of the fit index (GFI ) greater  $> .90$  (Joreskog & Sorborn, 1989) and Comparative fit index (CFI) $> .90$  (Bentler, 1990) were used.

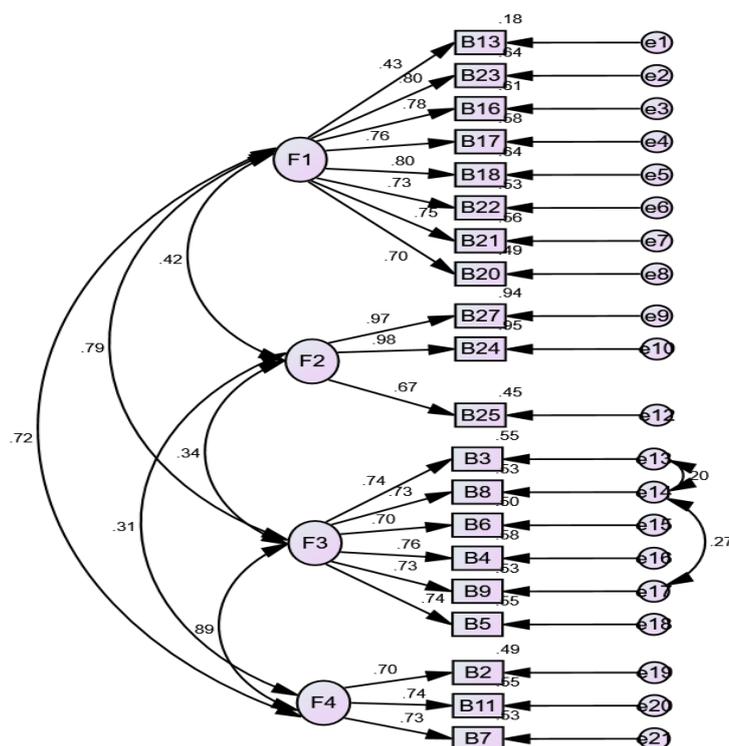


Figure shows four factor structure of Relational Betrayal Trauma Scale. Results support the distinctiveness of above 4 sub scales and items loading on them. Factor loadings of items are in their minimum range = .43.

### Study II: Convergent and Discriminant Validity of the Scale

Convergent validity of RBT scale was determined by measuring correlation between Berlin social support scale, and divergent validity was assessed by measuring correlation between betrayal response scale.

**Sample:** A purposive sample of (N=60) 30 female & 30 male university students, age ranged from was recruited by using convenient sampling technique.

### Psychological Measures

**Relational Betrayal Trauma (RBT) Scale:** scale was developed in study 1. Scale is comprised of 20 items with 4 factors. Emotional reactivity, avoidant reactivity, interpersonal problems and self - perception. Factor 1, measures emotional reactivity (13, 23,16,17,18,22,21,20) factor 2, avoidant reactivity (27, 24, 25) factor 3, interpersonal problems (3,8,6,4,9,5) and factor 4, self-perception (2,11,7). A 5 points Likert format was used for rating 1= strongly disagree, 2= disagree, 3=neutral, 4= agree and 5= strongly agree. The scale has shown an excellent alpha level =.87. Cut off score of the scale is 42 . Maximum score shows high level of betrayal.

### Berlin Social Support Scale (BSSS)

Scale was translated in Urdu by Nawaz (2013). Scale consisted of 32 items and 4 sub scales. perceived available support, need for support, support seeking, actually received support. The BSSS designed for adult population uses a 4-point Likert-type scale for getting answers from participants: strongly disagree (1), somewhat disagree (2), somewhat agree (3), and strongly agree (4). The scale shows reliability at alpha level= .87 .

### Betrayal Response Scale (BRS)

Scale was developed by Komolafe & Shah (2016). scale consists of 29 items. 5point Likert scale measures the responses from strongly agree to strongly disagree. Maximum score is 45 which shows high effect of betrayal event.

## **RESULTS**

Results indicate that Relational betrayal trauma scale is significantly correlated with Berlin Social Support Scale ( $r = .86^{**}$ ) and negatively correlated with Betrayal Response Scale ( $r = -.22^*$ ). It shows the good construct validity of the newly constructed scale.

## **DISCUSSION**

The present study was conducted to construct a new indigenous scale in the Pakistani perspective for young adults to measure their perception of betrayal in non-romantic relationships specifically. There is no evidence found on quantitative research addressing relational betrayal trauma as per my knowledge. RBT scale was constructed through inductive and deductive methods. The final scale consisted of 20 items. Four factors were extracted.

The findings indicate that the BRS, a tool designed to evaluate impairment following betrayal events, is a valid and reliable instrument. Following the removal of eight items that did not achieve the required coefficient value of 0.3, the items of the scale were effectively reduced into two coherent factors. The interpretation of the variables is in line with studies looking at how betrayal experiences affect people. (Koehler & Gershoff, 2003; Rachman, 2010).

The reliability of scale was analysed, and a high Chronbach's value of 0.90 was found. The Betrayal Trauma Inventory is one of the existing instruments that simply evaluates the history of betrayal events (BTI; Freyd, DePrince & Zurbriggen, 2001) and BBTS (Goldberg & Freyd, 2006).

The BRS is the first measure of its sort to analyse the multidimensional reactions to a betrayal event that is currently available. A research conducted by Goldsmith, Chesney, Heath, et al. (2013) anticipated that regardless of any pre-existing psychopathology, betrayal incidents cause psychological symptoms such as anxiety, despair, intrusion, and avoidance, which will negatively affect a person's capacity to operate in social settings. However, it's probable that this effect will be more likely to be transient in non-clinical groups due to stronger prosocial competencies and more effective emotion management skills. In these conditions, it's feasible that the detrimental effects of betrayal incidents evolve over time.

### **Implications**

This research will fill a gap in literature by developing a valid and reliable scale. Besides, the existing measures of betrayal trauma were either developed in Europe, America, etc., so they are not culturally relevant/culture fair and thus, they have limited application. The development of a reliable indigenous psychometric measure could lead to a better understanding of the nature and impact of betrayal trauma in the context of interpersonal experiences. The findings of the current study will inform health professionals about the diverse range of symptoms associated with relational betrayal trauma.

### **Limitations and Suggestions**

Generalizability of the scale can be limited because data was collected only from Punjab province. A large representative sample may be taken for future studies. The scale may be validated cross-culturally and for clinical population as well.

## **CONCLUSION**

The findings of the present study depict that the relational betrayal trauma scale has four aspects and has promising psychometric properties. The scale can be used to measure painful experiences and perceptions of young adults regarding relational betrayal.

**Table No. 1. Demographic Characteristics of the Participant(N=359)'**

Demographic Variables	<i>F</i>	%
<b>Gender</b>		
Male	115	32%
Female	244	68%
<b>Education</b>		
BS(Hons) & MSc	259	72%
MPhil	100	28%
<b>Marital Status</b>		
Single	327	91.15
Married	32	8.9%

<b>Socio Economic Status</b>		
Lower middle	100	27.9%
Middle	203	56.5%
Upper	56	15.6%

N = 359; f = Frequency; % = Percentage

**Table No. 2 Rotated Factor loadings for Relational Betrayal Trauma Scale (N=359)**

Factors	Item No	F1	F2	F3	F4
F1	Item 13	.71			
	Item 23	.70			
	Item 16	.67			
	Item 17	.66			
	Item 18	.64			
	Item 22	.59			
	Item 21	.53			
	Item 20	.51			
F2	Item 27		.97		
	Item 24		.97		
	Item 25		.60		
F3	Item 03			.75	
	Item 08			.72	
	Item 06			.71	
	Item 04			.64	
	Item 09			.64	
	Item 05			.51	
F4	Item 02				.67
	Item 11				.61
	Item 07				.48

N=359

**Table No. 3 List of Factors, Item loadings, and percentage of Variance Accounted by Four Factors**

Factors	Factor Label	Items	% of Variance
1	Emotional Reactivity	13, 23, 16, 17, 18, 22, 21, 20	29.40
2	Avoidant Reactivity	27, 24, 25	44.15
3	Interpersonal Problems	3, 8, 6, 4, 9, 5	51.11
4	Self- Perception	2, 11, 7	56.28

N=359

**Table No. 4 Factor Loadings of Confirmatory Factor Analysis for 20 Items of Relational Betrayal trauma Scale on Four Factors**

Factors	Item No	Factors			
		Emotional Reactivity	Avoidant Reactivity	Interpersonal Problems	Self- Perception
F1	Item 13	.43			
	Item 23	.80			
	Item 16	.78			
	Item 17	.76			
	Item 18	.80			
	Item 22	.73			
	Item 21	.75			
	Item 20	.70			
F2	Item 27		.97		
	Item 24		.98		
	Item 25		.67		

F3	Item 03	.74	
	Item 08	.73	
	Item 06	.70	
	Item 04	.76	
	Item 09	.73	
	Item 05	.74	
F4	Item 02		.70
	Item 11		.74
	Item 07		.73

N=600

**Table No. 5 Model Fit Indices of CFA for Relational Betrayal Trauma Scale (N=600)**

Models	$\chi^2$	df	$\chi^2/df$	<i>p</i>	GFI	AGFI	CFI	TLI
RBS								
Final Model	540.01	162	3.33	0.01	0.92	0.90	0.95	0.94

Note. N= 500;  $p^{***}<.000$

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