

URDU TRANSLATION AND CROSS-LANGUAGE VALIDATION OF THE MULTI-DIMENSIONAL JEALOUSY SCALE AMONG MARRIED INDIVIDUALS OF LAHORE PAKISTAN

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Abstract

The current study translated and validated the Multi-Dimensional Jealousy Scale (MJS) from English into Urdu. Age ranges of the participants varied from 25- 50 years ($M = 29.14$, $SD = 08.12$, and separate data were used for cross-language validation ($n = 80$), Exploratory Factor Analysis (EFA) $n = 130$, and Confirmatory Factor Analysis (CFA) $n = 150$ with same credentials. Semantic analysis and forward-back translation methods (Brislin, 1976) were used for translation purposes. Psychometric properties and cross-language validation results showed good internal consistency and reliability. Findings also retained the original factor structure with little variations on the current sample. Urdu MJS will help family-couple therapists and researchers to effectively deal with cognitive, emotional, and behavioral jealousy in the cultural context of Pakistan.

Keywords: Cognitive, emotional, and behavioral jealousy, Urdu language, cross-language validation

INTRODUCTION AND LITERATURE REVIEW

Zealous and jealous are both words that stem from the Latin *zelus*, "jealousy," and are used to imply the same thing. Zealous sometimes meant fear or jealousy in biblical writing in the 16th and 17th centuries. By the 18th century, it meant "warmly engaged or enthusiastic in favor of someone or something" instead of jealous. Zealous now implies "fiercely partisan" or "uncompromisingly ardent," implying strong emotion (Stein, 1978).

For around thirty years, jealousy in romantic relationships has been examined mainly on its predictors and effects (White & Mullen, 1989). Jealousy is familiar, yet it can damage relationships. It is driven by fear and fury. Romantic jealousy is the feeling of losing a partner to a real or imagined rival, whatever the reaction; it is jealousy. It affected happiness, love, and liking (Guerrero & Andersen, 1996). Relational misery, rumination, attachment anxiety, and verbal and physical abuse are all connected to jealousy. Romantic jealousy can be accompanied by rage, anxiety, and grief. Jealous people may do or think things to reduce jealousy or maintain the relationship. These thoughts and actions may not help a friend or worsen the relationship (Barnett et al., 1995).

Romantic jealousy is a complex emotion, cognition, and behavioral experience exhibited by people who feel a third party threatens their relationship. These three dimensions of jealousies are interacted and co-exist. The componential paradigm suggests jealousy involves cognitive, emotional, and behavioral components (Guerrero & Andersen, 1998). Cognitive jealousy is when a person doubts and fears that their partner is interested in a rival or a third party. Behavioral jealousy occurs when someone regularly questions and watches their spouse's routine activities with minute details. Emotional jealousy is how irritated a person gets by envy-inducing events (Guerrero et al., 2004; Pfeiffer & Wong, 1989).

There are multiple scales available on jealousy and romantic jealousy. The Jealousy Scale of White (1981) is a unidimensional assessment of romantic jealousy that cannot demonstrate a link between jealousy and personal preferences (Pfeiffer & Wong, 1989). In the same way, the Chronic Jealousy Scale analyzes the dispositional traits of romantic jealousy (Bringle & Boebinger, 1990), which



differentiate between romantic and non-romantic relationships and is incapable of explaining the multi-dimensional theory of romantic jealousy. However, the Communicative Responses to Jealousy Scale (Guerrero & Andersen, 1998) measured the 14 multiple dimensions of romantic jealousy through 70 items. It thoroughly analyzes how jealousy is displayed; it is currently being validated. It has a large number of questions and a complicated factor structure. On the other hand, the multi-dimensional jealousy scale is the proper tool for measuring romantic jealousy in various cognitive, affective, and behavioral contexts. Understanding evolutionary theory's intricate design and emotional evolution was made more accessible to this construct (Buunk et al., 1996).

The Multi-Dimensional Jealousy Scale (MJS) is translated into different languages, such as Italian. Tani and Ponti (2016) estimated the MJS factor structure using a sample of 361 people with a mean age of 26.50. The original scale factor structure has a satisfactory internal consistency of .80 to .85. The Italian multi-dimensional jealousy scale appropriately assesses romantic jealousy without compromising its original factor structure. Elphinston et al. (2011) validated the multi-dimensional jealousy scale on 178 Australian samples of 25- 45 years. Psychometric qualities kept the original factor structure of the cognitive, affective, and behavioral components with good internal reliability. The Self-Report Jealousy Scale corresponded with all multi-dimensional jealousy subscales (cognitive, emotional, and behavioral), showing concurrent validity (Bringle et al., 1979).

Scholars explored romantic jealousy with utmost vigor and excitement to assess marriage quality in complicated scenarios where spouses' and couples' adjustment is more critical for three decades (Pichon et al., 2020; Ponti, 2020). Romantic jealousy is a universal phenomenon, and Pakistan is in its infancy age to explore this complex emotion according to indigenous perspectives. Hence multi-dimensional jealousy scale is translated and adapted in different cultures and retains its original psychometric properties with little variations (de Visser et al., 2020). Therefore, in the current study, it is an effort to translate and validate the multi-dimensional jealousy scale from English into Urdu. It will help maximize intercultural communication by saving the time, energy, and resources required to develop the new instrument and to cater to the problem of romantic jealousy among married individuals from indigenous perspectives.

Objectives of the Study

- To conduct the semantic analysis on the multi-dimensional jealousy scale.
- To translate the multi-dimensional jealousy scale from the English language to the Urdu language.
- To find out the internal consistency and construct reliability of the Urdu-translated version of the Scale.
- To determine the cross-language validation of the original and translated version of the scale.
- To investigate the factor structure of the Urdu version of the Multi-dimensional jealousy scale.

Methods

This study used a correlational research design and survey method. After forward-back translation, it examined the internal consistency, construct reliability, cross-language validation, and psychometric features of the Urdu-translated of Multi-Dimensional Jealousy Scale.

Procedure

Formal permission from the authors (to translate the scale) and the Institutional Review Board of Lahore Leads University was sought. Written and verbal informed consent forms were taken from the volunteer participants after ensuring their research rights, anonymity, and confidentiality. Data were collected from the different private universities of Lahore, Pakistan, from January 2022 to May 2022. A personal information sheet and Multi-dimensional Jealousy scale (Urdu and English versions) were used for data collection, which took an average of 10 -15 minutes to complete. After meeting the inclusion and exclusion requirements, the response rate was 98%. Statistical Package for the Social Sciences (SPSS) version 22 and Smart PLS was used to analyze the data (Afthanorhan, 2013). Tabachnick and Fidell (2007) assert that confirmatory and exploratory factor analyses should be used in scale validation. Therefore, the MJS was submitted to exploratory and confirmatory factor analyses in two separate groups of people for the current investigation.

The Multi-Dimensional Jealousy Scale (MJS)



The English version of the Multi-Dimensional Jealousy Scale (MJS) (Pfeiffer & Wong, 1989) has 28 items with three subscales cognitive, emotional, and behavioral. It was translated into the Urdu language by Noor and Anjum (2019). The subscale of cognitive jealousy has item numbers: C1, C2, C3, C4, C5, C6, C7, and C8. Its sample item is "I think that my romantic partner is in secret seeing someone of the opposite sex" Behavioral jealousy (item number: B9, B10, B11, B12, B13, B14, B15, and B16). Its sample item is "I issue my romantic partner about his or her whereabouts" and Emotional jealousy (item number: E17, E18, E19, E20, E21, E22, E23, and E24). Its sample item is "My romantic partner is flirting with someone of the opposite sex" It has a seven-point Likert-type response format ranging from 1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *disagree*, 4 = *neutral*, 5 = *agree*, 6 = *somewhat agree*, and 7 = *strongly agree*. The cognitive jealousy scale was reverse-scored before running the analysis. It has good reliability on the current sample. Scales cut-off scores are measured through mean; higher scores on the multi-dimensional jealousy scale indicated pathological jealousy (Pfeiffer & Wong, 1989). It entails severe mistrust, emotional instability, and prolonged detective behavior, while low scores mean an average level of jealousy.

Step 1: Semantic analysis (Landauer, 1999) was utilized to translate important words from English to Urdu in the Multi-dimensional Jealousy Scale. The analysis identified the critical words in the question, pushing conceptual and contextual meaning instead of literal meaning, categorizing replies (favorable, neutral, and unfavorable), and calculating the percentages of responses used (Tariq & Batool, 2016).

Step 2: Forward-back Translations (Brislin, 1976) procedure was used to translate the Multi-dimensional jealousy scale from the English language into the Urdu language by keeping its contextual meanings intact instead of literal meanings. Five bilingual experts (Ph.D. scholars: two from English, one each from Urdu, Psychology, and Sociology departments of universities in Lahore, Pakistan) were approached for the forward translation. They were experts in Urdu and English translations and had three years of experience in scale development and measure translations.

Step 3: Committee Approach was used to check the compatibility of the translation from English to Urdu. Two women and three men with Ph. D.s in English, Urdu, and Psychology assessed the translation's precision, contextual meaning, concept clarity, linguistic difficulty, grammatical validity, and regional sensitivity of the Urdu version of the scale. They took help from the data of semantic analysis while finalizing the Urdu version of the scale.

Step 4: Back Translation: Three back translations assessed ambiguity, consistency, and language differences. Three multilingual Urdu-English professionals wrote the back translations. M. Phil in English from two Lahore institutions.

Step 5: Reformulation of Equivalence: The committee approach was used to reform the equivalence of the multi-dimensional scale. The final Urdu translation, back translation, and the original items of the scale were checked, and the conceptual discrepancies were minimized. They compared three back translations using conceptual similarities, language difficulties, deleting redundant terms, and making it more accessible in Pakistani culture. Minimizing meaning mismatch created the final version. The original authors were approached to confirm the back translation upon their suggestions amendments were incorporated. The two Urdu language experts checked the final version of the scale in Urdu to improve the linguistic quality of the document.

Step 6: Test Tryout was conducted on fifteen married individuals who had experienced romantic love. A sample of the test tryout rated the items as easy or difficult to understand and mentioned the words or items if they found them difficult to understand. After identifying and modifying the challenging words and items, a pilot study was conducted on the thirty participants. Results indicated that the Urdu version of the scale was easy to understand and had good internal consistency (.88).

Stage 2: Cross-language Validation and Internal Consistency of the Scale

In stage two, cross-language validation and reliability of the Urdu version of the multi-dimensional jealousy scale were conducted. Descriptive statistical analysis for the demographic variables, correlation analysis for the cross-language validation, and reliability analysis were used to measure the scale's internal consistency. Cross-language validation of the scale was calculated on the sample of eighty participants (equally distributed into four groups) with age ranges of 25-55 years. Their



personal information matched the demographic characteristics of the primary sample used for the EFA and CFA.

Table 1

Inter- correlations among English and Urdu Versions of the MJS (N = 80)

Scale	Urdu-English (n = 20)	English-English (n = 20)	Urdu-English (n = 20)	Urdu- Urdu (n = 20)
Multi-Dimensional Jealousy Scale	.89***	.90***	.89***	.91***
Cognitive	.87***	.89***	.89***	.90***
Behavioral	.89***	.91***	.90***	.91***
Emotional	.90***	.91***	.91***	.92***

Note: ****p* < .000; MJS = Multidimensional Jealousy Scale

In Table 1, the results of cross-language validation show an excellent internal consistency level of all the scales' peers. Thus the magnitude of the scales of the Urdu-Urdu versions is stronger than the other versions (English- Urdu, English - English, and Urdu- English scale versions).

Table 2 Psychometric Properties of the Urdu Multi-dimensional Jealousy Scale and its Subscale (n = 130)

Scales	k	a	M	SD	Actual	Potential	Skewness	Kurtosis
MJS	24	.93	45.26	26.72	24-17	24-18	2.12	5.65
Cognitive	8	.91	13.30	9.35	8-56	8-56	2.38	6.07
Behavior	8	.83	16.62	11.48	8-56	8-56	1.58	1.94
Emotion	8	.87	15.36	10.17	8-56	8-56	1.92	4.09

Note: Number of items = k; Mean = M; Standard Deviation = SD; Alpha = a

Table two contains the total items of the scale and its three subscale's mean, standard deviation, and actual and potential values of the Urdu scale. Values of the Skewness (normal range is between - 3 to + 3) and Kurtosis (normal range is between - 10 to + 10) is within the normal range of the scale (Edwards, 2010). It means data is usually distributed. Cronbach alpha reliability coefficients of the scales are also considered at an excellent level. The internal consistency values of all sub-scales are above .80 on the current sample.

Stage 3: Factor Structure of the Urdu Multi-dimensional Jealousy Scale

The factor structure of the Urdu Multi-dimensional Jealousy Scale was detrimental through the inter-correlation of the total scores of the MJS and its subscales by employing exploratory factor analysis and confirmatory factor analysis. For EFA, data from one hundred and thirty married participants (*M*_{age} = 30.15; *SD* = 7.15) were used with equal distribution of gender. Their education varied from 12th grade to graduation, and most were working. The following table number three shows the findings of the exploratory factor analysis.

Table 3 Exploratory Factor Analysis of the Urdu Multi-dimensional Jealousy Scale (N =130)

Item No	1	2	3	Item-total correlation
1. مجھے شک ہے کہ میرا، میری ساتھی چوری چپھے کسی جنس مخالف سے مل رہا/رہی ہے۔	.79	.33		.57**

2. میں پریشان ہوں کہ ہوسکتا ہے جنس مخالف میرے ساتھی کا پیچھا کر رہا/ رہی ہے۔	.78			.42**
3. مجھے شک ہے کہ میرا ساتھی کسی اور کی طرف مائل ہو رہا ہے۔	.76			.24**
4. مجھے شک ہے کہ میرے ساتھی میرے پیچھے کسی جنس مخالف کے ساتھ جسمانی تعلقات رکھتا/ رکھتی ہے۔	.72			.47**
5. میں پریشان ہوں کہ کوئی جنسی مخالف میرے ساتھی کو لہانے یا جسمانی تعلقات رکھتا/ رکھتی ہے۔	.69	.30		.38**
6. میں سوچتا / سوچتی ہوں کہ کوئی جنس مخالف رومانی طریقے سے میرے ساتھی میں دلچسپی لیتا / لیتی ہے۔	.76			.47**
7. میرا خیال ہے کہ میرا ساتھی / میری ساتھی جنس مخالف کے ساتھ خفیہ طور پر جذباتی وابستگی بڑھا رہا/ رہی ہے۔	.78	.39		.36**
8. مجھے شک ہے کہ میرا ساتھی/ میری ساتھی جنس مخالف کے لیے دیوانہ / دیوانی ہے۔	.51			.42**
9. میں اپنے ساتھی کے دراز، بیگ اور جیبیں چیک کرتا/ کرتی ہوں۔		.69		.36**
10. میں اچانک اپنے ساتھی کو کال کرتا/ کرتی ہوں صرف یہ دیکھنے کے لیے کہ وہ وہاں موجود ہے (جہاں اسے ہونا ہے)۔		.66		.13
11. میں اپنے ساتھی سے سابقہ اور موجودہ محبت کے بارے میں پوچھتی / پوچھتا ہوں۔		.31	.47	.28**
12. اگر میرا/ میری ساتھی جنس مخالف میں دلچسپی لے تو میں اس کے بارے میں نازیبا گفتگو کرتا/ کرتی ہوں،		.46		.22**
13. میں اپنے ساتھی سے اس کے فون کالز کے بارے میں پوچھتی/ پوچھتا ہوں۔		.68		.17*
14. میں اپنے ساتھی سے اس کے ٹھکانوں کے بارے میں پوچھتا/ پوچھتی ہوں۔		.72		.34**
15. جب کبھی میں اپنے ساتھی کو کسی جنس مخالف کے ساتھ بات کرتے دیکھتی/ دیکھتا ہوں تو میں شامل گفتگو ہو جاتا / جاتی ہوں۔		.74		.31**
16. میں اچانک اپنے ساتھی ملنے چلے جاتی/ چلے جاتا ہوں صرف یہ دیکھنے کے لیے کہ وہ کس کے ساتھ ہے۔		.64		.19**
17. میرا/ میری ساتھی کسی جنس مخالف کے خوبصورت نظرانے پر اس کی تعریف کرتا/ کرتی ہے۔	.58	.31		.25**
18. میرا/ میری ساتھی جنس مخالف سے دلچسپی اور پر جوش طریقے سے بات کرتا/ کرتی ہے۔	.74			.42**
19. میرا/ میری ساتھی جنس مخالف کے ساتھ بہت زیادہ دوستانہ طریقے سے مسکراتا/ مسکراتی ہے۔	.78			.47**
20. جنس مخالف ہر وقت میرے ساتھی کے قریب ہونے کی کوشش میں رہتے ہیں۔	.37	.50		.38**
21. میرا/ میری ساتھی جنس مخالف کے ساتھ جھوٹی محبت کر رہا/ کر رہی ہے۔	.44	.53		.27**
22. کوئی جنس مخالف میرے ساتھی کے ساتھ ملاقات کر رہا/ رہی ہے۔	.42	.62		.46**
23. میرا/ میری ساتھی جنس مخالف کو گلے لگاتا اور چومتا/ چومتی ہے۔	.46	.61		.55**
24. میرا/ ساتھی (سکول یا دفتر میں) جنس مخالف کے بہت زیادہ قریب ہو کر کام کرتا/ کرتی ہے۔		.69		.65**
Total	9.95	2.04	1.40	
% of Variance	41.47	8.56	5.84	
Cumulative %	41.57	49.98	55.86	

The results of exploratory factor analysis show that it retained the original factor structure of the scale with three subscales (cognitive, emotional, and behavioral jealousy). The factor loading of item number 10 is satisfactory but has a non-significant relationship with the item-total correlation.

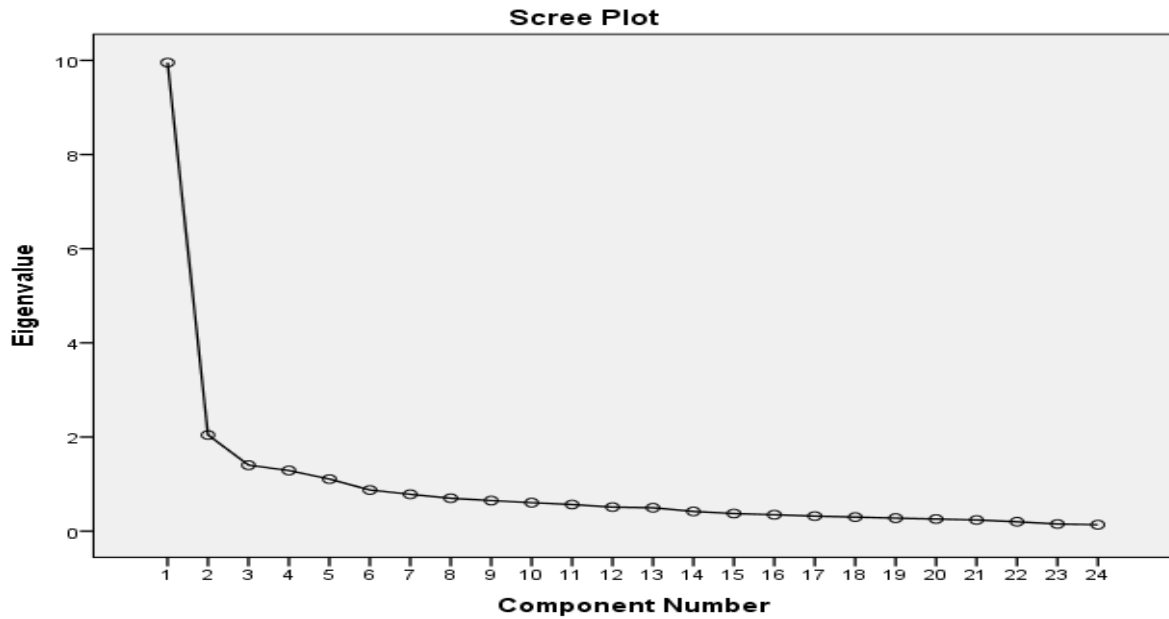


Figure 1: Scree plot shows the factor structure of the Urdu Multi-dimensional Jealousy Scale

Inter-correlations between Urdu Multi-dimensional Jealousy Scale and its Subscales

Inter-correlations between Urdu Multi-dimensional Jealousy Scale and its three subscales were conducted on one hundred and thirty participants (used for the EFA). Results of Person Product Moment Correlations showed that the Urdu version of the Multi-dimensional Jealousy Scale has a highly significant positive relationship with its following three subscales, cognitive ($r = .98^{***}, p < .000$), behavioral ($r = .85^{***}, p < .000$), and emotional jealousy ($r = .88^{***}, p < .000$). Cognitive jealousy has a significant positive relationship with behavioral ($r = .56^{***}, p < .001$), and emotional jealousy ($r = .78^{***}, p < .001$). Thus behavioral jealousy has a significant positive relationship with emotional jealousy ($r = .63^{***}, p < .001$).

Sample of Confirmatory Factor Analysis

The Confirmatory Factor Analysis (CFA) sample comprised 250 married individuals selected through purposive sampling. Their age ranges varied from 25-50 years ($M = 29.14, SD = 08.12$) with equal distribution of gender, and 170 of them experienced romantic love. Their education level varied from 12th grade to graduation; most participants worked and lived in a joint family system. They all have children and have a minimum of 5 years of marriage duration.

Table 4 Confirmatory Factor Analysis, Fit Indices for Multi-dimensional Jealousy Scale for Married Individuals ($N = 250$).

Model	χ^2	df	χ^2/df	GFI	CFI	NNFI	RMSEA	SRMR
Initial Model	740.15	249	2.97	.81	.84	.83	.07	.06
Model Fit	705.46	248	2.84	.92	.91	.90	.08	.06
$\Delta \chi^2$	34.69*							

Note. GFI= Goodness of the fit index, CFI=comparative fit index, NNFI = non-normed fit index; RMSEA=root mean square error of approximation, SRMR=Standardized root means square, $\Delta \chi^2$ = chi-square change.

Table four illustrates the absolute and relative model fit indices of the Multi-dimensional Jealousy Scale. The initial model's absolute fit index, which reads as $\chi^2 (249) = 740.15, p < .05$. The chi-square statistic, which is used to gauge the degree of model fit, is assumed to be significantly influenced by the sample size and the number of estimated parameters in a typical model (Henseler, 2018). The Goodness of Fit Index (GFI), Cumulative Fit Index (CFI), Non-normative Fit Index (NFI), Root Mean Square Approximation Error (RMSEA), and Standardized Root Mean Square were among the relative fit indices that academics advocated considering in this viewpoint (SRMR).



The existing estimations of the relative fit for the initial model did not satisfy the predetermined criterion for model fit (Bentler & Yuan, 1999). In order to obtain the model fit, the model modification process was initiated. Therefore, the covariance between the error terms was drawn from the indicators of the measurement model. The absolute and relative fit indices were again evaluated; the RMSEA and SRMR were .08 and .06, respectively, while the GFI, CFI, and NNFI values were .92, .91, and .90, respectively. The model fit indices and criteria thus qualified as having excellent model fit.


Figure 2 Confirmatory Factor Analysis of Multi-dimensional Jealousy Scale for Married Individuals.



The component structure of the multi-dimensional jealousy scale was psychometrically examined after meeting the criteria for model fit, reliability, and convergent validity. Henseler et al. (2016) recommended that the index of average variance extracted (AVE) should be at least .50 to assert that the measurement has good convergence. At the same time, .40 is also permissible for newly validated measures. Moreover, composite reliability and Cronbach's alpha reliability coefficients should be .70 or more significant for the constancy of the three structures. The average of the square root of the factor loading for the relevant factor makes up the average variance extracted (AVE). The percentage of the variance for cognitive, emotional, and behavior were 55, 40, and 45, respectively. However, the composite and Cronbach's alpha reliability coefficients varied from .91 to .84.

Table 5 Psychometric Evaluation of Multi-dimensional Jealousy Scale for Married Individuals (N = 250).

Items	α	CR	AVE	MSV	Λ
Cognitive	.90	.91	.55	.73	
MJSitemC1					.78
MJSitemC2					.67
MJSitemC3					.79



MJSitemC4							.71
MJSitemC5							.77
MJSitemC6							.73
MJSitemC7							.84
MJSitemC8							.63
Behavior	.83	.84	.40	.47			
MJSitemB9							.61
MJSitemB10							.64
MJSitemB11							.56
MJSitemB12							.41
MJSitemB13							.71
MJSitemB14							.74
MJSitemB15							.69
MJSitemB16							.66
Emotion	.86	0.87	.45	.73			
MJSitemE17							.52
MJSitemE18							.66
MJSitemE19							.69
MJSitemE20							.65
MJSitemE21							.76
MJSitemE22							.76
MJSitemE23							.76
MJSitemE24							.67

Note. CR = Composite reliability, AVE = Average variance extracted, MSV = Maximum shared variance, λ (lambda) = standardized factor loading

Discriminant validity (Voorhees et al., 2016) was measured through the square root of average variance derived from each factor's AVE ratio. It was compared with subsequent correlations of the components in the first approach (Fornell & Larcker, 1981). Table 5 shows that the correlation is more significant than the square root of AVE. Each component's AVE and the maximum shared variance (MSV) were compared in the second approach. The percentage of the same component's explained variance should be higher than any other factor, and the maximum shared variance should be more minor than the average variances extracted (Cho et al., 2020).

Table 6 Fornell-Larcker Criterion for the Multi-dimensional Jealousy Scale for Married Individuals (N = 250).

Variables	k	M	SD	MaxR(H)	Cognitive	Emotion	Behavior
Cognitive	8	11.94	8.13	0.915	0.74		
Emotion	8	15.63	10.21	0.851	0.616	0.63	
Behavior	8	15.05	10.10	0.879	0.855	0.687	0.67

Note. k = number of items, M = mean, SD = standard deviation

The discriminant validity results were insufficient. Researchers suggested a second-order evaluation of the components to address discriminant difficulties (Happell et al., 2015). Second-order confirmatory factor analysis was performed on all multi-dimensional jealousy scale items (see Figure 3).



Figure 3 Second Order Confirmatory Factor Analysis of Multi-dimensional Jealousy Scale.

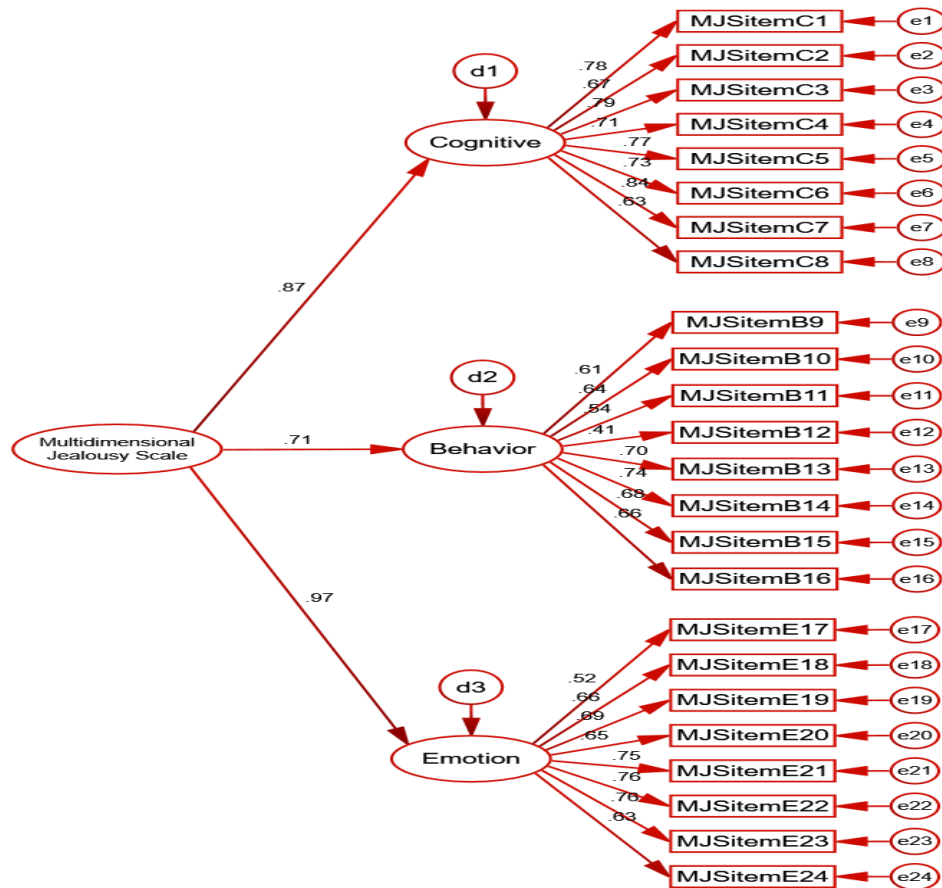


Table 7 Second-order CFA for Multi-dimensional Jealousy Scale.

Factors	CR	AVE	λ
Multi-dimensional Jealousy Scale	.89	.73	
Cognitive			.87
Behavior			.71
Emotion			.97

Note. CR = composite reliability, AVE = Average variance extracted, λ (lambda) = standardized factor loading ≥ .7,

Table 7 presents estimates of the components based on good reliability and convergent validity obtained from the psychometric evaluation of the second-order constructs. The multi-dimensional jealousy scale had a 73 percent variance that all aspects, including cognition, behavior, and emotion, could fully explain. For married people, the dependability coefficient was .89 at the same time.

Discussion

The current study translated a multi-dimensional jealousy scale from English into Urdu, including cross-language validation and psychometric properties determination. Semantic analysis, Brislin (1976) guidelines for forward-back translation, the correlation for the cross-language validation and inter-item total correlation, reliability analysis for the Cronbach alpha reliability coefficients, exploratory factor analysis, and confirmatory factor analysis were used. Results retained the original factor structure of the multi-dimensional jealousy scale. They aligned with the previous research as the same results were reported with different populations of Italian (Tani & Ponti, 2016) and Australian (Elphinston et al., 2011) while translating this scale into different languages.

Maintaining scale development quality needs diligent translation. Content equivalence is improved by bilingual translators and back translation (Thato et al., 2005). It minimizes translation equivalence



issues in etymological, idiomatic, grammatical-syntactical, empirical, and conceptual areas (Sechrest & Fay, 1972). Translating and cross-validating scales that assess universal cultural phenomena saved time, energy, and resources. A reliable method that measures the universal concept with minimal variation can aid them. Measure the construct by translating the scale into an indigenous language. Simple translation does not imply meaning until forward-back translation procedures, committee approach, test tryout, pilot study, cross-language validation, and determining the factor structure of the translated measure were applied to minimize internal reliability and validity risks, which was successfully done in the current study (Sechrest et al., 1972).

In the current study, the factor structure of the translated version of MJS was also confirmed through CFA, and discriminant validity results displayed insufficient evidence. Therefore, the second-order evaluation of the constructs has resolved this issue (Gaskin, 2015; Hair et al., 2010). By keeping all the information intact and cultural sensitivity, the Urdu-translated version of the Multi-dimensional Jealousy scale will be helpful to cater to the phenomena of romantic jealousy in married individuals to secure their long-term commitment by taking timely precautions to deal with the problem of romantic jealousy. However, this scale may provide more interesting results if applied to the polygamous relationship in the cultural context of Pakistan.

CONCLUSION

This study translated and validated the Multi-dimensional Jealousy scale from English to Urdu. Semantics analysis and forward-back translation were applied. Cross-language validation, Cronbach's alpha reliability coefficient, test-retest reliability, and inter-item total correlation show good internal reliability and consistency. Exploratory and Confirmatory Factor Analysis retained the original factor structure of the multi-dimensional jealousy scale, which measured the measured cognitive, behavioral, and affective elements of jealousy in married individuals of Pakistanis.

Limitations and Suggestions of the Study


Jealousy in married people is universal yet has indigenous cultural aspects. A culturally customized multi-dimensional jealousy scale is advocated to address culturally sensitive difficulties and better understand cognitive, affective, and behavioral jealousy. Pakistan has collectivistic traditions, and Islamic values are predominated in which intimate relations without marriages are discouraged; hence multi-dimensional jealousy scale has developed under the influence of Western cultures; therefore, indigenous perspectives required the dire need to develop the new scales. Hence, the Urdu version of the Multi-dimensional Jealousy scale retained the original factor structure. Therefore, using it with multiple populations with different relational conditions (pre-marital intimate relations, engaged individuals, married couples, and those who experienced polygamous relationships) is better.

The Implication of the Study

An Urdu-translated version of the multi-dimensional jealousy scale will be helpful for committed, engaged, and married individuals to understand the phenomena of romantic jealousy. This construct measured the multiple dimensions of romantic jealousy, including cognitive, behavioral, and emotional perspectives, which may negatively affect intimate relationships resulting in dissatisfaction and mental health problems. The couple, family, and mental health therapists can help intimate couples identify the problem affecting their long-term commitment. Social professionals and community health workers can help married couples with envy issues. It will help researchers who want to study the sensitive issue of romantic jealousy in the cultural context of Pakistan.

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