

**Adaptation, Translation and Psychometric Properties of Gaslight Questionnaire in Urdu Language**Amna Hassan<sup>1</sup>, Nazia Iqbal<sup>2</sup>, Bushra Hassan<sup>2</sup>**Abstract**

Translation and adaptation of an instrument measuring a certain construct in a specific culture has a scope in the field of psychological testing. To measure a psychological construct, a standardized test is used. Native language inventories produce effective and valid results as compared to foreign inventories. Gaslighting Questionnaire for measuring emotional abuse among married individuals was translated into Urdu language for use with the Pakistani population. The study was comprised of two phases, one is cross language validation and second is establishing psychometric properties of translated scale. For cross language validation, sample of  $n=40$ ; males= 5, females= 35, bilingual married males and females through purposive sampling technique, was drawn from different cities of Pakistan. A sample of  $n= 316$  of married males,  $n= 104$ ; and females,  $n= 212$ , age ranged from 18 to 64 years, was drawn through snowball sampling technique for establishing the psychometric properties. Correlation between Urdu to Urdu, English to English, Urdu to English and English to Urdu indicated that the cross-language validation was highly significant ( $p<.01$ ). Confirmatory Factor Analysis (CFI = .92;  $\chi^2 = 303.50$ ) indicated the good and acceptable model fit indices. The translated version is exactly alike the original version in conceptual equivalence. It is a reliable and valid instrument to measure the gaslighting phenomenon in married population of Pakistan as Urdu is native language and more easily comprehensible. Most of the Pakistani population is not very literate and use of difficult words from English language would influence the measurement of the phenomenon.

**Keywords:** Gaslighting, Emotional Abuse, Invisible Abuse, Cross Language Validation, Confirmatory Factor Analysis, Urdu Language Scale, Pakistani Married Population

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**Introduction**

Adaptation, translation and cross language  
validation is vital and fundamental step in  
investigating any novel psychological or

social phenomenon cross culturally. As a  
standardized tool is required to maintain  
consistency and validity of the construct in  
order to contribute effectively not only in the  
literature but also in measuring the  
phenomenon in some particular population.  
Inventories used in the native language of the  
target population provide more honest and  
authentic results as compared to those used in  
the foreign language (Bibi et al., 2020).  
Validation process and determining  
psychometric properties are crucial steps for  
translational studies as the tool is indigenized  
and supported by psychometric properties  
(Khan & Batool, 2013). In Pakistan, English  
is considered as foreign language whereas  
Urdu is a native language which can be

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understood and spoken by almost everyone irrespective of literacy rate. Population of Pakistan feels comfortable to response against the questions asked in Urdu language. Current study aimed to obtain standardized Urdu version of available English instrument of Gaslighting that would be conceptually equivalent for the Pakistani culture and comprehensible for its population. The study was conducted by following Brislin (1986) method for forward and backward translation to obtain a cross-cultural and conceptual equivalent version of the instrument. This method is more reliable and highly recommended for obtaining a standardized translated version of instruments, converging on the theoretical equivalence rather than the literal equivalence (Voracek et al., 2008).

In the present study, data is collected from married population of Pakistan. Though married males are literate enough but most of the married females are illiterate. As the data was collected from not only main cities but from some small cities as well. The ratio of literacy is very low in small cities, only 56 % in Pakistan (Rahman et al., 2015). Adaptation is also required for the variation in Pakistani culture, being collectivistic in nature and Western cultures, being individualistic in nature (Hofstede & Hofstede, 2001). Different terms such as boyfriends/girlfriends, dating a partner are not appropriate according to Pakistani culture.

Gaslighting is a specific kind of emotional and mental exploitation, used to destabilize an envisioned target person's mental stability. It is a covert, fluctuating bunch of manipulations (Welch, 2008). Dealing or interaction between two individuals i.e. gaslighter and gaslightee is known as gaslight effect. Gaslighter is a person who wishes to hold power and control, used to have sense of being always right and appropriate, however, gaslightee is the victim. Gaslightee permits gaslighter to outline her/his sense of perception and reality, as he/she is more

dependent on gaslighter in everyday life decisions, he/she used to seek approval from gaslighter in every task. In short, gaslightee idealizes the gaslighter (Stern, 2007). As a result, gaslightee used to experience confusion, increasing self-doubt, and having the desire to evacuate (Simon, 2010).

Patriarchal society and sociocultural guidelines promote multiple elements of psychological abuse that they are invisible, among which gaslighting stands out, initially defined as the intentional pursuit of making a person appear insane (Barton & Whitehead, 1969) and obtaining a benefit from it. Gaslighting frequently arouses distressing sentiments, little self-esteem, and deficient cognitive, intellectual and reasoning control by instigating gaslightee to doubt her/his own skills and abilities for perceiving, reality analysis and thinking. It is also evident from the researches that as gaslighting aims to get power and supremacy through different covert tactics, thus leads to low self-esteem, self-loathing, uncertainty, depression, anxiety and multiple psychotic spectrum disorders (Dorpat, 1996; Stern, 2007). These elements hide behind the concept of love, empathy, caring, some power or authority, sexism and the very effects of gaslighting enhance its posthumous appearance, as it results in guilt, disorientation, panic, anger, grief, damage to self-esteem, to autonomy, emotional dependence, doubt, psychic disorganization, alcohol or medication consumption not prescribed and generates psychosomatic and psychological problems, such as depression, including suicide or loss of self-esteem (Jimenez & Varela, 2017).

Manipulations such as frequent lies, suspecting, disputing and delegitimizing refer to the gaslighting. It is an organized and planned attack on an individual's perception (Carlin, 2019).

It has been demonstrated that salutogenic characteristics such as good mental health, resiliency, social support, and life satisfaction

have a definite influence on the onset and course of mental diseases (Garcia-Moya & Morgan, 2016, Wood & Tarrier, 2010). According to the USA based National Coalition against Domestic Violence, psychological abuse results in PTSD, diminished self esteem, low self worth, feelings of anxiety and depression (Carlin, 2019). Although narcissism is also associated with gaslighting but it is not limited to narcissism only (Simon, 2010). To find the evidence of gaslighting is difficult as it is covert in nature (Carlin, 2019).

Gaslighting is fundamentally a social phenomenon. Social inequalities, in the form of gender and sexuality, exhibit in power laden intimate relationship are the root cause of gaslighting. Gaslighting is devastating when activated by offenders in terms of structural inequalities, gender-based stereotypes and institutional vulnerabilities (Sweet, 2019).

### **Objectives**

The main objectives of the study were:

1. To adapt the Gaslight questionnaire culturally and translate it into Urdu language.
2. To determine the cross language validity of the Urdu translated version.
3. To establish the psychometric properties of the translated instrument and confirm the uni-factor structure of the Urdu translated scale.

### **Method**

#### **Participants**

Two sets of sample were collected from the population.

#### **Sample I**

The sample for cross language validation was consisted of 40 married individuals (male= 05, female = 35), age ranged from 25 to 46 years ( $M=34.2$ ,  $SD=5.66$ ), bilinguals, from different cities of Pakistan through purposive sampling technique. After signing the consent form, Gaslighting Questionnaire was completed by each participant.

### **Sample II**

A confirmatory factor analysis (CFA) was carried out to establish the model fit indices as well as to identify the factor loadings of each item of translated version of the scale. A sample of 316 married individuals, including males=104 and females=212, age ranging from 18 to 64 years ( $M= 32.47$ ,  $SD=8.74$ ) was drawn through purposive snowball sampling technique.

### **Instruments**

#### **The Gaslight Questionnaire (GQ)**

This questionnaire was developed by Stern in 2007. It is 20 items, likert-type self –report measure of gaslighting phenomenon among individuals within the context of worst intimate relationships. The estimate of internal consistency of the Gaslight Questionnaire tends to be higher with  $\alpha = 0.87$ . Each item is rated on a 9-point scale where 0= Never, 1= Once, 2= Only a couple of times, 3= Every few months, 4= About every other month, 5= About once a month, 6= About twice a month, 7= About every week, 8= A few times a week, 9= Almost daily. The maximum score on this scale is 180 and minimum score is 0. Higher score indicates that an individual is more affected by the gaslighting. Some of the example items are given below:

Item no 1: You constantly second-guessed yourself.

Item no 12: You had trouble making simple decisions.

Item no 19: Your kids began trying to protect you from your partner.

### **Procedure**

#### **Phase I**

#### **Adaptation and Translation of Questionnaire into Urdu Language**

Permission for translation was sought from the author and the scale was adapted and translated by using the method given by Brislin (1986).

## Step I

### Adaptation and Forward Translation

Six bilingual experts with proficient Urdu and English languages, four of them post graduated in relevant languages and rest of them having post graduation in Psychology, were approached.

### Procedure

All of the bilingual experts were given the scale for translation, independently. A standard guideline was provided to each of them for translation. All of them adapted and translated the items independently. These translators fit in the criteria as described by Brislin (1986).

For adaptation and translation of the scale into Urdu language, certain guideline was considered. It was considered to maximize the content and conceptual similarity between the original and Urdu language versions. It was focused to maintain the simple language items in order to make the scale more readily understandable to the target population without making the confusion. It was also kept in view to adapt and translate the scale items according to Pakistani culture, without eliminating any item.

If any inappropriate word, that they think is not relevant to our culture, is used in the scale, then modified it according to Pakistani cultural demand. Bilingual experts were instructed to identify such items, words etc. and to suggest the best conceptual equivalent alternatives. Experts were instructed to not use any proverb, jargon, slang words, technical terms and idioms that would be difficult for common people to understand. They were also instructed to avoid using any gender discriminated words, slogans and any such terms that can make targeted population offensive.

After translation, the experts did not give any other alteration in the translated version and all the items were kept same in number as in the original scale.

## Step II

### Expert Panel Approach

The researcher gathered all translations on one page and wrote all six translations of a particular item (that was translated) below it. A bilingual expert panel consisted of two lecturers of Psychology, one PhD scholar in Psychology, the supervisor of the study and the researcher herself was set for the committee approach. The Urdu translation of every item was examined and evaluated by the committee members by keeping in view the goal of identifying and resolving the inadequate or inappropriate translation of the items. The committee members critically reviewed each translation of every item and then selected the translation conveying the best meaning by mutual consensus. Translation was also analyzed in terms of grammar, wording and context.

### Backward Translation

In order to ensure the quality of the translated version and to keep a check on primary translation, the scale was back translated into English language. The purpose of this step was to ensure the equivalence between the two versions and to get higher reliability. Same procedure was applied as it was used in the step I, emphasizing the cultural and conceptual meanings of the items instead of literal equivalence. Items were reconsidered and discussed in the same committee in case of any discrepancy.

### Bilingual Experts

Six bilingual translators were selected and requested to translate the scale into English language while keeping in view the conceptual equivalency of the items. These bilingual experts were different than the experts selected in the step I, to avoid the familiarity and practice effect. Among the selected experts, one Assistant Professor and three Lecturers of English language and two Lecturers from Psychology department had contributed.

## Step IV

### Expert Panel Approach

The same committee members evaluated the back translation and observed matching of large content/ items on the basis of theoretical and linguistic equivalence with the original tools. The translated items were arranged in the sequence and order as described in the original scale.

## Phase II

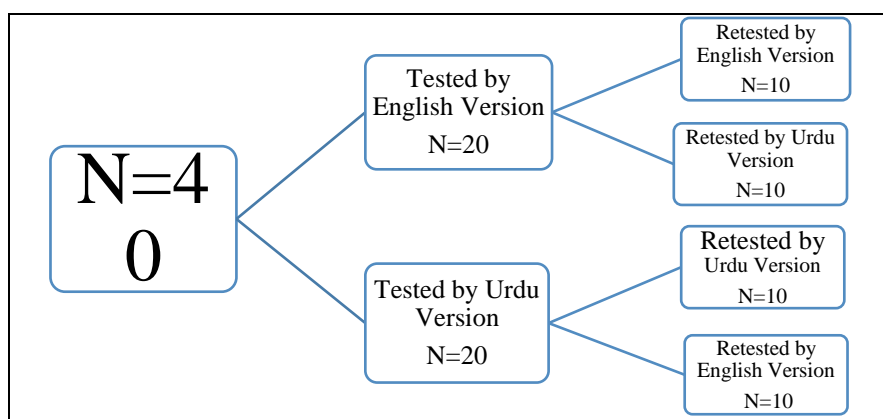
### Cross Language Validation

Validation of the translated Urdu version and original English version of the Gaslight Questionnaire was carried out to assess the quality, empirical and conceptual equivalence. For this purpose, a comparison of both versions was carried out effectively by following certain steps.

### Procedure

The scale was administered to the married sample into two equal groups of 20 participants through cross sectional research design. The group A ( $n=20$ ) was administered with translated Urdu version first while the group B ( $n=20$ ) was

administered with the original English version first. After the interval of fifteen days, the conditions were reversed i.e. the group A (who was administered Urdu version first), now given the English version to determine the Urdu test - English retest reliability and the group B (who was administered the English version first), now given the translated Urdu version to determine the English test – Urdu retest reliability. The whole sample was again divided randomly into four equal groups i.e.  $n=10$ . In order to determine the test-retest reliability of the translated version, half of the sample ( $n=20$ ) was administered with the translated Urdu version again with the interval of two weeks, however, the remaining half of the sample ( $n=20$ ) was administered with the original English version and the responses were recorded. The cross language validation is an effective technique to identify the discrepancy or equivalence between English and translated Urdu versions.



**Figure 1**

Diagrammatic representation of sample distribution into two groups for testing first trial and into four groups for retesting after fifteen days interval.

## Phase III

### Establishing Psychometric Properties and Confirmatory Factor Analysis of Translated Scale

Psychometric properties of the translated version were determined through SPSS-21. The scale was uni-factor as confirmed through confirmatory factor analysis (CFA) by using AMOS-20.0.

**Results**

Correlation coefficient was determined between the scores of two trials to ensure the

test retest reliability and cross language validity.

**Table 1**

*Test-Retest Reliabilities of Urdu and English version of the Gaslight Questionnaire (GQ) (N=40)*

Scale	U-E (n=10)	E-U (n=10)	U-U (n=10)	E-E (n=10)
GQ	.96**	.98**	.99**	.96**

Note. U-E= Urdu – English, E-U= English – Urdu, U-U=Urdu – Urdu, E-E= English – English, GQ= Gaslight Questionnaire

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

Table 1 indicates significant positive correlation for four groups of sample, i.e. Urdu – English, English – Urdu, Urdu – Urdu and English – English. The correlation coefficient for total score of the Gaslight

questionnaire ranged from 0.96 to 0.99 that represents the original English and translated Urdu version of the Gaslight questionnaire which has significant high conceptual equivalence and cross language validity.

**Table 2**

*Alpha Coefficients of the Translated versions of the Gaslight Questionnaire (N=40)*

Scale	K	M(SD)	$\alpha$	Range		Skew
				Potential	Actual	
GL (Urdu)	20	47.7 (36.31)	.93	0-180	2-163	1.22

Note. k= No. of items, M(SD)= Mean (Standard Deviation),  $\alpha$ = Chronbach's Alpha

Table 2 indicates that all the translated scales have acceptable range of skewness and reliability. Cronbach's alpha reliability

coefficient value suggests that the translated scale is reliable i.e. 0.93.

**Table 3**

*Model fit Indices for the Gaslight Questionnaire (N=316)*

Fit Indices	$\chi^2$	df	CMIN/df	RMSEA	IFI	NFI	CFI	TLI
Model 1	379.43	165	2.30	.06	.91	.85	.91	.89
Model 2	303.50	130	2.33	.06	.92	.87	.92	.91

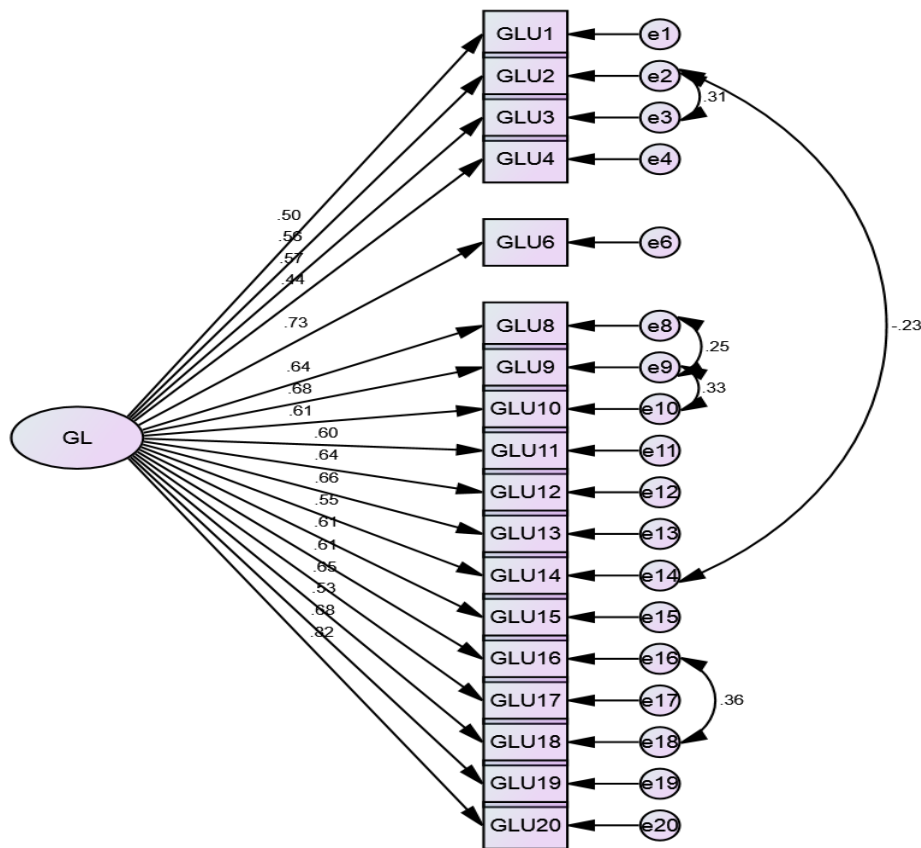
Note. \* $p = \text{RMSEA} < .01$ , \* $p = \text{CMIN} < 3.0$ ; Model 1= Gaslight questionnaire before deleting items; Model 2= Gaslight questionnaire after deleting item no 5 & 7

Table 3 of confirmatory factor analysis shows the standardized model fit indices (maximum likelihood) of Urdu translated version of the scale. The Gaslight Questionnaire was administered on the sample of 316 married individuals. The

results indicate that the model is reasonably fit for the following parameters of  $\chi^2/df$ , RMSEA, normed fit index, comparative fit index and Tucker-Lewis index. Overall, results describe that the value of Chi-square is significant as the degree of freedom is

greater. The values obtained by dividing the  $\chi^2/df$ , are acceptable for the parameters of

model fit indices i.e. The Gaslight Questionnaire 2.33 (Hu et al., 1992).



**Figure 2**

*Uni-factor Solution with 18-items (after deleting item no. 5 and 7) of the Translated Gaslight Questionnaire*

**Table 4**

*Standardized Factor Loadings of CFA Models for the Gaslight Questionnaire (N=316)*

Item Sr. No	The Gaslight Questionnaire	Item Sr. No.	The Gaslight Questionnaire	Item Sr. No	The Gaslight Questionnaire
Item No 1	.50	Item No 8	.64	Item No 15	.61
Item No 2	.55	Item No 9	.68	Item No 16	.61
Item No 3	.57	Item No 10	.61	Item No 17	.65
Item No 4	.44	Item No 11	.60	Item No 18	.53
Item No 5	<b>.26</b>	Item No 12	.64	Item No 19	.68
Item No 6	.73	Item No 13	.66	Item No 20	.82
Item No 7	<b>.18</b>	Item No 14	.55	K	20

*Note. K= Number of items of the Scale, Bold number is showing the deleted items from Model.*

Table 4 shows the standardized factor loadings of the translated scale and the findings are supported by the reliability analysis. It is indicated that all the factors are loaded satisfactorily and consistent internally as well as with the construct. Two items i.e.

item no 5 & 7 of the Gaslight Questionnaire also have low loadings (.26 & .18) were removed (Table 4). After removing the items, models for the translated scale was fit accurately.

**Table 5**

*Deleted Items*

Item No.	Item Statements
Item no 5	آپ اکثر یہ سوچتے تھے کہ کیا واقعی آپ ایک اچھی بیوی / شوہر ، ملازم، دوست، یا بیٹی / بیٹا ہیں۔
Item no 7	جب کبھی بھی آپ کپڑے ، جوتے، فر نیچر، یا ذاتی ضروریات کی اشیا ء خریدنے جاتے ہیں تو بجا ے اپنی پسند کے مطابق چیزیں خریدنے کے، آپکے ذہن میں آپکے شوہر / بیوی کی پسند و نا پسند کا خیال رہتا تھا ۔

**Table 6**

*Discriminant Validity of the Translated Scales of Gaslight Questionnaire (N=316)*

Constructs	GL	Conscientiousness	Agreeableness
GL	-	-.27**	-.22**
Conscientiousness		-	.71**
Agreeableness			-

Note. GL= Gaslight Questionnaire, \*\* $p < .01$

Table 6 indicates the discriminant validity of the translated version of the gaslight questionnaire. For assessing the discriminant validity of the translated scale, two sub scales i.e. conscientiousness and agreeableness of Urdu version of Big Five Inventory (Sadia, 2020) were used. Individuals having high score on conscientiousness sub scale would tend to be organized, have good impulse control and show goal directed behavior. Individuals with high scores on agreeableness sub scale would show pro

social behaviors i.e. altruism and kindness. These traits are contradictory to gaslighting tendency. So, there must be significant negative correlation between the conscientiousness and gaslighting as well as between agreeableness and gaslighting, indicating satisfactorily discriminant validity of the gaslight questionnaire (Table 6). However, agreeableness and conscientiousness sub scales are positively correlated with each other.

## Discussion

Translation of The Gaslight Questionnaire (Stern, 2007) in Urdu language was conducted with the purpose of making the instrument understandable for the target population. The instrument was highly reliable and valid measure of the construct for

English population. We need to administer this instrument on Pakistani population. Most of the target population understand Urdu language more easily and feel comfortable in responding the items in Urdu language, so there was a dire need to develop this instrument in Urdu language.



The instrument was being translated by following all the steps of translation, described by Brislin (1986). Scale translation involved the forward translation by bilingual experts and committee approach, backward translation by different bilingual experts (not those who translated the forward part) and the committee approach by same experts. Parallel versions of translation involved several bilingual experts who translated the same questionnaire independently. A consensus meeting was held as the final step of the study, to select the best reconciled version of the translated scale in order to obtain the purpose of the current study.

The important step of translation phase is to determine the cross language validity of the translated scale by analyzing a comparison of translated Urdu version with the original English language version of the scale. In order to validate the scale, both versions of the scale were administered to a small sample of 40 married individuals. Two groups of Pakistani married adults were administered twice with Urdu-English and Urdu-Urdu sequence and then these two groups were further divided into four subgroups of 10 married individuals each. Test-retest reliabilities and correlation of these groups; Urdu-English, Urdu-Urdu, English-English and English-Urdu, indicate significant positive relationship between the two versions of scale. Urdu-Urdu correlation is highly positive and most significant in the case of the Gaslight questionnaire that shows the Urdu version is more comprehensible to Pakistani population (Table 1).

Initial model fit indices of Gaslight Questionnaire were fit and the fitness indices were highly significant as indicated by the values of CFI, NFI, RMSEA and  $\chi^2/df$  (Table 3). Item no 5 & 7 of Gaslight Questionnaire was having low factor loadings in the model so these were removed from the model (Figure 2). After removing the items having low factor loadings, the

model was remained fit as indicated by the CFI and RMSEA values (Table 3).

Items having low factor loadings were removed from the translated version of the scale (Table 4). Item statements are mentioned in the Table 5. The reason of poor factor loadings might be the cultural irrelevancy of the items and low comprehension level by the target population. Poor factor loading of items could be due to the difference in Eastern and Western cultures. As in Eastern cultures, carrying the thought of giving preference to the spouse's choices is not considered odd rather it is common. Due to the need of conformity and emphasis on family cohesion, most of the spouses constantly worried about their attitude and behavior that is whether their behavior is appropriate or not (Skillman, 2000). It is general practice in Eastern cultures that is why, it is not considered in the perspective of gaslighting. Most of the spouses usually do prefer to buy products of daily use with the intimate partner's choice. This might be a valid reason of poor factor loading, as according to majority of the Eastern population, it does not come under the gaslighting phenomenon. People in collectivistic cultures, tend to focus on group goals (Desai, 2007) and focus on family cohesion and conformity (Skillman, 2000).

Discriminant validity of the translated version of the Gaslight Questionnaire with the two factors i.e. Agreeableness and Conscientiousness of Big Five Inventory was determined. Significant negative correlation of the gaslight questionnaire with Conscientiousness and Agreeableness indicated high discriminant validity of the construct. Investment Model scale has significant negative correlation with gaslight questionnaire and has no correlation with Conscientiousness and Agreeableness scales, indicates the significant discriminant validity of the translated versions (Table 6).

### Implications

The translated version of the Gaslight questionnaire can be used across Pakistani population as Urdu is native language of Pakistan. Most of the population of Pakistan easily understand and comprehend the question statements in Urdu language and feel comfortable in answering these statements. This translated version can be used for not only survey purposes but also for many other research designs. This scale is particularly designed for married population including men and women.

### Conclusion

It is concluded that both versions have equivalence in conceptual meaning of the construct. It also shows that the Urdu vocabulary words used in the scale are simple, easy to understand, words combined appropriately in a meaningful way, conveying the concept and the items are clearly written. Cross language validity and Confirmatory Factor Analysis reflect that Urdu version of Gaslight questionnaire could appear to be valid, reliable and culture fair measuring instrument for the research purpose on the target population in Pakistan.

### Limitations

The sample obtained for the confirmatory factor analyses can be increased up to some sufficient sample size, to reduce the chances of item deletion. It may happen that after enhancing the sample size, value of factor loadings can be increased.

### Contribution of Authors

Amna Hassan: Conceptualization, Investigation, Data Curation, Formal Analysis, Writing - Original draft

Nazia Iqbal: Conceptualization, Methodology, Writing- Reviewing & Editing

Bushra Hassan: Conceptualization, Methodology, Writing - Reviewing & Editing

### Conflict of Interest

There is no conflict of interest declared by authors. However, the current study is a partial requirement of the PhD degree program.

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