

Development and validation of Psychological Reactance Scale for married women of Pakistan

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✦ **ABSTRACT.** La reattanza psicologica, una reazione emotiva di angoscia in risposta a una minaccia alla libertà, è un importante costrutto che influenza la salute mentale delle donne sposate. Questo studio è stato condotto per sviluppare una misura valida e affidabile della reattanza psicologica nelle donne sposate e che vivono in culture collettiviste come quella pakistana. L'insieme degli item è stato creato attraverso l'opinione di esperti, una revisione della letteratura e la somministrazione di interviste semistrutturate a donne sposate. Al fine di esplorare la struttura dei fattori, è stata condotta un'analisi fattoriale esplorativa (EFA) su un campione di donne (N = 566). I risultati hanno rivelato una struttura a due fattori comprendenti l'Espressione Interna (dominio cognitivo-emotivo) e l'Espressione Esterna (dominio aggressivo-comportamentale). I valori alfa della Scala ($\alpha = .90$), dell'Espressione Interna ($\alpha = .81$) e del fattore Espressione Esterna ($\alpha = .81$) hanno fornito la prova dell'eccellente affidabilità della Psychological Reactance Scale. Al fine di confermare la struttura dei fattori, è stata effettuata l'analisi fattoriale confermativa su un campione indipendente di donne sposate (N = 150). L'analisi fattoriale confermativa ha fornito per la struttura a due fattori ottenuta tramite EFA, indici eccellenti di adattamento al modello (CFI = .93, RMR = .04). La validità convergente della Psychological Reactance Scale è stata accertata attraverso la sua correlazione con la Depression Anxiety and Stress Scale. Sono discusse le implicazioni pratiche dello studio.

✦ **SUMMARY.** Psychological reactance, an emotional reaction of distress in response to threatened freedom, is an important construct that influences the mental health of married women. The current study was carried out to develop a valid and reliable measure of psychological reactance for married women living in collectivistic cultures such as the Pakistani culture. Item pool was generated through expert opinion, literature review and semistructured interviews with married women. In order to explore the factor structure, exploratory factor analysis was carried out on a sample of women (N = 566). Results revealed a two factors structure comprising Internal Expression (cognitive-emotional domain) and External Expression (aggressive-behavioral domain). Alpha values of scale ($\alpha = .90$) and Internal Expression ($\alpha = .81$) and External Expression factor ($\alpha = .81$) provided evidence of the excellent reliability of Psychological Reactance Scale. In order to confirm the factor structure, confirmatory factor analysis was carried out on an independent sample of married women (N = 150). Confirmatory factor analysis provided excellent model fit indices (CFI = .93, RMR = .04) for the two factors structure obtained through EFA. Convergent validity of the Psychological Reactance Scale was ascertained through its correlation with Depression Anxiety and Stress Scale. Practical implications of the study are discussed.

Keywords: Psychological reactance, Married women, Restricted freedom, Psychometric properties

INTRODUCTION

Psychological reactance, is a motivational reaction in response to threatened, eliminated or reduced freedom, either actual or perceived in nature (Brehm & Brehm, 1981). It is said that threats to freedom can be explicit as well as implied in nature (Miron & Brehm, 2006). Experience of freedom helps in engendering the individual's self-identity and sense of control over the environment (Worchel, 2004). Threat to freedom results in an increased attractiveness and motivation for the forbidden act (Brehm & Self, 1989). The term reactance refers to the restoration of threatened or eliminated freedoms and it can be expressed in various ways (Brehm & Brehm, 1981). Individuals may directly engage in the prohibited behavior, receive gratification by observing others engage in the behavior, or may engage in aggression against the individual reducing or eliminating the freedom. (Miron & Brehm, 2006). Initially this construct was conceptualized as a state (Brehm, 1966) but later on it was conceptualized as trait (Shoham, Trost & Rohrbaugh, 2004).

Clinical features of psychological reactance

Psychological reactance as trait has received substantial attention in the field of clinical psychology (Miron & Brehm, 2006). Keeping in view the role of psychological reactance in the field of clinical psychology, researchers tried to explore its role in the clinical features of patients. Researchers proved that having high level of psychological reactance increase the vulnerability for psychological disturbances and decrease the chances of prognosis among patients (Beutler, Moleiro & Talebi, 2002; Cautilli, Riley-Tillman, Axelrod & Hine, 2005). It is also reported that psychological reactance of clients plays a significant role in the treatment process, particularly among depressed and anxious patients (Arnold & Vakhrusheva, 2016; Beutler et al., 2002; De las Cuevas, Peñate & Sanz, 2014; Shoham et al., 2004).

Researchers also found that psychological reactance shares overlap and found to be positively correlated with various clinical constructs. For instance Lienemann and Siegel (2016) reported the positive relationship of psychological construct with the depression. Quick and Stephenson (2007) elaborated the relationship of sensation seeking with psychological reactance. It is also reported

that psychological reactance is marked with high level of anger and evoke negative emotions (Shah, Friedman & Kruglanski, 2002)

Measurement of psychological reactance

Initially it was considered that measurement of psychological reactance is difficult as Brehm (1966) defined it as a hypothetical variable which cannot be measured directly. Miron and Brehm (2006) argued that psychological reactance can be indirectly measured by assessing the subjective experience underlying the phenomenon, that is, "feelings". Dillard and Shen (2005) stated that the construct of reactance can directly be measured and came up with their intertwined model which posited that reactance can be best measured as a combination of anger and negative cognition. Steindl and colleagues (Steindl, Jonas, Sittenthaler, Mattausch & Greenberg, 2015) criticized intertwined model on the basis of its scarce validation evidence.

There are three widely used measures of trait reactance; the *Questionnaire for the Measurement of Psychological Reactance (QMPR; Merz, 1983)*, the *Hong Psychological Reactance Scale (HPRS; Hong, 1992; Hong & Faedda, 1996; Hong & Page, 1989)* and the *Therapeutic Reactance Scale (TRS; Dowd, Milne & Wise, 1991)*. Several studies showed QMPR as unstable and unsuitable for usage (Donnell, Thomas & Buboltz, 2001). Therefore, the HPRS and TRS were developed. TRS was intended to be used in therapy (Dowd et al., 1991). HPRS was constructed for usage with the non clinical population. It has been used in different studies and its psychometric indices are also very good (Dillard & Shen, 2005). But the main limitation of the scale is that it was developed and validated using college population in western culture by Hong and colleagues (Hong, 1992; Hong & Faedda, 1996; Hong & Page, 1989) in Australia, and Thomas et al. (Thomas, Donnell & Buboltz, 2001) and Dillard & Shen (2005) in the United States. So, it cannot be used worldwide and across cultures. Another limitation associated with the HPRS is that currently it is available in 11-items and 14-items versions. Dual versions of the scale also cause confusion for test users and constitute a potential limitation of HPRS. So, there was a need of developing such a measure of psychological reactance which can be used widely for non clinical population.

Reactance, cultural diversity and marriage

Miron and Brehm (2006) concluded that different cultures react differently to certain situations in order to defend their freedom. Individualistic and collectivistic cultures vary in their choices, preferences and concept regarding oneself (Iyengar & Lepper, 1999). Analyzing people's exposure to reactance, Jonas et al. (2009) explained that individuals with self-centered approaches are less threatened by their personal freedom. People belonging to collectivistic culture are more concerned and threatened by the group, as they follow group think approach.

The role and importance of culture cannot be denied in marriage and marital relationships. Beels (2002) argued that culture is responsible for shaping the behavioral rituals and world view of its members. Stressing the importance of culture in one's life, Christiansen et al. (2011) considered multiculturalism to be the fourth force in psychology. Studies have explored families and marriage relationships according to different cultures i.e. individualistic and collectivist (Fang, 2018). Both cultures have different familial obligations, norms and values (Hofstede, 2001). In both cultures, the criterion of marital satisfaction also varies greatly (Dillon & Beechler, 2010).

Bian and Logan (2001) argued that people in collectivist culture (i.e. Pakistani culture) are used to maintaining frequent contact with their relatives, so, marriage is not a matter of husband and wife only. On the other hand, nuclear families of individualistic cultures are found to be more psychologically and geographically isolated (Georgas, 2003). The evidence suggests that the nature, source of problems, and the criteria of satisfaction and dissatisfaction of marital relationships differ across these cultures. There are also cultural differences in defining the role of women which determines the place and respect given to them in a particular society (Akhter & Akbar, 2016). These ground realities strengthened the need for indigenous measures of reactance to assess the phenomenon according to the cultures' unique dynamics.

Freedom of speech which is a basic right of human beings, is defined as an exclusive authority of action and expression of thoughts and feelings as per persons' will; its meant for self-ownership or self-control (Ramzan, Javaid, Iqbal, Buksh & Javed, 2019). When this freedom is restricted, a force called reactance comes into action.

Pakistan mainly is male dominant society (Ali & Bustamanate, 2008), therefore, the chances of expression of freedom or of so called free behavior are limited for women (particularly in marital relationships) (Ramzan et al., 2019). Although the constitution of Pakistan guarantees the right to speech to its citizens regardless of gender, women go through the suppression of freedom of speech in almost every aspect of life and are coerced into living according to the rules and regulations made by male members of society (Ramzan et al., 2019). Common examples of this include restrictions imposed on studies after marriage, choosing a profession of choice, going to desired places to meet friends and a long list of other familial and societal constraints. Pakistani collectivistic culture (Islam, 2004) demands limits expression of freedom by taking away self-ownership (Ramzan et al., 2019). All these conditions put a psychological burden and evoke reactance responses.

Mental and physical health of women is put at risk by violence faced at different stages in life (Akhter, 2011). Zahidie and Jamali (2013) identified that the common factors behind the development of mental health issues among married Pakistani women include verbal and physical abuse by in laws and stressful life events and other familial conflicts. The implication of psychological reactance in clinical settings (Arnold & Vakhrusheva, 2016; Beutler et al., 2002; Shoham et al., 2004) can be helpful to uncover the reactance antecedents of married women and to deal with their growing mental health issues effectively.

Rationale

Restriction of freedom and its reactions are threat to the mental health of married women living in any culture (De las Cuevas et al., 2014). Keeping in view the risk of mental health issues it is important to focus attention of the construct of psychological reactance. Researchers paid attention on the construct in general context. Earlier measures of trait reactance (QMPR, Merz, 1983; HPRS, Hong, 1992; Hong & Faedda, 1996; Hong & Page, 1989; TRS, Dowd et al., 1991) cannot be used to measure the psychological reactance of married women. Keeping in view the unique cultural values and issues of married women (Dillon & Beechler, 2010; Fang, 2018; Hofstede, 2001) and varied nature of reactance responses by the members of different cultures (Jonas et al., 2009; Miron & Brehm, 2006; Iyengar & Lepper, 1999), the current

study was planned to construct *Psychological Reactance Scale (PRS)*. The newly developed scale is a reactance measure for married women of Pakistan, a collectivist culture with its own unique values. It is hoped that the present scale will be fruitful in filling this gap.

In order to meet the main objective, current research was divided into three studies. Study 1 aimed at development of item pool and exploration of factor structure. Study 2 was carried out to confirm the factor structure through confirmatory factor analysis. Study 3 was meant to provide the evidence of construct validity for the meant developed scale of psychological reactance.

STUDY 1: DEVELOPMENT OF PSYCHOLOGICAL REACTANCE SCALE (PRS)

Study 1: Method

Study 1 comprised three phases.

- *Phase I: Exploring the construct and generating initial item pool.* Phase I was carried out to operationalize the construct “psychological reactance for married women”. Semistructured interviews were conducted with 30 married women, to explore the domains of psychological reactance among married women of Pakistan. Incorporating expert opinion, participants’ responses, literature review and already developed measures of the construct, a 46-item scale of psychological reactance was developed. Five-point Likert scale response format ranging from 1 = strongly disagree to 5 = strongly agree was used for PRS. After generating the item pool, a committee approach was used to review the item pool comprised of 46-item. Committee was comprised of three Lecturers and three Assistant Professors of University of Sargodha. On the recommendation of committee few of the items were rephrased and some new items were added. Items of the scale were assessed by experts in terms of their conformity to the construct, grammatical appropriateness, phrasing and response format. Finally, a 52-item indigenous measure of PRS was developed. This newly developed scale was used in the subsequent phases of the study.
- *Phase II: Pilot study.* Pilot study was carried out to get an initial picture of psychometric properties of the scale being

developed. Secondly it was meant to take the feedback of the participants about the suitability and understandability of the items.

Sample. A purposive sample of 125 married women was taken from different rural and urban regions of Punjab, Pakistan. Sample was divided into 5 subgroups in terms of marriage duration each having 25 participants. Category 1 consisted of early years of marriage; 0-2 years, Category 2 consisted of 3-5 years, Category 3 consisted of 6-10 years, Category 4 consisted of 11-20 years and Category 5 consisted of late adulthood period of married life, that is, above 20 years. Minimum education of the participants was matriculation.

Instrument. The newly developed 52-items measure with 5-point Likert scale response format was administered at this stage to gather data from participants. There were 4 reverse scored items in the scale at this stage.

Procedure. Topic of the research was approved by the internal review board of department of Psychology University of Sargodha (letter no. Psy56/2020). Keeping in view the ethical considerations, IRB reviewed the details of research and allowed to conduct the research. Participants were approached individually and the 52-item *Psychological Reactance Scale* was administered. Participants were told about the nature and objectives of the study. They were also ensured that their identity will not be disclosed and the given information will be used only for research purposes.

Results. Psychometric properties of the items and feedback of the participants were reviewed. Few of the items were found to be uncorrelated with other items and participants pointed out some items that were emotionally loaded, biased and irrelevant to some participants. As a result of pilot analysis, some items were removed with the help of experts. After ensuring the content validity, 32 items were retained.

- *Phase III: Exploratory factor analysis.* Phase III aimed to explore the domains of psychological reactance among married women of Pakistan and to assess the reliability indices of the scale.

Sample. An independent sample of 566 participants was recruited from rural and urban areas of Punjab, Pakistan. Age range of the sample was between 20 to 65 years ($M = 40.1$, $SD = 9.67$). Sample was divided into 5 subgroups in terms of marriage duration. Category 1 consisted of early years of marriage; 0-2 years ($n = 120$), Category 2 consisted of 3-5 years ($n = 127$), Category 3 consisted of 6-10 years

($n = 130$), Category 4 consisted of 11-20 years ($n = 110$) and Category 5 consisted of late adulthood period of married life, that is, above 20 years ($n = 79$). Minimum education of the participants was matriculation.

Instrument. Factor analysis was carried out on 32-items retained after pilot study. Likert type response format (strongly agree = 5 to strongly disagree = 1) was used. Higher score on PRS meant higher level of reactance and lower score meant lower level of reactance.

Procedure. Participants were approached individually. They were informed about the objectives of the study and confidentiality of the information was ensured. They were highly appreciated and thanked for their kind cooperation in the study.

Results. Exploratory factor analysis was carried out to explore the factor structure of PRS.

KMO and Bertlett test of sphericity were checked to test the suitability of data for running factor analysis. KMO = .86 indicated excellent sampling sufficiency (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity (Snedecor & Cochran, 1989) results were significant which indicated appropriateness of correlation between items for factor analysis. Appropriateness of matrix for factor analysis was also confirmed by examination of correlation matrix. The values of all the items were above .35.

Factor structure of construct was obtained by principal axis factoring. EFA was carried out by direct oblimin method of rotation on the data of 566 participants. Keeping in view the assumption that our retained factors would be correlated with each other, direct oblimin rotation method was found most suitable rotation method. Two well defined and clear factors were obtained. Scree plot also provided the evidence of two factor structure. All items loaded independently on the two factors namely Internal Expression and External Expression. 18 out of 32 items were retained. Remaining 14 items were discarded because some items had cross-loadings on more than one factors; some items had very low factor loadings (below .30); while some had very low communalities after extraction (below .20). Hence, only 18 items were not cross-loaded on more than one factors; they had very good factor loadings. Moreover, their communalities were also appropriate. A significant amount of variance (41.28%) was accounted for retained factors.

Table 1 represents the standardized factor loadings and factor structure obtained EFA on a sample of 566

participants.

Factor-1 Internal Expression. This factor of PRS includes the expression of reactance in which it is not outwardly expressed rather the responses to threatened freedom are internalized and are mostly cognitive in nature. 9 items are included in this factor. The factor explains 29.44% variance in the scale.

Factor-2 External Expression: This factor of PRS includes the expression of reactance in which it is expressed outwardly. Unlike the Internal Expression of psychological reactance, here, the responses are mostly emotional and aggressive in nature. 9 items are included in this factor as well. The factor explains 11.83% variance in the scale.

Study 1: Reliability analysis

Reliability analysis was carried out on the data of 566 participants in order to establish the internal consistency of PRS and its factors.

Table 2 shows the values of mean, standard deviation, range, and alpha reliability of all variables. The values of skewness were less than 1.96, which suggested that total score on PRS and its components do not deviate from symmetrical distribution.

Table 3 illustrates the patterns of relationship between PRS and its factors. Factors were significantly and positively correlated with one another as well as with the total score of PRS.

STUDY 2: CONFIRMATORY FACTOR ANALYSIS

Study 2 was carried out to confirm the factor structure through confirmatory factor analysis.

Study 2: Sample

Sample of study consisted of 150 married women. Equal representation ($n = 30$) was given to all five categories of marriage duration in the sample. Minimum education of the participants was matriculation. Age range of the sample was 28 to 61 ($M = 39.8$, $SD = 8.7$)

Table 1 – Standardized factor loadings of factors of PRS (N = 566)

Serial No.	Item No.	Factor loadings		
		F1	F2	h ²
1	1	.53	.27	.30
2	3	.58	.09	.35
3	5	.59	.08	.33
4	7	.71	.33	.51
5	9	.69	.32	.49
6	10	.79	.21	.63
7	29	.57	.32	.35
8	35	.61	.21	.38
9	36	.54	.34	.32
10	6	.28	.52	.38
11	19	.13	.56	.38
12	27	.18	.65	.42
13	28	.17	.68	.46
14	40	.15	.63	.41
15	42	.29	.67	.45
16	43	.19	.69	.49
17	51	.28	.57	.41
18	52	.25	.60	.36
Eigenvalues		5.30	2.13	
% of variance		29.44	11.83	
Cumulative %		41.28		

Table 2 – Means, standard deviations, alpha reliability and descriptive statistics of Psychological Reactance Scale and its factors (N = 566)

Variables	M	SD	α	Range	
				Actual	Potential
Total score PRS	50.37	12.99	.90	18-87	18-90
INT	29.24	7.73	.81	9-45	9-45
EXT	21.13	7.47	.81	9-44	9-45

Legenda. PRS = Psychological Reactance Scale; INT = Internal Expression; EXT = External Expression.

Table 3 – Correlations of Psychological Reactance Scale and its factors (N = 566)

Scales	INT	EXT	Total score PRS
INT	–	.45**	.86**
EXT	–	–	.84**

Legenda. INT = Internal Expression; EXT = External Expression; PRS = Psychological Reactance Scale.

** $p < .01$

Study 2: Instrument

In this study, newly developed PRS (18-items) with 5-point Likert response format (1 = strongly disagree to 5 = strongly agree) was used. The scale consists of two factors namely Internal Expression (9-items) and External Expression (9-items).

Study 2: Procedure

Participants were approached individually. They were informed about the objectives of the study and confidentiality

of their information was assured. They were highly appreciated and thanked for their participation in the study.

Study 2: Results

On the basis of initial criteria (i.e item loading $> .30$), the model obtained through EFA was examined in CFA. Maximum likelihood estimation method was used to run CFA. A model with chi square/df less than 3 is considered good (Gable & Wolf, 1993; Hatcher, 1994). The final model obtained consisted of 18 items presenting a good model fit. There were 9 items in both Internal and External Expression

(factors of PRS). Factor loadings ranged from .47 to .78. After CFA, the same 18 items were retained. Results of CFA indicated that model is good and replicable on the new sample (see Table 4 and Figure 1).

STUDY 3: VALIDATION OF PSYCHOLOGICAL REACTANCE SCALE (PRS)

Study 3: Method

Study III aimed to determine the construct validity of *Psychological Reactance Scale* for married women of Pakistan.

Study 3: Sample

A sample of married women ($N = 100$) was taken from the rural and urban areas of Punjab, Pakistan to assess the construct validity of the scale. Age range of the sample was 25 to 55 ($M = 35.7$, $SD = 9.2$). Education of the participants was minimum matriculation.

Study 3: Instruments

To determine the construct validity of the scale, the newly developed PRS was correlated with DASS.

– *Depression Anxiety Stress Scales (DASS)*. It is a 42-item self-

report measure of depression, anxiety and stress originally developed by Lovibond and Lovibond (1995). Each factor contains 14-items. DASS Urdu version was used in the present study to verify the construct validity of the newly developed scale. DASS-21 Urdu translation was carried out by Aslam (2007). The scale consists of 21 items with each factor having 7 items. The resulting score is multiplied with 2 to get equivalent results as DASS 42-items version. Response format consists of 4-point Likert scale (not at all = 0, seldom = 1, most of the time = 2, all time = 3). The scale has been validated using Pakistani population.

Study 3: Procedure

Informed consent of participants was taken and they were assured that their information will be kept confidential. They were also given appropriate instructions to ensure genuine responses. Participants were approached individually and online; and questionnaires were administered.

Study 3: Results

Table 5 show that total score on PRS has significant positive correlation with Depression subscale of DASS ($r = .34$, $p < .01$), Anxiety subscale of DASS ($r = .24$, $p < .05$) and Stress subscale of DASS ($r = .33$, $p < .01$).

Results of Study 3 provided the evidence of the construct validity (convergent of PRS).

Table 4 – Model fit indices of CFA for PRS ($N = 150$)

Indexes	Chi square	df	Chi square/df	CFI	RMSEA	RMR	GFI	TLI
Model	220.28	134	1.6	.93	.04	.04	.92	.91

Legenda. df = degree of freedom; CFI = Comparative Fix Index; RMSEA = Root Mean Square Error of Approximation; RMR = Root Mean Residual; GFI = Goodness of Fix Index; TLI = Tucker Lewis Index.

Figure 1 – Confirmatory factor analysis of Psychological Reactance Scale for married women of Pakistan

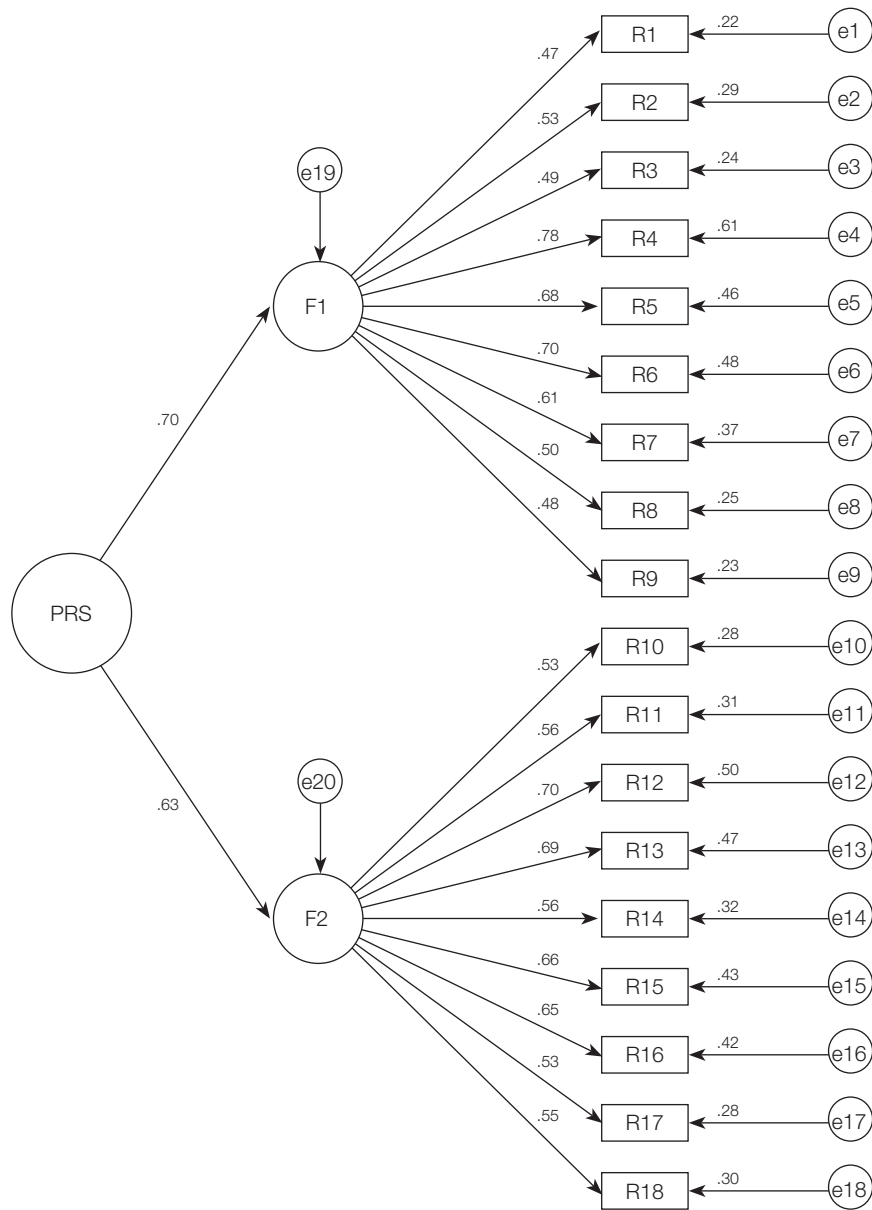


Table 5 – Correlation of total score PRS (Psychological Reactance Scale) with Depression, Anxiety, Stress Scale (DASS-21 factors) (N = 100)

VAR	PRS	DEP	ANX	STR
PRS	–	.34**	.24*	.33**
DEP		–	.58**	.71**
ANX			–	.43**

Legenda. VAR = Variables; PRS = Total score of Psychological Reactance Scale; DEP = DASS-21, Depression; ANX = DASS-21, Anxiety; STR = DASS-21, Stress.

** $p < .01$, * $p < .05$

DISCUSSION

The present study was carried out to develop an indigenous measure of psychological reactance according to the requirements of a collectivist Pakistani culture. Exploratory factor analysis revealed two well-defined factors. Factors were named as Internal Expression and External Expression (see Table 1).

Internal Expression of PRS measure the cognitive domain and this is a potent factor in predicting the development of mental health issues (depression, anxiety, stress etc.) among married women. This factor of PRS includes negative thinking pattern, inferiority complex, distress and inclination to adopt reckless or rebellious attitude in the future by threatened women. The results are in line with the study of Quick and Stephenson (2007) who identified psychological reactance as a latent variable having negative cognitions and state anger.

Primarily, Internal Expression of PRS is concerned with Miron and Brehm's notion (2006) of assessing the feeling component if one is experiencing threats to freedom. This is subjective in nature and so cannot be measured through outward expression of reactance. Further, the authors suggested that through the assessment of this aspect (feelings), measurement of the phenomenon is possible (Miron & Brehm, 2006) unlike the previous notion of considering it a hypothetical variable (Miron & Brehm, 1981).

External Expression of PRS includes emotional outbursts and aversive, motivational, behavioral outcomes. This aspect of reactance is more intense in nature as here the discomfort associated with threatened/eliminated freedom is not limited to one's own personality rather, gets extended against persons, values and customs etc. which are the actual cause of threat. Here, the measurement of the practical manifestation of rebelliousness (emerging during internal expression) is made. One is ready to take risk and acts out against the sources of threat. So, the aggressive behavioral outcomes and defiant acts, are evident at this stage. The findings are consistent with the previous line of research which provides evidence of relationship of psychological reactance with aggression, defensiveness, dominance, being autonomous (Dowd & Wallbrown, 1993), anger (Hong & Giannakopoulos, 1994) and being non-compliant (Brown & Finney, 2011). So, in External Expression of psychological reactance, social influence is rejected (Brehm, 1989) and the same is measured through this factor of PRS.

To assess the internal consistency of PRS and its factors, reliability analysis was carried out. Results indicated that PRS and its factors are highly reliable with alpha coefficients above .90 and .81 (see Table 2).

Correlation of PRS total score and its factors was also carried out to identify the nature of relationship between PRS and its factors. There was a significant positive correlation

between PRS and its factors as well as between factors at .01 significance level (see Table 3).

Confirmatory factor analysis was carried out to confirm the factor structure of PRS obtained through EFA. CFA indices confirmed the factor structure and provided good model fit of the data. Results of CFA confirmed that PRS is highly reliable for married women of Pakistan and replicable on an independent sample (see Figure 1; Table 4).

To provide validity evidence, newly developed PRS was correlated with DASS-21 (Urdu version). Psychological reactance among married women of Pakistan manifested as feelings of pessimism, inclination to resist pre-set rules and regulations of in laws, inclination to rebel and to perform defiant acts, emotional and behavioral outbursts etc. which shows that they are at risk for development of mental health issues. This is consistent with previous research on Pakistani women which has demonstrated that common factors behind the development of mental health issues include verbal and physical abuse by in laws and stressful life events and other familial conflicts (Zahidie & Jamali, 2013). Significant positive correlation of PRS with these constructs (i.e. depression, anxiety, stress) provides evidence for the convergent validity of the newly developed scale (see Table 5).

CONCLUSION

Psychological Reactance Scale is a trait based scale. Keeping in view the Pakistani collective culture where all married women are experiencing threats to their freedom at certain level which lead to psychological reactance, either internalized and/or expressed externally. This has important repercussions for their mental health. The scale is a valid and reliable measure of psychological reactance among married Pakistani women and taps the unique way it manifests in the Pakistani culture.

Limitations and recommendations

The scale is developed and validated using participants from Punjab, Pakistan so, it does not assess the issues of married women in other provinces. For better representation of the women of Pakistan, data should be collected from the other provinces as well. The unique way in which the geographical environment contributes to the development of reactance should also be addressed. Factors affecting the emergence and persistence of reactance such as the employment status of women and cross-sect and cross-cultural marriages, should also be considered in future studies. Convergent validity of External Expression factor was not tested in the current study. On the basis of these limitations it is suggested that future researches should be conducted to provide more evidences for the convergent and discriminant validity of PRS and its factors.

Practical implications of the study

Psychological Reactance Scale measures trait reactance and the measurement of psychological reactance in clinical and counseling settings will help psychologists to structure appropriate strategies for the married female clients which will lead toward better treatment outcomes. As it is already proved in previous researches that psychological reactance is a great hindrance in therapeutic process therefore this scale can be used to assess the level of psychological reactance of patients so that they may be treated and handled accordingly. Moreover, various researches can be conducted to measure consequences of psychological reactance among Pakistani married women. Results of studies will help out policy makers to devise strategies and plans to protect and facilitate the freedom and rights of married women and it will ultimately help in increasing the mental health of women.

Conflict of interest: The authors declare that they have no conflict of interest.

References

- AKHTER, N. (2011). Push and pull factors behind domestic violence practices in Bahawalpur, Pakistan. *Journal of Educational Research*, 14 (1), 154-163.
- AKHTER, N. & AKBAR, R.A. (2016). Critical analysis of life of Pakistani women: Views of educated women. *Journal of Elementary Education*, 26 (1), 111-121.
- ALI, P.A. & BUSTAMANATE, M.I. (2008). Violence against women in Pakistan: A framework for analysis. *Journal of Pakistan Medical Association*, 58, 198-203. Retrieved from www.jpma.org.pk
- ARNOLD, K.A. & VAKHRUSHEVA, J. (2016). Resist the negation reflex: Minimizing reactance in psychotherapy of delusions. *Psychosis*, 8, 166-175. doi.org/10.1080/17522439.2015.1095229
- ASLAM, N., (2007). *Psychological disorders and resilience among earthquake affected individuals*. Unpublished MPhil dissertation, National Institute of Psychology, Quid-i-Azam University, Islamabad.
- BEELS, C.C. (2002). Notes for a cultural history of family therapy. *Family Process*, 41 (1), 67-82. doi:10.1111/j.1545.5300.2002.4010200067.x
- BEUTLER, L.E., MOLEIRO, C. & TALEBI, H. (2002). Resistance in psychotherapy: What conclusions are supported by research. *Journal of Clinical Psychology*, 58, 207-217. doi.org/10.1002/jclp.1144
- BIAN, F. & LOGAN, J.R. (2001). The comparative study of intergenerational relationships between China and the United States. *Sociological Studies*, 2, 85-95.
- BREHM, J.W. (1966). *A theory of psychological reactance*. Oxford, England: Academic Press.
- BREHM, S.S. & BREHM, J.W. (1981). *Psychological reactance: A theory of freedom and control*. New York, NY: Academic Press.
- BREHM, J.W. & SELF, E.A. (1989). The intensity of motivation. *Annual Review of Psychology*, 109-131. doi.org/10.1146/annurev.ps.40.020189.000545
- BROWN, A.R. & FINNEY, S.J. (2011). Low stakes testing and psychological reactance: Using the Hong Psychological Reactance Scale to better understand compliant and non-compliant examinees. *International Journal of Testing*, 11 (3), 248-270. doi.org/10.1080/15305058.2011.570884
- CAUTILLI, J., RILEY-TILLMAN, T.C., AXELROD, S. & HINELINE, P. (2005). Current behavioral models of client and consultee resistance: A critical review. *International Journal of Behavioral and Consultation Therapy*, 1, 147-164. doi.org.ccl.idm.oclc.org/10.1037/h0100742
- CHRISTIANSEN, A.T., THOMAS, V., KAFESCIOGLU, N., KARAKURT, G., LOWE, W., SMITH, W. & WITTENBORN, A. (2011). Multicultural supervision: Lessons learned about an ongoing struggle. *Journal of Marital Family Therapy*, 37 (1), 109-119. doi:10.1111/j.1752-0606.2009.00138.
- DE LAS CUEVAS, C., PEÑATE, W. & SANZ, E.J. (2014) The relationship of psychological reactance, health locus of control and sense of self-efficacy with adherence to treatment in psychiatric outpatients with depression. *BMC Psychiatry*, 14 (1), 324-333. doi.org/10.1186/s12888-014-0324-6
- DILLARD, J. & SHEN, L. (2005). On the nature of reactance and its role in persuasive health communication. *Communication Monographs*, 72, 144-168. doi.org/10.1080/03637750500111815
- DILLON, L.M. & BEECHLER, M.P. (2010). Marital satisfaction and the impact of children in collectivist cultures: A meta-analysis. *J. Evol. Psychol.*, 8, 7-22. doi: 10.1556/JEP8.2010.1.3
- DONNELL, A.J., THOMAS, A. & BUBOLTZ, W.C. (2001). Psychological reactance: Factor structure and internal consistency of the Questionnaire for the Measurement of Psychological Reactance. *The Journal of Social Psychology*, 141 (5), 679-687. doi.org/10.1080/00224540109600581
- DOWD, E.T., MILNE, C.R. & WISE, S.L. (1991). The Therapeutic Reactance Scale: A measure of psychological reactance. *Journal of Counseling and Development*, 69, 541-545. dx.doi.org/10.1002/j.1556-6676.1991.tb02638.x
- DOWD, E.T. & WALLBROWN, F. (1993). Motivational components of client reactance. *Journal of Counseling and Development*, 71, 533-538.
- FANG, F. (2018). *Culture and family life: Three studies on marriage and family relationships across cultures*. Doctoral dissertation, Virginia Tech.
- GEORGAS, J. (2003). Family: Variations and changes across cultures. *Online Readings in Psychology and Culture*, 6 (3), 3.
- GORSUCH, R.L. (1983). *Factor analysis*. Hillsdale, NJ: Lawrence Erlbaum Associates. doi.org/10.1207/s15327906mbr2501_3
- HOFSTEDDE, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Thousand Oaks, CA: Sage Publications.
- HONG, S.M. (1992). Hong's Psychological Reactance Scale: A further factor analytic validation. *Psychological Reports*, 70, 512-514. doi.org/10.2466/pr0.1992.70.2.512
- HONG, S.M. & FAEDDA, S. (1996). Refinement of the Hong Psychological Reactance Scale. *Educational and Psychological Measurement*, 56, 173-182. doi.org/10.1177/0013164496056001014

- HONG, S.M. & GIANNAKOPOULOS, E. (1994). The relationship of satisfaction with life to personality characteristics. *The Journal of Psychology*, 128 (5), 547-552. doi.org/10.1080/00223980.1994.914912
- HONG, S.M. & OSTINI, R. (1989). Further evaluation of Merz's Psychological Reactance Scale. *Psychological Reports*, 64, 707. doi.org/10.2466/pr0.1989.64.3.707
- HONG, S.M. & PAGE, S. (1989). A Psychological Reactance Scale: Development, factor structure and reliability. *Psychological Reports*, 64, 1323-1326. doi.org/10.2466/pr0.1989.64.3c.1323
- HUTCHESON, G. & SOFRONIOU, N. (1999). *The multivariate social scientist: The introductory statistics using generalized linear models*. Sage. doi.org/10.4135/9780857028075.d148
- ISLAM, N., (2004). Sifarish, sycophants, power and collectivism: Administrative culture in Pakistan. *International Review of Administrative Sciences*. 70. 311-330. 10.1177/0020852304044259
- IYENGAR, S.S. & LEPPER, M.R. (1999). Rethinking the value of choice: A cultural perspective on intrinsic motivation. *Journal of Personality and Social Psychology*, 76, 349-366. Retrieved from <https://psycnet.apa.org/buy/1999-10261-001>
- JONAS, E., GRAUPMANN, V., NIESTA KAYSER, D., ZANNA, M., TRAUTMATTAUSCH, E. & FREY, D. (2009). Culture, self, and the emergence of reactance: Is there a "universal" freedom? *Journal of Experimental Social Psychology*, 45, 1068-1080. doi: 10.1016/j.jesp.2009.06.005
- LIENEMANN, B.A. & SIEGEL, J.T. (2016). State psychological reactance to depression public service announcements among people with varying levels of depressive symptomatology. *Health Communication*, 31, 102-116. doi.org/10.1080/10410236.2014.940668
- LOVIBOND, S.H. & LOVIBOND, P.F. (1995). *Manual for the Depression Anxiety Stress Scales (2nd ed.)*. Sydney: Psychology Foundation.
- MERZ, J. (1983). A questionnaire for the measurement of psychological reactance. *Diagnostica*, 29, 75-82.
- MIRON, A.M. & BREHM, J.W. (2006). Reactance theory - 40 years later. *Zeitschrift für Sozialpsychologie*, 37, 9-18. doi.org/10.1024/0044-3514.37.1.9.
- QUICK, B.L. & STEPHENSON, M.T. (2007). The Reactance Restoration Scale (RRS): A measure of direct and indirect restoration. *Communication Research Reports*, 24, 131-138. doi: 10.1080/08824090701304840
- RAMZAN, M., JAVAID, K., IQBAL, T., BUKSH, I. & JAVED, K. (2019). Freedom of speech: Infringement of women rights in Pakistan. *Saussurea*, 9 (1), 28-38
- SHAH, J.Y., FRIEDMAN, R. & KRUGLANSKI, A.W. (2002). Forgetting all else: On the antecedents and consequences of goal shielding. *Journal of Personality and Social Psychology*, 83, 1261-1280. doi.org/10.1037/0022-3514.83.6.1261
- SHOHAM, V., TROST, S.E. & ROHRBAUGH, M.J. (2004). From state to trait and back again: Reactance theory goes clinical. In R.A. Wright, J. Greenberg & S.S. Brehm (Eds.), *Motivational analyses of social behavior: Building on Jack Brehm's contributions to psychology*. Mahwah, NJ: Erlbaum.
- STEINDL, C., JONAS, E., SITTENTHALER, S., MATTAUSCH, E. & GREENBERG, J. (2015). Understanding psychological reactance: New development and findings. Department of Psychology, University of Salzburg, Austria; Department of Psychology, University of Arizona, Tucson, AZ, USA. *Zeitschrift für Psychologie*, 223 (4), 205-214. doi.org/10.1027/2151-2604/a000222
- THOMAS, A., DONNELL, A.J. & BUBOLTZ, W.C. (2001). The Hong Psychological Reactance Scale: A confirmatory factor analysis. *Measurement and Evaluation in Counseling and Development*, 34 (1), 2-13. doi.10.1080/07481756.2001.12069018
- TUCKER, R.K. & BYERS, P.Y. (1987). Factorial validity of Merz's Psychological Reactance Scale. *Psychological Reports*, 61, 811-815. doi.org/10.2466/pr0.1987.61.3.811
- WORCHEL, S. (2004). The diamond in the stone: Exploring the place of free behavior in the study of human rights and culture. In R.A. Wright, J. Greenberg & S.S. Brehm (Eds.), *Motivational analyses of social behavior: Building on Jack Brehm's contributions to psychology*. Lawrence Erlbaum Associates Publishers.
- ZAHIDIE, A. & JAMALI, T. (2013). An overview of the predictors of depression among adult Pakistani women. *Journal of the College of Physicians and Surgeons Pakistan*, 23 (8), 574-580.