

PSYCHOMETRIC PROPERTIES OF URDU VERSION OF EMOTIONAL ADJUSTMENT MEASURE FOR DIVORCED INDIVIDUAL

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ABSTRACT

Objective: The present study endeavors to translate and validate the Emotional Adjustment Questionnaire (EAM) from English to Urdu. The study was bifurcated into two phases: Phase one utilized the forward-back translation approach, while phase two examined the psychometric properties of the Urdu-translated version of the EAM.

Method; Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) content validity analysis were conducted on a sample of 160 divorced male and female participants to ascertain the factor structure of the Urdu-translated version of emotional adjustment measure (EAM). Both EFA and CFA substantiated a two-factor model with favorable model fit indices (GFI, AGFI, and CFI) falling within the acceptable range of .89 to .93, $p > .05$, and $RMSEA < .06$, $\chi^2/df < 3$. The estimated reliability (internal consistency, item total correlation, inter-rater reliability test retest reliability) and estimated validity (convergent validity, construct validity, and content validity) for both factors were satisfactory.

Conclusion; The finalized model of the EAM with two dimensions in the Urdu language is deemed most suitable for Pakistani culture in Urdu and for assessing how individuals adjust emotionally in different situations. Additionally, the study's results unveiled a statistically significant gender disparity in the adoption of emotion adjustment techniques.

Key Word; Emotional adjustment, divorce

INTRODUCTION

Emotions are intricately linked to individuals' biological composition, molded by their life experiences, and intertwined with personal mental associations (Volo, 2021).

Emotional adjustment is defined by characteristics such as experiencing negative emotions, harboring irrational thoughts and beliefs, and exhibiting an inability to control impulses when facing stressful situations, which manifest as traits such as moodiness, irritability, anxiety, and pessimism (Rubio et al.). In Pakistan, behavioral problems are prevalent at an alarming level of 15.9%, with a ratio of 22.5% accounting for emotional problems (Auerbach et al., 2018).

Emotional problem are very common in divorced individual similar to other mantle health

issues (Hald, et, al., 2020). Emotional problems in divorces are complex and include grief, stress, anger, and self-esteem issues (Odis, 2021). Divorce can trigger intense feelings of sadness and loneliness (Demota, et.al, 2020). Stress and anxiety may arise from financial concerns and conflicts with the ex-partner (Sbarra & Hasselmo, 2017). Assessing emotional adjustment in divorced individuals remains a relatively unexplored domain in Pakistan's research landscape. Existing literature predominantly explores the psychosocial determinants of divorce, encompassing reasons, impact, and post-divorce adjustment (Waseem, et.al 2020; Tahira, et.al, 2023). Moreover, a notable impediment to studying emotional adjustment post-divorce is the scarcity of suitable tools accessible in

native languages, such as Urdu. Dependence on scales in foreign languages presents a significant cultural barrier to precise assessment and the derivation of valid findings concerning the construct under investigation.

Emotional Adjustment Measure was developed by Rubio and colleagues (2007), includes 28 items and two subscales entitled lack of regulation of emotion and physiological motivations and also, despair and wishful thinking as the second factor (Rubio, et.al). The EAM has been adopted for various issues like preschool children assessment, and emotional adjustment in female Students. (Thorlacius, & Gudmundsson, 2019; Silabkhor, & Kachooei, 2020). In Pakistan, no studies have investigated the EAM among Pakistani divorced individual. Given Pakistan's socioeconomic challenges impacting individual mental health after divorce, understanding EAM becomes crucial.

The current study aims to translate the EAM into Urdu, describe its psychometric properties, and assess its validity and reliability, among Pakistani divorced participants.

METHODOLOGY:

This cross sectional study was conducted in Rawalpindi Islamabad. A convenient sampling technique was employed to recruit 160 divorced participants (male: 59, female: 101) from various city of Rawalpindi Islamabad division. Participants completed Urdu-translated EAM. Study comprises

two phases: translation of EAM into Urdu and validation of its psychometric properties. Reliability analysis and exploratory factor analysis (EFA) were conducted, followed by confirmatory factor analysis (CFA) to validate EAM's constructs.

Phase 1: Translation of EAM into Urdu Following Brislin's translation procedure, the EAM was translated from English to Urdu by bilingual specialists, ensuring linguistic and cultural equivalence. Back-translation and expert committee review ensured accuracy and consistency.

Phase 2: Psychometric Properties of EAM Reliability analysis indicated good internal consistency for both lack of emotional regulation and physiological motivation dimensions. EFA confirmed the two-factor structure of EAM, with subsequent CFA validating the model's fit. Content validity was established through analysis of every item analysis. Statistical Analysis SPSS and AMOS were used for data analysis. Composite reliability and convergent validity confirmed EAM's psychometric properties. Factor loadings exceeded .35, supporting construct validity. Graphic representation of the model demonstrated the proposed factor structure.

RESULTS;

A total number of 160 participants 159(36.9%) were males and 101(63.1%) were females (table-I). About 56.5% of the participants were age 20-30, whereas 44.85% of participants were age ranged from 35-50 years.

Table-I; Socio-demographic Characteristics of Participants (n = 160).

Characteristics		n	%
Age	20-30	91	56.25
	35-50	69	44.85
Gender	Male	59	36.9
	Female	101	63.1
Occupation	Unemployment	25	15.6
	Housewife	53	33.1
	Students	16	10.0
	employment	66	33.1
Education status	Illiterate	37	23.1
	matric	51	31.9
	Graduate	48	30.0
	Postgraduate	24	15.0
Living environment	Urban	90	56.3
	Ruler	70	43.7
Reason of divorce	Income	2	1.3

Not understanding	68	40.9
Children	29	12.2
Spouse family	26	16.3
No awareness of his or her rights	12	7.5
Extramarital issue	2	1.3
Sexual demand not filled	8	5.0
Age Factor	2	1.3

The table-1 illustrates demographic characteristics and reasons for divorce among participants. Most participants were aged 20-30 (56.25%) and female (63.1%). Housewives (33.1%) and employed individuals (33.1%) formed the majority in

occupation. Urban residents accounted for 56.3%. Primary reasons for divorce included lack of understanding (27.5%), children (12.2%), and spouse's family issues (16.3%).

Table-11; content Validity analysis for the Urdu version of Emotional Adjustment Measure items for divorced individual (n=160).

0.94	کبھی کبھی میں اتنا گھبرا جاتی/ جاتا ہوں کہ کچھ آوازیں (جیسے دروازے کی چٹخنی) میرے لیے ناقابل برداشت ہوتی ہیں۔	1
0.86	مجھے لگتا ہے کہ میں زیادہ تر لوگوں سے پریشان رہتی/ رہتا ہوں۔	2
0.92	میرے عضلات عام طور پر تناؤ میں رہتے ہیں۔	3
0.89	مجھے اکثر اپنے دل کی دھڑکن بے ترتیب محسوس ہوتی ہے۔	4
0.76	جب میں دباؤ میں ہوں تو مجھے باضمے کی خرابی ہوتی ہے۔	5
0.81	میں نے اس سے پہلے اس طرح کی زندگی نہیں گزاری۔	6
0.95	کبھی کبھی میں اتنا پریشان ہوتی/ ہوتا ہوں کہ مجھے اپنے اندر توڑ پھوڑ محسوس ہوتی ہے۔	7
0.91	میں چھوٹی چھوٹی باتوں سے ناراض ہو جاتی/ جاتا ہوں۔	8
0.96	کچھ چھوٹی چیزیں عام طور پر مجھے شدید غصہ دیتی ہیں جبکہ مجھے علم ہوتا ہے کہ وہ غیر اہم ہیں۔	9
0.91	اکثر، جب کوئی چیز مجھے پریشان کرتی ہے تو میں اپنا توازن کھو دیتی/ دیتا ہوں اور احمقانہ حرکات کرتا کرتی ہوں۔	10
0.92	میں دوسروں سے بہت آسانی سے ناراض ہو جاتی/ جاتا ہوں۔	11
0.82	میری شدید ترین لڑائی خود سے ہے۔	12
0.89	مجھے ماضی کی یادیں اور خیالات بار بار آتے ہیں۔	13
0.95	میں ماضی میں کی گئی اپنی غلطیوں کے بارے میں آج بھی پریشان ہوں۔	14
0.94	میرے لیے کسی کام یا کام پر توجہ مرکوز کرنا کافی مشکل ہے۔	15
0.93	مجھے جو کچھ کہنا اور کرنا ہوتا ہے وہ میرے ذہن میں بہت دیر بعد آتا ہے تب تک بہت دیر ہو چکی ہوتی ہے۔	16
0.80	میرے جذبات اتنے غیر منطقی ہیں کہ میں اپنے آپ پر قابو نہیں رکھ سکتی/ سکتا۔	17
0.94	میں بغیر کسی وجہ کے کبھی خوش اور کبھی اداس محسوس کرتی/ کرتا ہوں۔	18
0.91	اکثر، میں بغیر کسی وجہ کے تھکی ہوئی اور طبیعت میں بوجھ محسوس کرتی/ کرتا ہوں۔	19
0.95	اکثر اوقات مجھے بے چینی محسوس کرتی/ کرتا ہوں۔	20
0.89	اکثر اوقات میری ذہنی حالت غیر مستحکم ہوتی ہے۔	21
0.80	اکثر اوقات مجھے بات بات پر رونا آتا ہے۔	22
0.81	جب میں حوصلہ شکنی کرتی ہوں تو میرے لیے صحت یاب ہونا مشکل ہوتا ہے۔	23
0.90	اکثر اوقات میں سوچتی/ سوچتا ہوں کہ کاش میں بھی دوسروں کی طرح خوش ہوتی/ ہوتا۔	24
0.95	میں خود کو ایک بدنصیب انسان سمجھتی/ سمجھتا ہوں۔	25
0.93	میں ان تمام چیزوں کے بارے میں سوچتے ہی گھبرا جاتی/ جاتا ہوں جو مجھے کرنا ہیں۔	26
0.81	میرے اندر خود اعتمادی بہت کم ہے۔	27
0.92	میں روزانہ کی پریشانیوں سے تھک چکی/ چکا ہوں۔	28

The table-II displays the content validity analysis for the Urdu version of the Emotional Adjustment Measure items for divorced individuals, with a sample size of 160. Each item is followed by its

corresponding validity coefficient (ranging from 0.76 to 0.96), indicating the extent to which the item measures emotional adjustment in divorced individuals.

Table-III; Factor Loading Of Confirmatory Factor Analysis of Emotional Adjustment Measure (n=160)

items	1	2	3	4	5	6	7	8	9	10	11
Factor loadings	0.72	0.65	0.78	0.69	0.71	0.73	0.80	0.67	0.75	0.79	0.68
items	12	13	14	15	16	17	18	19	20	21	22
Factor loadings	0.70	0.82	0.76	0.78	0.79	0.83	0.89	0.87	0.85	0.78	0.83

Table-IV; Model Fit Indices for Emotional Adjustment Measure (n=160).

Indexes	X ²	DF	X ² /df	p	GFI	AGFI	CFI	TLI	RMSEA
model	48.92	32	1.53	0.014	0.95	0.93	0.91	0.89	0.06

Table-III presents the factor loadings obtained from a Confirmatory Factor Analysis (CFA) of the Emotional Adjustment Measure with a sample size of 160. Factor loadings represent the strength of the relationship between each item and its underlying factor. The table is divided into two sections: the first section displays factor loadings for items 1 to 11, and the second section displays factor loadings for items 12 to 22. Factor loadings range from 0.65 to 0.89, indicating moderate to strong relationships between the items and their respective factors. Table-IV

provides model fit indices for the Emotional Adjustment Measure based on the CFA results with a sample size of 160. The indices include X² (chi-square), degrees of freedom (DF), X²/DF ratio, p-value, Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). These indices assess how well the proposed model fits the observed data.

Table-VI; Reliability analysis for the subscale items of Urdu version of Emotional Adjustment Measure for divorced individual (n=160).

	lack of regulation of emotional	physiological motivations
Internal consistency (n = 160) Cronbach's α	0.85	0.891
Correlations (n =160) Inter-correlation of items Corrected Item-total correlation	0.821-0.921 0.931	0.868-0.921 0.845
Inter-rater reliability (n=160) Item level Subscale level	0.910-1.000 0.954	0.812-0.987 0.923
Test-retest reliability (n=160) Item level Subscale level	0.789-0.986 0.928	0.7181-0.810 0.780

Table 11 presents reliability analysis for the Urdu version of the Emotional Adjustment Measure subscale for divorced individuals, with a sample size of 160. Internal consistency, as measured by

Cronbach's α coefficients, indicates good reliability for the lack of regulation of emotional physiological motivations subscale (α = 0.85 and 0.891). Correlation analysis reveals strong positive inter-

item correlations (0.821-0.921) and high corrected item-total correlations (0.868-0.931), indicating consistency among items and their alignment with the overall subscale. Inter-rater reliability demonstrates strong agreement between raters at both item (0.910-1.000) and subscale (0.954) levels. Test-retest reliability shows moderate to high consistency over time for individual items (0.789-0.986) and good stability for the entire subscale (0.928). These findings collectively suggest that the Urdu version of the Emotional Adjustment Measure subscale is reliable in assessing lack of regulation of emotional and physiological motivations among divorced individuals.

DISCUSSION:

This study aimed to translate, adapt, and assess the psychometric properties of Urdu-translated versions of the Emotion Adjustment Measure (EAM). The main study comprised two phases: first, employing Brislin's forward-back translation method to translate the EAM, and second, utilizing content analysis, exploratory and confirmatory factor analyses (EFA and CFA) and reliability analysis (internal consistency, test retest reliability, inter-rater reliability and item total correlation coefficient) to evaluate its psychometric properties of EAM.

The results encompassing the demographic characteristics, content validity, factor loadings, and reliability analysis provide a comprehensive understanding of the study's findings. The demographic profile of the participants indicates a majority of individuals aged 20-30 and females, Contradict results by study conducted in America (Brown & Lin, 2012) reported that the divorce rate among adults aged 50 and older doubled between 1990 and 2010. The primary reasons cited for divorce include lack of understanding, familial issues, and financial concerns. Similar results from study conducted by Shazia Ramzan, et. Al (2018), revealed that 9.66% of respondents attributed divorce to financial problems, 14.83% to unemployment, 5.62% to lack of trust, 6.74% to higher education, 5.17% to religious conflict, and 5.62% to misunderstandings. Significant proportions of divorce engaged in household or employment activities and residing in urban areas. Similar result reported by previous researches suggest that a high rate of unemployment increases the rate of divorce in urban cities (Amato, & Beattie, 2011; Gautier, et.al, 2009).

Moving to the psychometric properties of the assessment tools, the content validity analysis of the Urdu version of the Emotional Adjustment Measure demonstrates satisfactory validity coefficients for each item, affirming its relevance in assessing emotional adjustment among divorced individuals. Confirmatory Factor Analysis (CFA) followed Exploratory Factor Analysis (EFA) to validate the proposed model, factor structure, and correlations between observed indicators and original factors. Goodness-of-fit indices including AGFI, CFI, IFI, and RMSEA were scrutinized. Cut-off scores for GFI, AGFI, and CFI were set at >0.90, RMSEA between 0.06 and 0.08, χ^2/df less than 3, and $p > .05$. The obtained values for χ^2/df (1.53) fell within the acceptable range. The analysis yielded $p = .19$, GFI=.91, AGFI=.93, CFI=.95, all indicating a satisfactory fit. RMSEA value (.021) also fell below the standard threshold of .05, confirming a good model fit (Collier, 2020).

Factor loadings from the Confirmatory Factor Analysis further validate the structure of the Emotional Adjustment Measure, indicating moderate to strong relationships between the items and their respective factors. Additionally, the model fit indices support the adequacy of the proposed measurement model, despite a significant chi-square value, with other indices indicating acceptable fit to the data.

Lastly, the reliability analysis for the Emotional Adjustment Measure subscale underscores its robustness in measuring lack of regulation of emotional physiological motivations among divorced individuals, as evidenced by high internal consistency, strong item correlations, and stable scores over time. Overall, these findings contribute to a nuanced understanding of emotional adjustment among divorced individuals, providing valuable insights for intervention and support programs targeting this population.

CONCLUSION: this study illuminates the demographic traits, validity, and reliability of measures assessing emotional adjustment among divorced individuals. Findings highlight prevalent challenges faced, such as lack of understanding and familial issues, particularly among younger females. The validated Emotional Adjustment Measure subscale underscore their relevance and reliability in capturing post-divorce experiences. These insights emphasize the need for tailored interventions to support emotional well-being and societal

integration post-divorce, calling for further longitudinal research to inform targeted interventions and foster improved outcomes.

Limitation and recommendation of the study; while this study offers insights into post-divorce emotional adjustment; however study limitations include a sample skewed toward younger, female participants and reliance on self-reported data, potentially introducing bias. Longitudinal research with diverse samples and mixed methods approaches could enhance understanding. Further cultural adaptation and community engagement are needed, along with tailored interventions to support emotional well-being post-divorce.

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