THE REVISED CHILDREN'S MANIFEST ANXIETY SCALE (RCMAS)

"What I Think and Feel"

The RCMAS is a 37-item self-report inventory used to measure anxiety in children, for clinical purposes (diagnosis and treatment evaluation), educational settings, and for research purposes.

The RCMAS consists of

28 Anxiety items and

9 Lie (social desirability) items.

It is advised that the RCMAS only be used as part of a complete clinical evaluation when diagnosing and treating a child's anxiety (Gerard and Reynolds, 1999, p.323).

DEVISED BY:

The Revised Children's Manifest Anxiety Scale was developed by Reynolds and Richmond (1978) to assess "the degree and quality of anxiety experienced by children and adolescents" (Gerald and Reynolds, 1999, p. 323). It is based on the Children's Manifest Anxiety Scale (CMAS), which was devised by Casteneda, McCandless and Palermo (1956).

The Revised version of the CMAS deletes, adds and reorders items from the CMAS to meet psychometric standards.

Reynolds and Richmond (1978) also renamed the instrument, "What I Think and Feel", although subsequent papers primarily refer to it as the Revised Children's Manifest Anxiety Scale (RCMAS).

RELIABILITY:

Several types of reliability can be demonstrated with the RCMAS, in terms of the internal consistency of the instrument, stability, and possibly equivalence, but not in terms of the inter-rater reliability. Reynolds and other researches have focused on developing an instrument that was

psychometrically sound and that could be used by a variety of practitioners (clinicians, teachers and researchers), without attention to potential variations with application or interpretation in its use.

VALIDITY:

There is substantive research confirming the validity of the RCMAS as a measure of chronic manifest anxiety in children, dating back to the original article reporting the development of the RCMAS (Reynolds and Richmond, 1978). In addition, the RCMAS is frequently used in research to validate other instruments and to measure treatment effects.

The five factors confirmed by Reynolds and Paget (1981) are as follows:

Anxiety Scale Factors:	Item Numbers
I. *The Physiological Factor*	1, 5, 9, 13, 17, 19, 21, 25, 29, 33
II. *The Worry/Oversensitivity Factor*	2, 6, 7, 10, 14, 18, 22, 26, 30, 34, 37
III. *The Concentration Anxiety Factor*	3, 11, 15, 23, 27, 31,35

Lie Scale Factors:	
IV. *Lie 1*	4, 8, 12, 16, 20, 24
V. *Lie 2*	28, 32, 36

·   **Criterion (or Predictive) Validity:**

Hadwin, Frost, French and Richards (1997) found in a sample of 40 children aged 7 to 9 years, that levels of anxiety as measured by the RCMAS, could significantly predict the children's interpretations of ambiguous stimuli as threatening.

ADMINISTRATION:

The RCMAS is suitable for individual or group administration, by clinicians, researchers or teachers, with 6 to 19 year old children. The scale is best read out to children in Grades one and two (or to children who have an equivalent reading age). Grade three and older children need to be monitored carefully as they read the items themselves, with explanations given for words that they do not understand.

SCORING METHOD AND INTERPRETATIONS OF RESULTS:

Each item is given a score of one for a "yes" response, yielding a Total Anxiety score (Ag). Three empirically derived Anxiety Subscales scores (Physiological Anxiety, Worry/Oversensitivity, and Social Concerns/ Concentration) and Lie Scale scores can be calculated. The Lie scale is best thought of as a social desirability scale as it does not directly and conclusively detect "lying".

Stallard, Velleman, Langsford and Baldwin (2001) recommend that an overall cut-off point of 19 out of 28 be used to identify children experiencing clinically significant levels of anxiety (p.200).

Reynolds and Richmond (1978) suggest that scores within one standard deviation of the mean, at the appropriate grade level, be used to indicate scoring within the normal range of variability (see below for norms of means and standard deviations or sources for norms).

Scores falling at least one standard deviation from the mean (T ^{3} 60) are thought to be of clinical interest. However, T-scores above 70 should be interpreted with caution. The child's response pattern should be examined with respect to a problematic pattern of endorsement or reading difficulties.

High scores on the sub-scales can represent different aspects of anxiety, which can be used to develop hypotheses about the origin and nature of a child's anxiety.

(1) High scores on the *Physiological Factor* (item*s* 1, 5, 9, 13, 17, 19, 21, 25, 29, 33) can indicate physiological signs of anxiety (eg sweaty hands, stomach aches).

(2) High scores on the *Worry/Oversensitivity Factor* (items 2, 6, 7, 10, 14, 18, 22, 26, 30, 34, 37) would suggest that the child internalises their experiences of anxiety and that he or she may feel overwhelmed and withdraw.

(3) High scores on the *Concentration Anxiety Factor* (items 3, 11, 15, 23, 27, 31, 35) would suggest that the child is likely to feel that he or she is unable to meet the expectations of other important people, inadequate and unable to concentrate on tasks.

NORMS:

Reynolds and Richmond (1978) suggest that scores within one standard deviation of the mean, at the appropriate grade level, be used to indicate scoring within the normal range of variability. Reynolds and Richmond (1978, p.276) also note that the Anxiety scale correlated significantly with the Lie scale, $r(327) = .15$; $p \pounds .01$.

Means and SD were also obtained for the RCMAS by Grade, Race and Gender (Reynolds and Richmond, 1978, Tables II and III, pp. 276-277):

	Anxiety Scale			Lie Scale	
	Mean	*SD*	*N*	*Mean*	*SD*
Grade					
1	13.70	4.85	23	6.00	1.95

2	16.13	6.42	30	4.63	2.55
3	12.78	6.50	32	3.97	2.18
4	16.64	5.70	28	2.25	1.65
5	12.52	5.33	33	2.70	2.47
5	13.82	5.28	28	4.18	2.04
6	11.85	5.27	26	1.93	1.67
8	14.50	5.22	30	2.57	1.87
9	13.25	6.27	40	3.70	1.84
10	13.23	5.85	22	3.68	2.48
11	13.96	5.87	28	3.68	2.75
12	13.67	4.58	9	4.33	2.29
Gender					
Females	14.97	5.60	173	3.66	2.45
Males	12.58	5.75	156	3.45	2.28
Race					
Blacks	14.09	5.30	172	4.02	2.09
Whites	13.56	6.29	157	3.06	2.56

·   **Cross Cultural Validity:**

Studies of cross-cultural validity of the RCMAS have tended to focus on issues of validity with respect to gender and ethnicity. Reynolds, Plake and Harding (1983) found that the RCMAS does contain some potentially

biased items in terms of different gender and race response, but the difference was not clinically significant.