

INITIAL PSYCHOMETRIC PROPERTIES OF GENERAL FUNCTIONING OF FAMILY SCALE (URDU VERSION)

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ABSTRACT

The Family Functioning Scale has been widely utilized in the literature to determine whether a family is healthy or dysfunctional. The current study aimed to translate the Family Functioning scale into the Urdu language and find out its initial psychometric properties on the Pakistani population. The measure was translated from English to the Urdu language by following standardized procedures. Cross-language validation was assessed by comparing the scores of a bilingual sample, (n=40) of 20 males and 20 females (Mage = 15.9, SD = 1.42). Urdu translated version of GFS was administered on 360 individuals from the general population of Faisalabad with 190 men (52.8%) and 170 (47.2%) women age ranged between 12 to 56 years (Mage = 21.68, SD = 7.12). Convergent validity of the General Functioning Scale was assessed by correlating the scores of GFS and the Confusion, Hubbub, and Order Scale, while Satisfaction with Life Scale, Multidimensional Scale for Perceived Social Support, and the Subjective Happiness Scale were used to check discriminant validity. Cronbach alpha reliability coefficient and Pearson- Product Moment Correlation Coefficient were applied to determine the internal consistency, convergent, and discriminant validity of the translated measure respectively. The results revealed that the Urdu version of GFS has good internal consistency ($\alpha = .80$). GFS was significantly positively correlated with CHAOS while a significant negative correlation was found between family dysfunctioning and family support, life satisfaction, and happiness. Findings reflect that the Urdu version of the GF is a psychometrically sound measure to assess the family functioning in the Pakistani cultural context.

Keywords: Family Dysfunctioning, Urdu, Psychometric Validation, Pakistan

INTRODUCTION

Family is the source of emotional, Influential, and substantial support for its members. It is considered a social component fundamental to the healthy functioning of individuals and society (Hardaway et al., 2012). Families are the most enduring and primary unit to teach individuals about values, beliefs, and behaviors that are supposed to be suitable for any society (Ogwo, 2013). According to Szcześniak and Tulecka (2019) family functions guide individuals to incorporate one's behavior into social life. Walker and Shepherd (2008) defined that family functioning as the ways family members communicate and relate to each other, how they maintain relationships, make decisions, and solve their problems together. Family functioning could be conceptualized as a multidisciplinary conception that guides family members on how to interact with each other and cooperate in achieving mutual goals and outcomes (Botha & Booysen, 2013). Functional families are essential to enhance the optimal level of an individual's capabilities that help to increase the psychological health of any family member. Individuals' mental health and physical health are strongly related to family relationships. Individuals' overall well-being is also affected by family interactions. An adequate level of family care and support is indispensable to an individual's life satisfaction (Cicirelli, 2004).

Quantitative, qualitative, and mixed methods are proposed in the literature to understand the construct of family functioning. The following self-reported quantitative measures, reflecting the specific theoretical perspective, are used to measure family functioning. Family Assessment Device

(Epstein et al., 1983) explains the relationships, configuration, and the association of the family set up. Family Environment Scale (Oliver et al., 1988) describes the socio-ecological and psychological theory of the family system. Family Assessment Measure (Skinner et al., 2000) reflects the marital and family environment model and is used to assess the strength and flexibility of the family. The difference between ideal and actual family functioning is also measured by this measure. Family Adaptability Cohesion Evaluation Scale (Rodick et al., 1986) highlights the interaction between families and their members as well as family dynamics. Family roles, values, norms, communication, affective interaction, and problem-solving are the main features that are raised in all the above-reported scales.

Family Assessment Device (FAD) is one of the commonly used scales. It is a self-rated measure developed on the McMaster model of family functioning (Epstein et al., 1982). In recent few years, it is widely used in many countries other than the United States like America, Italy, Hungary, Netherlands, England, Australia, China, and Japan. From the year 1990 to 2009 for the evaluation of family functioning in a psychiatric setting the FAD was used in thirteen out of twenty international studies (Souza et al., 2011).

The FAD has sixty self-rated items and six sub-scales such as problem-solving, communication, roles, affective responsiveness, affective involvement, and behavior control. These sub-scales measure the ability of the family to solve the issues, exchange of information among family members, family's patterns of behaviors to control its functioning, ability of family members to express family members' ability to exhibit suitable emotions within the family framework, Family member's concerns which they show to each other, as well as family's values for behavior respectively. There is an extra sub-scale named general family functioning which is used to assess the overall family functioning. The GFS indicates overall health and dysfunction within the family. This sub-scale is consisting of supplementary questions that are not included in other sub-scales. The GFS is mostly used independently to evaluate family functioning (Aarons et al., 2007). This practice was promoted by the outcomes of Ridenour et al. (2000) study which concluded that GFS is enough to give an appropriate assessment of family functioning. Variations in theoretical models, diversity of tools, and the disagreement on the definition of the concept of a dysfunctional and healthy family can assess family functioning/dysfunctioning a complex endeavor (Bogenschneider et al., 2012).

REVIEW OF LITERATURE

GFS has been translated into multiple languages and tested with several ethnic groups since its debut in the United States, with relatively strong empirical proof of its utility in various cultures and segments of the population (Juliusdottir & Olafsdottir, 2015; Boterhoven et al., 2015). The psychometric properties of the General Functioning scale as a measure of family functioning in non-clinical, psychiatric, and medical samples of adolescents, youths, and adults have been supported by extensive research (Turliuc et al., 2017; Juliusdottir & Olafsdottir, 2015). The importance of the family is reflected in the work of Thomas et al., (2017) who concluded that individuals who believed that family members cared about them, as well as those who believed that they could rely on family members for aid in the time of major personal crises, reported higher levels of life satisfaction and happiness. According to data from the World Values Survey, People in countries with greater family ties are happier and more satisfied with life (Alesina & Giuliano, 2010). Pichler (2006) examined data from the European Social Survey's first wave and reported that People who live with their families (e.g., with a partner and children) showed much higher levels of subjective well-being in terms of life satisfaction and happiness than those who live alone.

Despite the considerable importance of family and its correlates to well-being, few studies are conducted in Pakistan related to the family context. Only one instrument, the Family Environment Scale (Bhatia & Chadha, 1993) has been translated into Urdu that is lengthy (70 items) and time-consuming. So, the main purpose of the current study is the Urdu translation of the general Functioning Scale a brief and comprehensive measure of family dysfunctioning/functioning.

Initial psychometric properties of the Urdu version of GFS across adolescent and adult populations are also established in the study.

METHODS

The present study was carried out in two steps.

Step I: Urdu Translation of the General Functioning Scale.

To translate the measure in the native language, the standard guidelines for translating the scale were considered in this study (Acquadro et al., 2012). For forward translation, two bilingual professionals translated the scale from English to the Urdu language independently. The main concern during this step was to translate the scale conceptually rather than literally. After forward translation, the semantic equivalence of English and Urdu versions of GFS was evaluated on each item. Then Urdu translated version was sent to two other experts of the English language for back-translation from Urdu to the English language who reviewed and judged the translated items to check their appropriateness. After comprehensive discussions aimed to remove ambiguity or uncertainty in the meaning of any word or item phrases, an Urdu-translated version of GFS was finalized.

Pilot testing

For evaluation of cross-language concordance of final Urdu translated version, a sample of 40 adolescents age ranged between 12 to 15 years ($Mage = 15.9$, $SD = 1.42$), 20 boys and 20 girls were selected from two English medium schools of Faisalabad city by using a convenient sampling technique. A crossover design was used for cross-language concordance. Half of the participants who were selected randomly were given either the original English version or Urdu version first. After two weeks, the same sample was given the opposite version.

Step II: Determining the Psychometric Properties of the GFS Urdu Version.

For empirical evaluation of the GFS 360 Participants from the general population were selected by using a convenient sampling technique. This sample consisted of 190 males (52.8%) and 170 females (47.2%) with an age ranged between 12-52 years ($Mage = 21.68$, $SD = 7.12$). Having diverse education levels from 5th grade through M Phil ($Medu = 13.14$, $SD = 3.03$).

Measures

General Functioning Scale (Epstein et al., 1983).

The General Functioning Scale is a sub-scale of the Family Assessment Device, It consists of 12 self-rated items on four points Likert-type scale including 1-strongly agree to 4- strongly disagree. The respondent rated the item according to his/ her family functioning. The reversed items like 1,3,5,7,9 and 11 were reversed by subtracting them from 5. The overall score of the scale was obtained by summing up the items' scores and then dividing it by the total number of the items. A score of 2 or above showed unhealthily or family dysfunction. For this scale, the alpha reliability coefficient of this sub-scale was 0.92 but for the Portuguese version, the alpha value was 0.75.

Confusion, Hubbub and Order Scale (Matheny et al., 1995).

This is a 15 items self-reported scale developed to assess home disorganization and confusion, originally used with children and adolescents. It provides the assessment of the environment-related lack of routine, confusion, and noise. A high score on the scale presents a more disorganized, confused, and noisy home.

Satisfaction with Life Scale (Diener et al., 1985).

A brief five-item scale is developed to assess the overall cognitive judgment of an individual's satisfaction with life. Usually, it takes only one minute for a respondent to complete it. Respondents answer on a Likert- type scale. High scores on the measure reflect higher life satisfaction. This scale has a single factor, high internal consistency (.83), and its content is appropriate for a wide range of groups.

Multidimensional Scale for Perceived Social Support (MSPSS; Zimet et al., 1988).

Multidimensional Scale for Perceived Social Support (MSPSS; Zimet et al.,1988). It consists of twelve self-rated items on a seven-point Likert- type scale, ranging from 1 (very strongly agree) to 7 (very strongly disagree). MSPSS is designed to assess the perception of an individual by judging his surrounding from 3 main perspectives (e.g., family, friends, and significant others). In the present study sub-scale of family support consisting of four items is used. A high score on the scale indicates a high level of family support.

Subjective Happiness Scale (Lyubomirsky & Lepper, 1999).

SHS was designed to measure participants' general level of happiness. It is a brief 4-item self-report scale. The responses are measured on 7 points Likert-type scale. Three items have forward scored while one has reverse scoring. A total score is obtained by summing up the score. High scores on the measure reflect more happiness.

Procedure

Formal permission from the authors of the original version of GFS was sought. After finalizing the Urdu version of GFS, participants of the study were approached and then provided with informed consent. Confidentiality of information was assured to the willing participants. The participants were instructed to read the scale items carefully and choose the most appropriate option which best represents them. They were asked to select the response without concerning about right or wrong choices. Participants also had given the choice to leave at any point of data collection if they do not feel comfortable. They were requested to complete the questionnaires without leaving any items unfilled.

Statistical Analysis

Data were assessed using Statistical Package for the Social Sciences (SPSS) version 23. For continuous variables mean and standard deviation, while frequency and percentages of categorical variables were calculated. Pearson product-moment correlation coefficient and intra-class correlation between item scores of the English as well as Urdu versions were measured for cross-language concordance. Cronbach's alpha was used to check the internal consistency of the General Functioning Scale Urdu Version. To find out convergent and divergent validity Pearson product-moment correlation coefficient was applied.

RESULTS

Cross- Language Concordance

Results of Cross-language concordance indicated that Cronbach alpha for both Urdu and original versions was .80 and .81 respectively. There was a significant correlation between the English and Urdu versions' items on the General Functioning Scale (Table 3). Significant intraclass correlation values ranging between .77 to .92 were found on each item. Pearson product-moment correlation coefficients were found to be significant ($***p < 0.001$) between the English and Urdu measures.

Internal consistency

The internal consistency was measured using Cronbach's alpha of the GFS measure that is .80 which falls in a "Good" range.

Convergent and Discriminant Validity

Convergent validity of GFS was established by measuring the correlation between family dysfunctioning and CHAOS Scale, while discriminant validity was assessed by measuring the correlation between family dysfunctioning, life satisfaction, and social support in terms of family and happiness (see Table 5). The results indicated that there was a significantly positive correlation between family dysfunction and home chaos ($r = .27^{**}; p < .01$). However, life satisfaction, family support and happiness were significantly negatively correlated with family dysfunctioning ($r = -.17^{***}, -.22^{***}, -.193^{***}; p < .001$) respectively. Based on the above-mentioned results it can be determined that GFS shows significant convergent as well discriminant validity.

DISCUSSION

The translation and initial validation procedures were carried out following widely accepted translation norms (Acquadro et al., 2018). Back translation was acknowledged by the scale developers however they showed their concern about item number twelve "*We confide in each other*". In this item, the word "*confide*" was translated in terms of trust while the author of the original scale suggested using another alternative for the mentioned term, as the actual purpose was to communicate that family members disclose issues that are difficult to discuss and make them worry. So, the translation of the item has been revised that reflected the meaning of reliance while sharing issues.

The current study showed sufficient understanding of the semantic equivalence between the Urdu translated and original versions of the General Functioning Scale of family assessment. A significant correlation coefficient and cross-language validation were found on each item. These results indicate that both Urdu and English versions of GF measure the same concepts. Strong intra-class correlation coefficient (except item no 12) and Pearson Product Moment correlation coefficient (ranging from .69 to .85) reflect the acceptable quality of translation for use in the Pakistani population as suggested in several studies (Hausken et al., 2019; Wo et al., 2017; Boterhoven et al., 2015). Internal consistency of the Urdu version was also found to be good as Nunnally (1994) reported that .80 is considered as a good reliability coefficient value.

These findings are consistent with other studies such as the Portugal validation of GFS, which observed internal consistency of GF in a non-clinical population that was .82 (Speranza & Guenole, 2012).

Construct validity was determined by assessing the convergent and discriminant validity. Concerning the convergent validity of GFS, a significant positive correlation was observed between the scales of family dysfunction and home chaos indicating the importance of an organized and peaceful home environment for smooth and healthy family functioning and its impact on interpersonal relationships and behaviors of family members (Sahin, 2017). Moreover, family dysfunction was negatively correlated with perceived family support, life satisfaction, and happiness. Poor family functioning has been consistently linked with a lack of social support and together could prove to be a risk factor for mental health problems (Roman et al., 2016). The findings of our study are in line with other studies that revealed a negative correlation between family dysfunction, life satisfaction, and happiness within a sample of South Africans (Ostermann et al., 2017). It also shows the significance of better family functioning for subjective well-being (Sari & Dahlia, 2018). Based on the findings, we may conclude that the GFS is a psychometrically sound measure for evaluating family functioning in Pakistan.

CONCLUSION

Our findings show that the Urdu version of GFS and the original English version of GFS are semantically and linguistically equivalent. Furthermore, it can be used as an effective measure for assessing family function/dysfunction in the Pakistani community due to its strong psychometric features.

Limitations

The present study was limited to exploring initial psychometric properties however validation of GFS will be conducted in a future study using Confirmatory Factor Analysis across different populations (normal and clinical). There was no cut-off points used in this study to distinguish between pathological and healthy families in the Pakistani population.

Table No. 1 Demographic Characteristics of the Study Sample (N = 360)

Variables	Groups	<i>f</i>	%
Gender	Males	190	58.8
	Females	170	47.2
	Total	360	100
Residence	Urban	327	90.8
	Rural	32	8.9
	Total	360	100
Family System	Joint	242	67.2
	Nuclear	118	32.8
	Total	360	100

Table 1 illustrates the sample's demographic characteristics in terms of gender, residence, and family system.

Table No. 2 Descriptive Statistics of the Demographic Characteristics (N = 360)

Variables	<i>M</i>	<i>SD</i>
Age	21.68	7.15
Education	13.14	3.03
Monthly Income	72727.7	94253.57

Descriptive statistics for continuous demographic variables in the sample, such as age, education, and monthly income, are shown in table 2.

Table No. 3 Concordance between the translated and original versions of the General Functioning Scale across languages (Item: 1–12). (N=360)

Items	Eng. <i>M(SD)</i>	Urdu <i>M(SD)</i>	<i>r</i>	<i>ICC</i>
GF1	1.55(.55)	1.65(.76)	.82***	.87***
GF2	2.62(1.84)	2.20(1.06)	.18***	.88***
GF3	1.73(.90)	1.75(.92)	.68***	.81***

GF4	.272(1.01)	2.35(1.2)	.71***	.80***
GF5	1.82(.74)	1.82(.71)	.85***	.92***
GF6	2.15(.92)	1.90(.77)	.66***	.77***
GF7	2.05(.90)	1.95(.93)	.85***	.92***
GF8	2.39(1.01)	2.02(.99)	.69***	.80***
GF9	1.75(.63)	1.67(.61)	.84***	.91***
GF10	1.65(.86)	1.50(.75)	.70***	.81***
GF11	1.57(.71)	1.37(.66)	.77***	.85***
GF12	1.80(.72)	1.72(.71)	.83***	.90***

*** $p < 0.001$, GF (General Functioning).

Table 3 shows the results of a cross-linguistic examination of the Urdu Version of GF on forty subjects with the gap of two weeks.

Table No. 4 Item Total Statistics for General Functioning Scale (N = 360)

Item No.	Item-Total Correlation	α if Item Deleted
GF1	.616	.733
GF2	.344	.761
GF3	.595	.741
GF4	.544	.732
GF5	.611	.746
GF6	.572	.732
GF7	.402	.746
GF8	.489	.745
GF9	.536	.743
GF10	.731	.803
GF11	.612	.730
GF12	.132	.776

Table 4 shows how omitting a single item can change the alpha values from .73 to .80.

Table No. 5 Correlation-coefficients among study variables. (N = 360)

Variables	1	2	3	4	5
Family dysfunctioning	1				
Home chaos	.26***	1			
Life Satisfaction	-.17***	-.38***	1		
Social Support	-.22***	-.25***	.26***	1	
Happiness	-.19***	-.26***	.40***	.40***	1

Table 5 shows correlation coefficients among family dysfunctioning, home chaos, life satisfaction, social support and happiness.

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