

INTERNAL CONSISTENCY OF THE KUWAIT UNIVERSITY ANXIETY SCALE IN TEN ARAB COUNTRIES

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The Kuwait University Anxiety Scale (KUAS) was administered to a select sample of undergraduate students from ten Arab countries, namely, Egypt, Saudi Arabia, Kuwait, Syria, UAE, Lebanon, Oman, Palestine, Jordan, and Iraq ($n=296, 340, 300, 203, 280, 290, 303, 285, 253$ and 254 respectively). The coefficient alpha was computed for male and female respondents from the participating countries, and the combined values for males and females determined. The study showed that the scale, by and large, was viable in the Arabic context, and its use in cross-cultural research, though feasible, merits further exploration.

The Arab countries have a number of psychometric scales to assess anxiety. These are widely used in both research and practice. However, invariably many of these psychological scales are translations of American or British scales. Given this reality, it becomes essential to construct and validate psychological scales in Arabic prepared by Arabic-speaking psychologists, which could be effectively translated into English, to address emerging interest in cross-cultural comparisons in the field.

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The efforts of Dr. Promila Sharma, in the expert scientific editing of the manuscript, are especially acknowledged.

This study was supported by Kuwait University, Research Administration through Research Grant # OP04/02.

Appreciation is due also to reviewers including Izabela Sorić, PhD, Department of Psychology, Faculty of Science and Arts, Krešimirova obala 2, 23000 Zadar, Croatia; Email: <isoric@ffzd.hr> and Ahmed Abdel-Khalek, PhD, Department of Psychology, Kuwait University, PO Box 68168, Kaifan, Code No. 71962, Kuwait; Email: <jss@kuc01.kuniv.edu.kw>

Keywords: KUAS, undergraduate students, internal consistency, Arab context, cross-cultural research, anxiety.

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Currently, several self-report anxiety scales, translated into Arabic, have been found to be available. These include Taylor's Manifest Anxiety Scale (1953), Costello and Comrey's Anxiety and Depression Scale (1967), Derogatis, Lipman, and Covi's Symptom Check List with an Anxiety Subscale (1973), the Crown-Crisp Experiential Index with an Anxiety Subscale (1979), and Spielberger, Gorsuch, Lushene, Vagg, and Jacobs' State-Trait Anxiety Inventory (1983).

Specific shortcomings inherent in each of these scales have been reported by Abdel-Khalek (2000). In view of this there appears a compelling need to construct and validate psychological scales in Arabic by Arabic-speaking psychologists, with a good translation into English, so as to address growing interest in cross-cultural comparisons. In this regard, the newly constructed Kuwait University Anxiety Scale (KUAS) has been developed to assess anxiety and has taken care of requisite psychometric properties among Kuwait University college students and secondary students (Abdel-Khalek, 2002), in terms of high Cronbach alpha and test-retest coefficients, denoting good internal consistency and stability. In addition, the scale is criteria-related (five criteria), and both factorial and discriminant validity of the scale have been reported, the validation in particular having been established with respect to Saudi samples (Ahmed, Abdel-Khalek, Abdel-Ghaffar, & Al-Adwandi, 2003).

For all practical purposes, KUAS is the most advanced scale available in Arabic, thus far, which is the reason why it is necessary to reexamine its internal consistency among undergraduate students from different Arab countries. The present study aimed to do this by examining the adequacy and internal consistency of the (KUAS) in the context of ten Arab countries.

METHOD

PARTICIPANTS

The standard Arabic version of the KUAS was administered to a select sample of undergraduate students, both males and females (aged between 18-25), from ten Arab countries, namely, Egypt, Saudi Arabia, Kuwait, Syria, UAE, Lebanon, Oman, Palestine, Jordan, and Iraq ($n=296, 340, 300, 203, 280, 290, 303, 285, 253$ and 254 , respectively) to measure its applicability and internal consistency, in general, among young adults.

SCALE

The scale consists of 20 brief statements, answered on a 4-point intensity scale, ranging from 1: *rarely* to 4: *always*. Factor analysis yielded three high-loaded factors - Cognitive/Affective, Behavioral/Subjective, and Somatic Anxiety, with moderate interfactor correlations. Item-remainder correlations ranged from .27 to .74. Reliabilities ranged from .88 to .92 (alpha) and between .70 and .93 (test-retest) with a one-week interval, denoting good internal consistency and stability. Criteria-related validity of the scale ranged between .70 and .88 (5 criteria-

related), while the loadings of the scale, on a general factor of anxiety, were .93 and .95 in two factor analyses, demonstrating the scale's criteria-related and factorial validity. Discriminant validity of the scale was also demonstrated, and the scale correlates .65 with the Beck Depression scale. Male adolescents (secondary school students) were found to attain a higher mean score than did male undergraduates, while the females exhibited significantly higher mean scores than did their male counterparts. Kuwaiti norms ($n=4,660$) were reported, and an English version of the scale was generated (Abdel-Khalek, 2000).

PROCEDURE

The study was primarily concerned with examining the internal consistency of the KUAS, so as to determine the reliability of the scale among undergraduate students from ten Arab Universities. The KUAS was administered to students in their classes, after pretesting it on 150 volunteers, and the test took 15 minutes. The questionnaires were mailed to the university presidents of all the selected countries included in the study, and the sample included 2650 respondents distributed among the 10 countries: Kuwait, Kuwait University (296); Syria, Damascus University (340); Saudi Arabia, King Faisal University (300); UAE Emirates, United Arab Emirates University (203); Lebanon, Lebanese University (280); Egypt, Alexandria University (290); Oman, University of Al-Sultan of Qaboos (303); Palestine, University of Al-Najah, (131); Jordan, Yarmouk University (253); Iraq, University of Baghdad (254). The questionnaire was distributed with the understanding that all duly completed questionnaires would be returned within 3 months from the date of their issue.

RESULTS

TABLE 1
MEAN, STANDARD DEVIATION AND COEFFICIENT ALPHA FOR THE KUWAIT UNIVERSITY ANXIETY SCALE (KUAS) DISTRIBUTION OF UNDERGRADUATES FROM TEN ARAB COUNTRIES

Samples	Male		Female		All	
	<i>n</i>	<i>r</i>	<i>n</i>	<i>r</i>	<i>n</i>	<i>r</i>
Kuwait	144	.92	152	.94	296	.93
Syria	147	.90	193	.91	340	.91
Saudi Arabia	150	.90	150	.88	300	.90
UAE Emirates	100	.87	103	.92	203	.91
Lebanon	139	.87	141	.90	280	.89
Egypt	141	.90	149	.92	290	.92
Oman	115	.93	188	.82	303	.87
Palestine	131	.90	154	.92	285	.92
Jordan	128	.87	125	.89	253	.88
Iraq	120	.84	133	.85	254	.85
Mean	1315	0.883	1488	0.895	2804	.90

The results (Table 1) show that the coefficient alphas, ranging between .85 and .93, were found to be consistently high. The aforementioned coefficients generally denoted good reliability, and hence responses by the participating college students to the Arabic version of the scale is indicative of its internal consistency.

DISCUSSION

On examining the study's findings, it appears that the KUAS has appropriate coefficient alpha characteristics, and as such could be recommended for use in nonclinical samples of undergraduates in different Arab countries.

The results suggest that the scale could be a successful rapid screening device for anxiety, and especially useful in future epidemiological/prevalence studies. Hypothetically, as the scale consists of 20 short items, it is promising as a brief addition to a test battery in research projects as a measure of anxiety, without excessive time or burdening of the subjects.

Since the KUAS is written in modern standard Arabic, it is felt that the scale would be useable by literate subjects in Arab countries, without any stylistic or phrasing modifications. The present findings highlight the need to investigate the scale's validity in the same study zone, that is the ten Arab countries, so as to ensure the feasibility of cross-cultural comparisons.

An important next step in the validation process would be to use the new scale extensively with different groups of respondents in Arab countries, so as to ensure its further validation in additional samples. In addition, normative values in different age groups are needed, and research with the inventory must ascertain the psychometric characteristics with patients under a broad category of "neurosis" or "anxiety" disorders.

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