

## Letter to the editor

### Schedule for affective disorders and schizophrenia for school-age children-present episode (K-SADS-P): a pilot inter-rater reliability study for Greek children and adolescents

The kiddie-schedule for affective disorders and schizophrenia (K-SADS) is one of the more popular examples in child psychiatry of a semistructured interview instrument [1,2,4]. It was developed by Puig-Antich and Chambers based on the schedule for affective disorders and schizophrenia (SADS) designed for adults [7]. Chambers, Puig-Antich et al. did the first reliability study of the K-SADS-P-II, but this first version of the K-SADS was not fully DSM-III compatible. More recent reviews and research provide evidence that K-SADS is a reliable measure of depression, anxiety, emotional and conduct disorder [8].

The aim of this pilot study was to examine inter-rater reliability of the K-SADS-present state version for Greek children and adolescents in a clinically referred population. The K-SADS-P was translated into Greek (among other European languages) and then backwards in English. Participants were 26 children and adolescents (7–15 years of age, 15 boys and 11 girls) and their parents who were referred to our department and were interviewed by two trained interviewers. Scales of symptom groupings of depression, somatization, anxiety and conduct problems were erected and inter-rater reliability was undertaken. Diagnostic interviews were undertaken (separately with parent and child resulting in a summary rating) based on DSM-III-R [3] criteria for depressive disorder, anxiety disorder, conduct disorder and also codings on the K-SADS-P version of the Children's Global Assessment Scale (CGAS) [6,9,10].

The four K-SADS-P Depression Summary Scales, composed of 2–17 symptoms [4], showed high inter-rater reliability (>0.96) and moderately to high internal consistency (>0.46). The Kappa statistic [5] of the diagnosis for depressive disorders was 0.90. It was evident that the greater the number of items representing this syndrome, the higher the agreement (correlation) and this is according to expectation.

Inter-rater reliability of assessment of anxiety symptoms was lower ( $r = 0.59$ ) than that for depressive disorders and low internal consistency (Cronbach  $\alpha = 0.44$ ). The reliability of the diagnosis of anxiety disorder was higher (Kappa = 0.80) than that reported by Chambers et al. [4] (Kappa = 0.24).

The K-SADS-P Somatization Scale (aches and pains and hypochondria) had also lower but acceptable reliability (0.67) and internal consistency (0.49) than found with depressive disorders. The conduct composite variable (scale) showed high reliability (0.83) as well as high internal consistency (0.89). The Kappa for conduct disorders was also high (Kappa = 0.90). Synthesis of the K-SADS-P parent/child data provided information which allowed codings on the CGAS, which had excellent inter-rater reliability (intraclass correlation coefficient 0.91,  $P < 0.001$ ).

In conclusion, the results of this study on the psychometric properties of the K-SADS-P for the Greek child and adolescent psychiatric population are promising. The main limitation of the present study was the relatively small size of the sample, yet adequate for the current purposes. The second limitation is that is a clinical sample and so the excellent reliability results that are recorded are not necessarily generalizable to community samples. Nevertheless, these limitations do not decrease the importance of this pilot study on a very useful diagnostic instrument for a psychiatric child population in Greece and its promising results for other similar studies such as the one which the same authors have undertaken on the psychometric properties of a more recent version of the interview, the K-SADS-PL [8].

### Acknowledgements

The authors would like to thank Dr. Paul Ambrosini for his helpful comments and suggestions.

### References

- [1] Ambrosini PJ, Metz C, Prabucki K, Lee JC. Videotape reliability of the third revised edition of the K-SADS. *J Am Acad Child Adolesc Psychiatry* 1989;28:723–8.
- [2] Ambrosini PJ. Historical development and present status of the schedule for affective disorders and schizophrenia for school-age children (K-SADS). *J Am Acad Child Adolesc Psychiatry* 2000;39:49–58.
- [3] American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 3rd ed. revised. Washington, DC: APA; 1987.
- [4] Chambers W, Puig-Antich J, Hirsch M, Paez P, Ambrosini P, Tabrizi MA, et al. The assessment of affective disorders in children and adolescents by semistructured interview: test-retest reliability of the schedule for affective disorders and schizophrenia for school-age children, present episode version. *Arch Gen Psychiatry* 1985;42:696–702.
- [5] Cohen J. A coefficient of agreement for nominal scales. *Educ Psychol Measurement* 1960;20:37–46.

- [6] Endicott J, Spitzer R, Fleiss J, Cohen J. The Global Assessment Scale: a procedure for measuring overall severity of psychiatric disturbance. *Arch Gen Psychiatry* 1976;33:766–71.
- [7] Endicott J, Spitzer RL. A diagnostic interview: the schedule for affective disorders and schizophrenia. *Arch Gen Psychiatry* 1978;35: 837–44.
- [8] Kaufman J, Birmaher B, Brent D, Rao U, Flynn C, Moreci P, et al. Schedule for affective disorders and schizophrenia for school-age children-present and lifetime version (K-SADS-PL): initial reliability and validity data. *J Am Acad Child Adolesc Psychiatry* 1997;36(7): 980–8.
- [9] Madianos MG. The reliability and validity of the Global Assessment Scale in the Greek population. *Encephalos* 1987;24:97–100 [in Greek].
- [10] Shaffer D, Gould M, Brasic J, Ambrosini P, Fisher P, Bird H, et al. A Children's Global Assessment Scale (CGAS). *Arch Gen Psychiatry* 1983;40:1228–31.

G. Kolaitis \*  
T. Korpa  
I. Kolvin <sup>1</sup>  
J. Tsiantis

*Department of Child Psychiatry, Medical School of Athens University, "Aghia Sophia" Children's Hospital, Thivon and Levathias Street, 115 27 Athens, Greece*  
*E-mail address: itsianti@cc.uoa.gr (G. Kolaitis).*

\* Corresponding author.

© 2003 Éditions scientifiques et médicales Elsevier SAS. All rights reserved.  
doi:10.1016/j.eurpsy.2003.02.002

<sup>1</sup> Deceased, Tavistock Center, 120 Belsize Lane, London NW3 5BA, UK.