Family Life and Relationships in the Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA)

AIMS AND METHOD
The Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA) were developed as a routine measure of outcomes in child and adolescent psychiatry. In a preliminary study we administered sub-scale 12 of HoNOSCA (Family Life and Relationships) to 20 families and compared the results with two well-established measures of family functioning and a measure of abnormal psychosocial situations associated with psychopathology.

RESULTS
Strong correlations were found between HoNOSCA sub-scale 12 and both self-assessed and clinician-assessed measures of family functioning. However, there was little relationship between HoNOSCA (12) and a measure of abnormal psychosocial situations.

CLINICAL IMPLICATIONS
HoNOSCA (12) appears to provide a quick and valid assessment of overall family dysfunction and can be used in a time-efficient manner as a means to assess where further more comprehensive family assessment or family therapy may be required.

Measures
Health of the Nation Scales for Children and Adolescents (HoNOSCA)
This is a clinician-rated scale consisting of 13 items plus two option scales. The Trainer’s Guide for sub-scale 12 (Problems with Family Life and Relationships) instructs clinicians to use this item to refer to relationships with parents and siblings in the family home (or foster or residential home). In addition:

- parental personality problems, mental illnesses and marital difficulties should only be rated here if they have an effect on the child, though this will usually be the case. Problems associated with physical, emotional or sexual abuse should be included but this scale is not intended to address abusive or neglectful features alone. Difficulties arising from over-involvement and overprotection should also be included, as well as difficulties arising from family re-organisation as a result of relocation or bereavement (Gowers et al, 1997).

In summary, this scale is purported to measure a hybrid of family functioning indices (relationships, overinvolvement, etc.) and life events (abuse, bereavement, etc.).

McMasters Structured Interview of Family Functioning
This structured interview (Bishop et al, 1980) was developed so that researchers and clinicians could conduct valid and reliable family interviews. The interview...
addresses six areas of family functioning: roles, behavioural controls, problem-solving, communication, affective responsiveness and affective involvement. The dimensions of the McSIFF are based on the McMasters model of family functioning.

**McMasters Clinical Rating Scale**
This is a seven-item scale that rates each of the six dimensions of the McMasters model. It also gives an overall health/pathology rating. It was designed for use either by a rater who observes an in-depth family interview or by a researcher or clinician who carries out a structured interview (i.e. the McSIFF). The scale measures family functioning across a continuum from very dysfunctional to superior functioning on a seven-point Likert scale. Concurrent validity with the Family Assessment Device (FAD) has been demonstrated (Fristad, 1989), as has discriminant validity, interrater reliability and test–retest reliability over a 3-month period (Keitner et al, 1992).

**Family Assessment Device**
The FAD is a paper-and-pencil questionnaire, which can be filled out by all family members over the age of 12. It yields seven scales: the six domains of family functioning (identified in the McMaster Model) and a General Family Functioning Scale that assesses the overall health/pathology of the family. Epstein & Bishop (1981) suggest that the FAD is both a reliable and valid instrument.

**Child Behavior Checklist**
The CBCL is a well-recognised inventory of emotional and behavioural problems designed for children aged 4–18 years of age. It is considered to be both a valid and reliable instrument and has been standardised (Achenbach, 1991).

**ICD–10 Axis V**
The psychosocial axis (Axis V) of the World Health Organization (1996) Multi-Axial Classification of Child and Adolescent Psychiatric Disorders lists nine abnormal psychosocial situations associated with psychopathology: abnormal intrafamilial relationships; mental disorder, deviance or handicap in the child’s primary support group; inadequate or distorted intrafamilial communication; abnormal qualities of upbringing; abnormal immediate environment; acute life events; societal stresses; chronic interpersonal stress associated with school/work; and stressful events/situations resulting from the situation or life event had played a role in causative processes.

We also generated a total score of adversity by summing all scores across the nine sub-scales.

**Data analysis**
The data were analysed using the Statistical Package for the Social Sciences (SPSS) version 10, for Windows. Non-parametric correlation coefficients between the variables were computed using Spearman’s rho.

**Results**
The mean age of mothers of referred children was 38.6 years and the mean age of fathers was 41 years. The mean age of referred children was 10.2 years. Half of the participants were married, a quarter separated and a tenth widowed. Of the 20 index children, 15 (75%) were boys and 5 (25%) were girls. On the CBCL, 5 children (25%) were within the normal range for Total Problem T scores whereas 2 (10%) were in the borderline range and 13 (65%) were within the clinical range for Total Problem T scores. For the externalising T scores, 8 children (40%) were within the normal range, 2 (10%) were within the borderline range and 13 (65%) were within the clinical range. For the internalising T scores, 8 children (40%) were within the normal range, 3 (15%) were in the borderline range and 9 (45%) were within the clinical range.

**HoNOSCA and Axis V**
Significant correlations were found between HoNOSCA (12) and the Axis V sub-scales Inadequate or distorted intrafamilial communication (r=0.498, P<0.05) and Societal pressure (r=0.482, P<0.05). There were no other correlations between HoNOSCA and any of the other sub-scales of Axis V or of the total score for Axis V (Table 1).
HoNOSCA and MCRS

There were significant correlations between HoNOSCA (12) and all the MCRS sub-scales besides affective responsiveness: problem-solving ($r = -0.534$, $P < 0.05$); roles ($r = -0.471$, $P < 0.05$); affective involvement ($r = -0.559$, $P < 0.05$); communication ($r = -0.530$, $P < 0.05$); behavioural controls ($r = -0.643$, $P < 0.01$); and general functioning ($r = -0.509$, $P < 0.05$) (Table 2). The negative scores between the MCRS and HoNOSCA relate to how the MCRS scores: lower scores in the MCRS indicate that the family have more marked difficulties whereas higher scores indicate overall healthy family functioning.

HoNOSCA and FAD

The HoNOSCA (12) was significantly correlated with the mean family scores for the following FAD sub-scales: general functioning ($r=0.553$, $P<0.05$); affective responsiveness ($r=0.468$, $P<0.05$); roles ($r=0.666$, $P<0.01$); and communication ($r=0.619$, $P<0.01$) (Table 3). HoNOSCA (12) was also significantly correlated with mothers’ scores for the following FAD sub-scales: communication ($r=0.646$, $P<0.01$); roles ($r=0.620$, $P<0.01$); affective responsiveness ($r=0.564$, $P<0.01$); affective involvement ($r=0.456$, $P<0.05$); and general functioning ($r=0.617$, $P<0.01$) (Table 4).

Discussion

The principal aim of this study was to establish whether a relationship exists between HoNOSCA sub-scale 12 and gold standard measures of family functioning and family life events (both clinician- and family-rated). Also, we have attempted to clarify what precise aspects of family functioning and family life events the scale might be measuring. We have taken the FAD and the MCRS to be measures of family functioning and Axis V to be a measure primarily of life events, although it does include a measure of family relationships.

The results indicate that HoNOSCA (12) correlates well with the FAD completed by the families and the MCRS completed by the researchers. There was little, if any, relationship between HoNOSCA (12) and Axis V. In other words, when applying HoNOSCA (12) to families, it appears that we are principally measuring aspects of family functioning in line with the McMasters’ theoretical model and not the life events and family psychosocial adversities that it alludes to in its definition. The interpretation of this finding is difficult and we believe this is because of a lack of clarity in the definition of the HoNOSCA (12) sub-scale itself. The description of HoNOSCA (12) in the Trainer’s Guide indicates that it spans both family functioning and life events; however, it is clear that in coding, some life events (parental mental illness) should be subordinated to the former and considered only for their effect upon the child. The Trainer’s Guide is ambiguous regarding rating abuse: ‘it should be included but this scale is not intended to address abusive or neglectful factors alone’ (Gowers et al, 1997). In the separate Glossary for HoNOSCA Score Sheet it is clearly indicated that sexual and/or physical abuse can be included on its own as a life event (Gowers et al, 1998). In other words, it assumes that its

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| ICD−10 Axis V | Correlation |
|--------------|-------------|
| Abnormal intrafamilial relationships | 0.353 |
| Mental disorder/deviance/handicap in child’s support group | 0.110 |
| Distorted communication | 0.498* |
| Abnormal qualities of upbringing | 0.148 |
| Abnormal immediate environment | 0.411 |
| Acute life events | 0.336 |
| Chronic interpersonal stress | −0.482* |
| Stress events resulting from child’s disorder | 0.342 |
| Total score | 0.106 |

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| FAD sub-scale | Correlation |
|--------------|-------------|
| Problem-solving | 0.410 |
| Communication | 0.619** |
| Roles | 0.666** |
| Affective responsiveness | 0.468* |
| Affective involvement | 0.396 |
| Behavioural controls | 0.393 |
| General functioning | 0.553* |

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HoNOSCA, HoNOSCA Family Life and Relationships in HoNOSCA, Original papers, Data analysed using Spearman’s rho. *P=0.05; **P=0.01 (two-tailed).
occurrence within the family coexists with relationship problems.

If our clinical raters have interpreted HoNOSCA (12) as requiring discrimination between life events as cold historical facts (to be excluded) and life events according to how they impact upon the child and their relationships within the family, then the lack of correlation between HoNOSCA (12) and Axis V indicates of course a correct use of HoNOSCA according to the Trainer’s Guide but not the Glossary.

There might be other explanations for this finding. Axis V is a broad multi-axial framework, which looks at the family’s psychosocial situation over a life span (or a specified time frame) whereas HoNOSCA measures the child’s symptomatology over a 2-week period.

Also, the lack of a correlation between HoNOSCA and Axis V might be in part a result of the poor reliability of the psychosocial axis when tested in day-to-day practice (Willemsen et al, 2003). It might also be owing to different professional groups’ ability within child psychiatry to work with criterion-based classifications. Applying Axis V reliably and validly requires a complex understanding of diagnostic classification; something medical staff clearly have more experience of. This is in contrast to the HoNOSCA which can be used reliably by medical staff.

Declaration of interest
None.

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Table 4. Correlations between HoNOSCA Family Life and Relationships and FAD (mothers)

| FAD sub-scales             | Correlation |
|----------------------------|-------------|
| Problem-solving            | 0.394       |
| Communication              | 0.646**     |
| Roles                      | 0.620**     |
| Affective responsiveness   | 0.564**     |
| Affective involvement      | 0.456*      |
| Behavioural controls       | 0.406       |
| General functioning         | 0.617**     |

FAD, Family Assessment Device.
Data analysed using Spearman’s rho.
* P=0.05; ** P=0.01 (two-tailed).