The Articles

Reliability and Validity of The Arabic Version of The Semi Structured Clinical Interview for Children and Adolescents (SCICA)

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ABSTRACT

The aim *of this study was to examine the reliability, validity and psychometric properties of the Arabic version of the SCICA.* ***Method:*** *A sample of 42 referred children aged (6-11 years) underwent two administration of the SCICA with test-retest intervals of 2 weeks, test-retest reliability after 2 weeks were similar to those of the original version, the internal consistency of the 8 sub-scales and 2 global scales were adequate, finally, the concurrent validity, assessed by a correlation with the child behaviour checklist (CBCL) was also found to be good.* ***Results:*** *The present study showed that the Arabic version of the SCICA is a good instrument for clinical and research use.* **(Int. J. Ch. Neuropsychiatry, 2005, 2(2): 111-118)**

INTRODUCTION

Clinical interviews are widely used as a basis for diagnosing disorders and formulating treatment plans for children[1].

The psychiatric interview plays a critical role in clinical assessment and therapy. Problems with assessment reliability and validity that were apparent in nosological and diagnostic discrepancies plagued the field of psychiatry historically. Technical approaches including structured and semistructured interviews were developed to address these problems[2].

Semistructured interviews are less rigid in their format than structured interview as they employ open-ended questions that can be followed by probes when appropriate furthermore, the interviewer can alter questions and vary the sequence of topics to follow the child natural flow of conversation. Some semistructured interviews also include nonverbal activities, such as drawing and play materials, to provide more options for interacting and establishing rapport with the child[3]. Examples of semi structured interviews are child assessment schedule (CAS)[4], Social adjustment inventory for children and adolescents(SAICA) which is a semistructured interview that assess adaptive functioning in children and adolescents and covers the four major role areas of school functioning, spare time activities, peer relations and home life, factor analysis of the SAICA yielded three factors designated as school and spare time activities, spare time sociability and family relations[5] and semistructured clinical interview for children and adolescents (SCICA). The last of these is a standardized semistructured clinical interview that scored quantatively on structured observation and self report forms. The SCICA is designed to sample functioning in nine broad areas:

1. Activities, school, job
2. Friends
3. Family relations
4. Fantasies
5. Self perception, feelings
6. Parent/teacher-reported problems
7. Achievement tests (optional)
8. For ages 6-12: Screen for fine and gross motor abnormalities (optional).
9. For ages 13-18: Somatic complaints, alcohol, drugs, trouble with the law.

The SCICA is not designed to obtain yes/no reports of symptoms. Instead, it utilizes open-ended questions and structured tasks to encourage subjects to talk and behave in ways that will reveal their thoughts, feelings, concerns and interests, as well their interaction style in a prototypic mental health assessment situation[3].

The test retest reliability of SCICA was examined by McConaughy and Achenbach in 1994[3]. The SCICA was administrated to 20 children seen by different intervals ranging from 7 to 22 years. The sample included 15 boys and 5 girls aged 6-12 years. The test-retest were significant for most SCICA scale Test-retest Reliabilities were highest ($r \geq 0.70$) for attention problems, strange, resistant, externalizing, total observation score and total self-report score. In another study, it was reported that the internal consistency of SCICA as calculated by cronbach's alpha was satisfactory for the eight SCICA syndromes, internalizing, externalizing, total observation score, and total self report score ranged from 0.81 to 0.86 [3].

Achenbach et al.[6], examined the concurrent validity of 1990 version of the SCICA by comparing the score of this and those of child behaviour checklist CBCL[7], another well known measure of behaviour problems in children. The results showed significant correlations between most of the SCICA and CBCL scales.

Ferdinand et al.[8], in their study on Dutch children, found that the clinicians' ratings of self-reported and observed behaviors in a semi-structured interview (SCICA) make an important and unique contribution to the multiaxial assessment of problem behaviors, based on longitudinal data, However, they also pointed out that these findings should always be supplemented with information from parents and teachers. Following Hambleton's guidelines on the necessary requirements for considering an instrument as reliable and valid, and the need to demonstrate these features regardless of these of the original instruments[9]. **The goal in the present work** is to focus on the study of the reliability and validity of the Arabic version of SCICA.

1. Test- retest reliability.
2. Concurrent validity between the SCICA and CBCL the parents' version.

SUBJECT AND METHODS

Subjects:

The sample of the present study consists of 42 children subjects were aged between 6 and 12 years old, and were recruited from the child psychiatry clinic Mansoura University hospital. All the subjects were attending the clinic for the first time, distribution of sex was 29 boys (69%) and 15 girls (31%). Fahmy and Sherbini[10] social standard distribution a follows: class I: 9.5%, class II: 15.1% class III: 33.6%, class IV: 41.8%. to avoid possible effect of low cognitive ability or physical problems on behaviour, the children were excluded of they had a full scale to below 75 or physical disability or disorders such as epilepsy.

Method:

The current study was conducted during period from 2nd of October 2004 to 1st March 2005.

Study 1:

To assess the test re-test reliability. The sample group under 2 administrations of SCICA with a Test retest interval of 2 weeks. The SCICA

is semistructured clinical interview for ages 6-11 years and can be completed in 60-90 minutes, immediately after interview, the interviewer scores the 117 observation items and 107 self-report items of the SCICA scoring forms. The items of the 2 scoring forms are aggregated into a profile of empirically derived syndrome scales. The syndrome scales based on observation items include anxious, withdrawn, attention problems, strange and resistant and that on self-report items included anxious depressed, family problems and aggressive behaviour[3]. Translation and back translation was made by two of the authors. One of whom didn't know the original English text. The final translation was fixed by a consensus.

Study 2:

For the assessment of concurrent validity. Once the first SCICA interview with the children was finished, A CBCL form was given to the parents who were able to fill it out and return on their next visit to the clinician. CBCL is a standardized instrument for assessment for child behaviour problem. It is suitable for ages of 4 to 16 years and can be completed in 15-17 minutes by the parents. CBCL evaluates clinical sub scales of withdrawn. Somatic complaints, anxious depressed, social problems. Thought problems, attention problems. Delinquent behaviour and aggressive behaviour. It allows one to obtain a global score for the grouping of the so called internalizing and externalizing syndromes, as well as a total score of symptoms present. Arabic version of CBCL was done by EL-Defrawi in 1997[11].

Statistical analysis was mode using SPSS; SICICA was scored according to McConaughy and Achenbach[3]. CBCL was scored according to Achenbach's,[7] scales and norms appropriate each age. Pearson product moment correlation coefficient was calculated to assess test-retest reliability, internal consistency and concurrent validity.

RESULTS

Table (1) showed that rest-retest correlations were highly significant for all scales $P<0.001$ except anxious scale $P = 0.074$, reliabilities were excellent $r \geq 0.90$ for Anxious depressed, withdrawn aggressive behaviours, attention problems, family problems and strange scale. Student T-test showed no significant difference ($P<0.05$) between time I and time 2 scores. The closet to a significant difference was on the self report items of the aggressive scale where ($P<0.05$).

Table (2) showed that a significant correlation between the observation scores and its five sub-scales (attention problems $r = 0.75$, strange $r = 0.67$, anxious $r = 0.57$, withdraw $r = 0.55$ and resistant $r = 0.41$.

Table (3) indicates that there is a significant correlation between total self report scores and its eight subscales (Anxious depressed $r = 0.77$, aggressive behaviour $r = 0.55$ and family problems $r = 0.35$).

Table (4) declared that there is a significant correlation between the four SCICA syndrome that bear names correspond to CBCL syndromes as follows: Anxious depressed $r = 0.39$, withdrawn $r = 0.38$, aggressive behaviour $r = 0.37$ and attention problems $r = 0.42$ also there is a significant correlation between the SCICA family problems scale and CBCL somatic complaints $r = 0.24$, however the anxious syndrome has a negative correlation with CBCL aggressive scale ($r = -0.12$) and externalizing scale ($r = - 0.13$).

Table 1. Means and standard deviations by Moment and 2 week test-retest Reliability of the Arabic version of SCICA.

Scale	Mean		Standard deviation	
	Time 1	Time 2	Time 1	Time 2
Anxious depressed	5.43	5.10	0.83	0.78
Anxious	3.06	2.93	0.47	0.45
Family problems	2.17	2.23	0.33	0.34
Withdrawn	6.70	6.63	1.03	1.02
Aggressive behaviour	6.19	8.21	0.95	1.28
Attention problems	0.76	8.05	1.18	1.24
Strange	0.36	3.71	0.55	0.57
Resistant	7.41	6.98	1.14	1.07
Internalizing	17.73	17.57	7.42	10.48
Externalizing	25.35	27.80	20.11	0.35
Total observations	34.76	36.33	19.97	23.71
Total self report	31.75	34.09	7.74	21.33

Note:

a- All coefficient r were significant at $P \leq 0.001$ except one in parentheses (P=0.074).

b- All paired test showed no significant difference, ($p>0.05$) except one in parentheses ($P<0.05$).

Table 2. The correlation between the total observation score and its subscales using r (Pearson correlation).

Subscales	r
Anxious	0.57**
Withdrawn	0.55**
Attention problems	0.75**
Strange	0.67**
Resistant	0.41*

Table 3. The correlation between the total self report score and its subscales using r.

Subscales	R
Anxious depressed	0.77**
Family problems	0.35*
Aggressive behaviour	0.55**

* $P < 0.05$

** $P < 0.01$

Table 4. Pearson correlations between SCICA and CBCL problem scales.

SCICA	With drawn	Somatic comp.	Anx. Dep.	Social probs.	Att probs	Aggressive	Internalizing	Externalizing	Total probs.
Anxious depressed			0.39**			(-0.12)	0.29*		
Anxious								(-0.13)	0.23*
Family problems		0.24*							
Withdrawn	0.38**							0.41**	
Aggressive behaviour						0.37**			0.36*
Attention problems					0.42**				
Strange				0.39**					
Resistant				0.43**				0.39**	
Internalizing		0.21*					0.21*		
Externalizing				0.49**					0.46**
Total observations				0.45**					0.43***
Total self report			0.24*				0.37**		

a- the CBCL thought problems and delinquent behaviour are omitted, because no SCICA scale had a higher r with either of item than with another CBCL syndrome

b- All r^s in the table were significant * $p < 0.05$, ** $p < 0.01$ except those in parentheses which were $P > 0.05$.

DISCUSSION

Summarizing the results with respect to the aim of the study we can conclude that the Arabic version is psychometrically sound.

Reliability refers to agreement between repeated assessment when the phenomena being assessed are expected to remain constant: when rating instruments such as SCICA are administrated, it is important to know the degree to which raters provide over periods when the subject behaviour and self-Report are not expected to change i.e. test reliability[7], the present study showed that the test retest Pearson correlations after 2 weeks was found to be satisfactory.

It is also important to assess the consistency of results across items within a test (consistency of individual performance from item to item & item homogeneity) i.e. to determine the degree to which all items measure a common characteristic of the person i.e. internal consistency reliability.

These findings agreed with the results of McConaughy and Achenbach[3], with the original version. Test-retest reliability were excellent ≥ 90 for withdrawn, anxious depressed, aggressive behaviour, attention problems, family problems and strange scales, the only scale for which test-retest correlations was less impressive was the anxious r=0.05 scale, Anastasi[12] stated that the high the correlation coefficient the more confidence you can have in the score. Young et al.[13], in an excellent review of research on clinical diagnostic instruments, pointed out that clinicians training and working together on the use of structured assessment will commonly achieve agreement in the range of 0.8 (Pearson correlation). Agreement between parents regarding ratings of emotional and behavioral items reaches a range around 0.6, Different types of informants (e.g. Parent and teacher). Can be expected to demonstrate an agreement level no better than approximately 0.3 [6], in addition there is no significant difference between time 1 and time 2 scores except on the aggression scale is which

no more than expected by chance[14]. The SCICA did not manifest the tendency for problem scores to decline markedly from the first to the second interview (attenuation effect) that has been found in NIHM Diagnostic interview schedule for children DISC[15].

In this study, the internal consistency was assessed by average item total correlation using Pearson correlation and was found to be adequate and ranged from 0.35 to 0.89.

Validity concerns the accuracy with which a procedure measures what is supposed to measure. Concurrent validity or the degree of agreement between an instrument and other, simultaneous external measures is one of the important aspects when determining usefulness. The establishment of this concurrent validity tells us about the instrument's degree of effectiveness for predicting or forecasting an interesting variable (the criterion) from its score[16]. In turn, the comparison of a given characteristic based on different diagnostic instruments may provide data about the usefulness of certain epistemological entities.

On this occasion, the chosen referent is the Child Behavior Checklist, a measure widely used and studied in various countries.[17-22] The instrument is easily applied and there is a great deal of data about its psychometric qualities, coming out of results from studies in 28 different cultures(reference). The r values in test-retest from the original version, computed for a sample of 72 children between 4 and 16 years old in the normal population, range between .82 and .95 ($p<.001$). The relation to other similar instruments, such as Conners' Parents Questionnaire[23], in a sample of 60 external patients, was high ($r=.82$, $p<.001$). CBCL's empirical construction -based on a list of problems about pre-school behaviour of concern to parents and mental health professionals-, as well as evidence of higher scores for subjects coming from clinical populations than those from normal populations, are its best guarantees of good content and discriminant validity.

In the present study, it was found that the SCICA convergent validity with CBCL was moderate or low. Ranging from 0.21 to 0.49 these correlations are commensurate with those found in meta-analysis of correlations between ratings by different types of informants seeing children under different conditions in many studies[6]. The four SCICA syndromes that bear names correspond to CBCL syndromes, all correlated with corresponding CBCL syndrome than with any other CBCL syndrome. This finding gave support to Biederman et al.[24], who found that the highest relation is always obtained between the syndrome and dimension theoretically most related to it in general dimensions also tend to correlate with other dimensions that may form part of the clinical chart.

The significant correlation of the CBCL social problems syndrome with both the strong and resistant r = 39, 43 respectively suggest that the inter personal difficulties reflected in the parents rating of social problems tend to be manifested in the interview situation in term of the strange and resistant syndrome. The SCICA Anxious syndrome had no correlation that were significant at $P \leq 0.01$ than with any CBCL scales, however the anxious syndrome correlated with the aggressive scale and externalizing scale (r= 12, r = 13 respectively. These negative correlations indicate a small tendency for children who displayed externalizing behaviour problems with their parents to show little anxiety during the interview. All these results agree with the original version[3].

In conclusion, these results support the Arabic version of the SCICA as instrument with good psychometric properties in terms of reliability and validity. It may be used as a screening instrument in schools for early detection of emotional and behavioural problems in children, the SCICA may also be a useful measure in clinical settings as it provide opportunities to obtain child interview in a systematic manner, ensure that a broad range of symptoms and diagnoses are assessed and establish the rapport necessary for effective treatment.

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الملخص العربى

دراسة ثبات ومصداقية النسخة العربية للمقابلة الإكلينيكية شبه المقننة للأطفال والمراهقين

تهدف هذه الدراسة الى معرفة درجة الثبات والمصداقية والخصائص السيكومترية للنسخة العربية من المقابلة الإكلينيكية شبه المقننة للأطفال والمراهقين. وتكونت عينة الدراسة من 42 طفلاً يتراوح عمرهم بين 6-11 سنة وطبقت عليهم المقابلة الإكلينيكية مرتين مع وجود فاصل زمنى يقدر أسبوعين وقد أشارت النتائج الى تشابه درجة ثبات إعادة تطبيق المقياس للنسخة العربية بنظريتها الأصلية. وان الاتساق الداخلى للمقاييس الثمانية الفرعية والمقياسان الكليان كافية. وكذلك كانت درجة المصداقية المتزامنة جيدة والتى تم تقديرها عن طريق حساب الارتباط بين المقابلة الإكلينيكية شبة المقننة وقائمة وصف سلوك الطفل وتوضح النتائج إن النسخة العربية من الاختبار شبه المقنن هي آداه جيدة للاستخدام الإكلينيكي والبحثي.