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The Children's Depression Scale: Review and Further Developments

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Until the early 1960s, depression in children was rarely if ever mentioned in textbooks on child psychiatry and generally not diagnosed clinically. Since that time, however, interest in childhood depression has increased considerably and an ever-increasing number of papers on childhood depression is being published. In reviewing the status of the Children's Depression Scale (CDS), some perspective of the literature concerning definition and measurement of childhood depression is useful.

DEFINITION

Many authors writing in the 1970s agree upon a set of behaviors which are consistent with childhood depression. Kovacs and Beck (1977) (Table 1) provide a good summary of these characteristics, which include weepiness, looking or feeling miserable, weepy, or unhappy, low self-esteem, persistent somatic problems which are not of physical origin, irritability, and social withdrawal (Connell, 1973; Frommer, 1967; Glaser, 1967; Kovacs and Beck, 1977; McConville et al, 1973; Murray, 1970; Pozanski and Zrull, 1970).

While there is general agreement regarding the characteristics above, there are some important disagreements in the literature which should be noted.

The question of "masked" versus "overt" depression continues to be debated. Those who argue for masked depression claim that behavior such as truancy, lying, stealing, school phobia, enuresis, encopresis, hyperactivity, hypochondriasis, and delinquency, are indirect or masked ways in which children express their depression (Connell, 1973; Cytryn and McKnew, 1974; Bakwin, 1972; Fromer, 1967; Glaser, 1967; Ling et al, 1970; Renshaw, 1974). Other writers such as Anthony (1977) question whether by terming so many behaviors depression we are in fact contributing anything to the understanding of childhood depression.

A second question arising from the literature is whether depression is a syndrome or a mood state. Kovacs and Beck (1977) firmly draw the distinction between ". . . depression as a sad, despondent mood, and depression as a clinical syndrome (a collection of symptoms)." Murray (1970), identifies eight major symptoms which he considers indicate the presence of childhood depression as a syndrome.

A third issue is whether and when depression is normal or appropriate and when it is pathological. Lefkowitz (1977) and Lefkowitz and Burton (1978) review the literature and find that in epidemiological studies of deviant behavior in children, for example, the work of Lapouse and Monk (1958), approximately 20 percent of the general child population has been reliably judged to possess the symptoms of depressive disorder observed in clinical samples.

One of the important findings reported recently is that depression in children is manifested differently depending on the age of the child. McConville et al (1973) suggest that affectual depression would be most common in youngest children (six to eight years), that self-esteem depression would be most common in middle children (eight to ten years), and that guilt depression would be most common in oldest children (ten to 13 years). Cytryn and McKnew (1974) identify some of the factors which influence the changing clinical picture of childhood depression with age.

MEASUREMENT

To date, to our knowledge, two serious attempts have made to measure depression in children, neither of which has been published for general use. The first of these is the Wiggins and Winder Peer Nomination Inventory (Siegelman, 1966), in which 113 boys in grades four, five, and six were asked to rate each other on 58 items which covered five areas, one of which was depression, and the others aggression, dependency, withdrawal and likability. The second measure is the Children's Depression Inventory (Kovacs and Beck, 1977). Kovacs and Beck have adapted the BDI (Beck Depression Inventory), a scale which has been used widely with adults to measure depression, for use with children by changing or omitting items as necessary.

The Children's Depression Scale

Raskin (1977), after reviewing definitions of depression in children and measurement issues associated with depression in children, argues for the importance of what he calls a "laundry list" of symptoms and signs of childhood depression and of several simultaneous rating scales which are completed by the child, teacher, and others. He further argues for the separation of symptoms

and behaviors which are associated with mood and those which extend longer, for example, loss of appetite and loss of interest in activities previously enjoyed. We were pleased to note that the CDS in fact meets the criteria set up by Raskin.

In terms of definition, we see depression as a range of behaviors, feelings, and attitudes which varies in intensity and in extent. We expect that childhood depression is present to varying degrees throughout the population as well as having a role in various specific groups such as bereaved children, underachieving children, and psychiatric populations, particularly groups of children diagnosed as suffering from depression.

In terms of measurement, in the CDS we combine two types of measurements; we ask the child himself or herself to report on themselves, that is, self-report, and we ask for reports from others who know the child well, for example, parents, teachers, nurses. We also ask for a systematic clinical judgment by clinicians or testers, that is, a rating on each of ten scales.

Development of the CDS

Toward the end of 1967, we were interested in studying a sample of severe school refusing children and their families and comparing them with a matched control group of children who attend school regularly. On the basis of our clinical experience we had some expectations or hypotheses about the sorts of variables that would be important; these included separation anxiety, dependency, and, very importantly, depression in the children and in the families generally. While there were many scales to measure anxiety, personality disturbance, and so on, there was no scale available to measure depression in children; in fact at that time there was debate and some opposition in the literature to the concept that childhood depression could be an issue (Rie, 1966). As no scale of childhood depression was available, we decided to develop our own. A brief summary of the development of the scale follows.

The first step was to develop an empirical definition of childhood depression. We arrived at such a definition by summarizing the features reported in the literature as part of the symptomatology of childhood depression:

1. Affective response: feelings of sadness and unhappiness, weeping (Despert, 1952; Frommer, 1967; Harrington and Hassan, 1958; Poznanski and Zrull, 1970; Sandler and Joffe, 1965; Ushakov and Girich, 1971; Ling et al, 1970).

2. Negative self-concept: feelings of inadequacy and low self-esteem, feelings of worthlessness, helplessness, hopelessness, unlovability (Poznanski and Zrull, 1970; Sandler and Joffe, 1965).

3. Decrease in mental productivity and drive: boredom, withdrawal, lack of energy, discontent, little capacity for pleasure, inability to accept help or comfort, motor retardation (Sandler and Joffe, 1965; Stack, 1971; Ushakov and Girich, 1971).

4. Psychosomatic problems: headaches, abdominal pains, insomnia or other sleep disturbances (Agras, 1959; Harrington and Hassan, 1958; Poznanski and Zrull, 1970; Sandler and Joffe, 1965; Stack, 1971; Ling et al, 1970; Frommer, 1968; Kuhn and Kuhn, 1972).

5. Preoccupation with death or illness of self or others, suicidal thoughts, feelings of loss (real or imagined) (Agras, 1959; Despert, 1952; Frommer, 1967; Harrington and Hassan, 1958; Poznanski and Zrull, 1970; Ushakov and Girich, 1971).

6. Difficulties with aggression: irritability, temper outbursts (Frommer, 1967; Harrington and Hassan, 1958; Poznanski and Zrull, 1970; Stack, 1971).

For the purpose of constructing the CDS, these features constituted a definition of childhood depression, and in developing the CDS an attempt was made to include items pertinent to all these features.

Items were developed on the basis of close inspection of psychotherapy records and TAT and sentence completion records of clinically depressed children as well as descriptions of depressive phenomena and experiences reported in the literature. In phrasing the items, the aim was to describe the depressed child's experience in such a way that he or she would recognize the feelings or attitudes described by the item if they were in any way part of his or her experience.

These items were administered to a range of children in treatment at the time of scale construction. The children were subsequently requested to comment, modify, and/or suggest new items as they thought appropriate.

Description: Scales and Subscales

CDS

The full CDS contains 66 items, 48 depressive (for example, "Often I feel I'm not worth much," "Often I feel lonely") and 18 positive (for example, "I enjoy myself most of the time"). The two sets of items are retained as independent scales and scored separately, yielding a depressive score and a positive score.

Within the two main scales of the CDS certain items which refer to similar features of childhood depression have been grouped together as subscales. The depressive scale contains five such subscales and the positive scale contains one such subscale. Each is briefly described here.

Affective Response (Aff. Res.): Refers to the feeling state and mood of the respondent. Items are:

7 Often school makes me miserable
10 Sometimes I wish I was dead
27 I feel like crying often when I am at school

32 Often I feel miserable/weepy/unhappy
33 Sometimes I feel that life is not worth living
45 When I am away from home I feel very unhappy
51 Sometimes I don't know why I feel like crying
54 I feel that life is miserable for me

Social Problems (Soc. Prob.): Refers to the difficulties in social interaction, isolation, and loneliness of the child. Items are:

16 Often I feel nobody cares for me
18 Often I feel lonely
20 Often I can't show anybody how unhappy I feel inside
28 When I am at school I often feel lonely and lost
40 Most of the time I feel nobody understands me
49 Nobody knows how unhappy I really am inside
56 Often I feel I am no use to anyone
64 When I am away from home I feel empty inside

Self Esteem (Self Est.): Refers to the child's attitudes, concepts, and feelings in relation to his/her own worth and value. Items are:

9 Often I feel I'm not worth much
19 Often I am annoyed with myself
25 I hate the way I look or the way I act
35 Often I hate myself
38 Often I feel ashamed of myself
52 Sometimes I wonder whether I may be a very bad person inside
53 When I fail at school I feel that I am a nobody
58 Most of the time I feel I am not as good as I wish to be

Preoccupation with Own Sickness and Death (Sick/Death): Refers to the child's dreams and fantasies in relation to his/her sickness and death. Items are:

12 Often I wake up during the night
13 I feel more tired than most children I know
14 Most of the time I am not interested in doing anything
26 Often I don't feel like waking up in the morning
30 Often I feel dead inside
48 I feel tired most of the time when I am at school
60 I often imagine myself hurt or killed

Guilt (Guilt): Refers to the child's self blame. Items are:

21 Often I feel as if I'm letting my mother/father down
23 Sometimes I believe that my mother/father do or say things which make me feel as if I've done something terrible to them
37 Sometimes I am afraid that I do things which might harm or upset my mother/father

39 Often I feel I deserve to be punished
46 I sometimes feel upset becuase I don't love my mother/father as much as I should
47 I feel that people love me even though I don't deserve it
55 Sometimes I believe that I do things which could make my mother/father ill
61 I sometimes feel upset because I can't give my mother/father the attention and love that they need

Pleasure (Plsr.): Refers to the presence of fun, enjoyment, happiness in the child's life, or to his/her capacity to experience these things. Items are:

1 I enjoy myself most of the time
2 I'm always looking forward to the next day
8 I'm always keen to do lots of things when I am at school
22 I get fun out of the things I do
24 Often I enjoy myself at school
41 I'm a very happy person
65 I feel I'm a beautiful person
66 I'm successful in most of the things I try

The items in each of these subscales are mutually exclusive, that is, each item belongs to only one subscale. Thee are nine depressive items which do not cluster together and which do not belong to any of the subscales. These are scored as Miscellaneous D items. Similarly, there are ten positive items which do not belong to a subscale; these are scored as Miscellaneous P items.

Miscellaneous D items are:

3 I feel that there is a lot of suffering in life
4 When somebody gets angry with me I get very upset
6 When I feel very angry I usually end up crying
42 Often my schoolwork makes me miserable
43 Often I am upset about my mother's health
50 Sometimes in my dreams I am hurt or killed
59 Often I'm very upset because I don't get the opportunity to do things I want to do
62 Often I feel I'm not getting anywhere
63 Sometimes I feel there are two persons inside me pulling me in different directions

Miscellaneous P items are:

5 I feel proud of most of the things I do
11 Most of the time my mother/father make me feel the things I do are pretty good
15 In our family we all have lots of fun together
17 When somebody gets angry with me I get angry in return

29 I feel my mother/father are very proud of me
31 It is all right to feel angry
34 I sleep like a log and never wake up during the night
36 I have many friends
44 I spend my time doing many interesting things with my father
57 Many people care about me a lot

Different children manifest their depression in different ways; these subscales allow several aspects of childhood depression to be considered separately.

CDS–Adult Form

The CDS–Adult Form is intended for use with parents, siblings, teachers, and relatives of the child to yield another index of the child's depression. The items of the CDS were rephrased, for example, from "Often I feel I'm not worth much" to "Often he feels he is not worth much" (for boys) and "Often she feels she is not worth much" (for girls).

Rather than relying upon the respondent only, that is, the child, by using the CDS in conjunction with the CDS–Adult Form, the tester has information about the child's depression from at least two, and perhaps more, sources.

A systematic version of what commonly happens in a clinician's office is thus provided, that is, the child's state of feeling and behavior is explored with the child, the parents, the siblings, and perhaps teachers or relatives. All the information obtained is then used to provide an index of depression in the child which is more reliable and comprehensive than would be the case if only one respondent's information were being relied on.

Table 1 shows experimental and control group mean scores, F values, and significance level values, based on analysis of variance for each of the CDS and CDS–Adult Form items.

Of the 48 depressive items, 35 discriminate between the depressed and nondepressed children and 47 discriminate between the two groups of mothers. Of the 18 positive items, 11 discriminate between the two groups of children and 12 discriminate between the two groups of mothers.

Each of the 66 items of the CDS is printed on a separate card. The cards/items are presented one by one to the child or adult in order, that is, 1 through 66.

Five boxes are provided, each with a slit in the top. These boxes are labeled "Very Wrong –," "Wrong –," "Don't know/Not sure?," "Right +," and "Very Right ++." They are set up in a row in front of the child or adult, from left to right as follows:

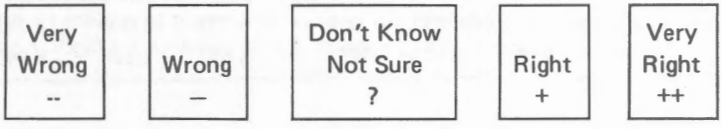

Table 1

	CDS				CDS adult form			
Item no.	Exp $\bar{x}$ n = 40	Cont $\bar{x}$ n = 37	F values	p	Exp $\bar{x}$ n = 39	Cont $\bar{x}$ n = 37	F values	p
3	3.950	3.649	1.125	NS	3.462	3.243	0.832	NS
4	3.725	3.351	1.700	NS	4.538	3.919	14.796	000
6	2.975	2.324	3.987	.049	3.846	2.919	10.081	002
7	4.075	2.595	27.308	.000	4.206	2.027	96.141	000
9	3.125	2.784	1.347	NS	3.615	1.811	68.286	000
10	2.950	2.703	0.491	NS	3.462	1.946	32.408	000
12	3.225	2.784	1.808	NS	3.385	2.081	24.872	000
13	3.150	2.081	18.330	000	3.256	1.892	26.968	000
14	2.950	1.757	19.235	000	3.026	1.486	38.606	000
16	2.925	2.297	5.049	.028	3.256	1.838	36.035	000
18	3.625	2.649	12.988	.001	3.718	2.189	45.879	000
19	3.750	2.919	11.817	.001	3.538	2.703	15.474	000
20	3.725	2.622	15.042	000	3.897	2.514	37.990	000
21	3.450	3.000	2.282	NS	3.103	2.135	19.950	000
23	3.400	2.622	7.260	.009	3.179	1.811	40.233	000
25	2.650	2.432	0.494	NS	3.051	1.757	46.433	000
26	3.875	3.405	2.350	NS	3.872	2.486	27.071	000
27	2.675	1.622	16.080	000	3.513	1.838	47.624	000
28	2.975	1.432	40.809	000	3.692	1.676	86.033	000
30	2.825	1.919	9.504	.003	3.256	1.919	36.858	000
32	3.575	2.189	27.289	000	3.821	2.000	70.830	000
33	3.150	2.432	4.521	.037	3.179	1.811	30.813	000
35	3.325	2.541	7.923	.006	3.333	2.054	27.193	000
37	3.525	3.000	2.922	NS	3.308	2.649	7.750	.007
38	3.425	2.541	10.952	.001	3.256	2.432	14.786	000
39	3.050	2.865	0.425	NS	2.949	2.432	5.276	.024
40	3.650	2.135	32.617	000	3.974	2.081	68.307	000
42	3.675	2.514	19.063	000	3.718	2.000	50.633	000
43	3.275	2.541	6.637	.012	3.077	1.892	22.853	000
45	2.830	2.000	10.726	.002	2.897	2.081	10.364	002
46	2.550	2.081	3.349	NS	2.923	1.892	20.654	000
47	3.325	2.595	9.414	.003	3.231	2.324	15.807	000
48	3.400	1.973	26.007	000	3.308	1.838	45.081	000
49	3.575	2.216	22.547	000	3.872	2.000	116.213	000
50	2.600	2.459	0.175	NS	2.897	2.378	4.962	.029

Table 1 (continued)

	CDS				CDS adult form			
Item no.	Exp $\bar{x}$ n = 40	Cont $\bar{x}$ n = 37	F values	p	Exp $\bar{x}$ n = 39	Cont $\bar{x}$ n = 37	F values	p
51	3.325	2.351	11.862	001	3.436	2.216	21.359	000
52	2.975	2.405	4.502	037	2.846	1.838	19.696	000
53	3.525	2.514	11.593	001	3.436	2.000	38.324	000
54	3.100	1.541	49.524	000	3.564	1.757	60.072	000
55	2.800	2.108	5.478	022	2.769	1.622	27.363	000
56	3.150	2.054	14.310	000	3.103	1.676	38.816	000
58	3.775	3.054	6.639	012	3.513	2.403	31.522	000
59	3.825	2.784	15.021	000	3.769	2.649	22.233	000
60	2.400	2.162	0.644	NS	2.641	2.054	8.513	005
61	3.050	2.162	9.397	003	2.692	1.787	24.899	000
62	3.850	2.405	33.419	000	3.641	2.189	38.637	000
63	3.300	2.351	9.212	003	3.231	1.973	35.192	000
64	2.925	1.973	12.841	001	3.026	2.000	23.470	000
1P	2.425	1.730	8.595	004	2.615	1.703	18.017	000
2P	3.025	2.351	6.857	011	3.000	2.081	25.374	000
5P	2.775	2.541	0.920	NS	2.154	1.892	2.372	NS
8P	3.425	2.270	17.000	000	2.718	1.838	17.296	000
11P	2.225	2.324	0.144	NS	2.256	1.865	3.488	NS
15P	3.000	2.273	7.067	010	3.103	2.378	11.461	001
17P	2.350	2.703	1.535	NS	1.897	2.649	9.008	004
22P	3.125	1.703	29.725	000	3.231	1.730	54.374	000
24P	2.925	2.297	7.235	009	2.718	2.054	9.135	003
29P	3.025	2.757	0.912	NS	2.436	2.405	0.021	NS
31P	3.150	2.832	0.836	NS	2.178	2.270	9.606	003
34P	2.875	1.730	17.241	000	3.205	1.973	27.584	000
36P	3.650	2.676	11.676	001	3.436	2.946	3.259	NS
41P	3.000	2.162	10.878	001	2.769	2.162	6.818	011
44P	3.625	3.270	2.001	NS	3.103	3.865	1.019	NS
57P	2.775	2.459	1.462	NS	2.308	2.108	0.801	NS
65P	2.625	1.649	20.266	000	2.282	1.622	10.827	002
66P	3.275	1.838	34.233	000	2.897	1.784	22.380	000

[a] Experimental (Exp) and Control (Cont) group means ($\bar{x}$), F values, and significance level values based on analysis of variance for each of the CDS and CDS adult form items where Very right = 5, Right = 4, Don't know = 3, Wrong = 2, Very wrong = 1.

This format ensures that the respondent focuses attention on one item at a time and that he/she is not unduly influenced by earlier items; it forces the respondent to manipulate each item separately and to take an active role while doing the CDS, possibly reducing the effects of response set. Most of the children who have used the CDS have enjoyed its game-like quality. Administration, scoring, and interpretation details are set out in the manual of the CDS (Lang and Tisher, 1978).

Description of Sample

The CDS was administered to a total sample of 96 children, 76 mothers, and 54 fathers. The breakdown of the sample is shown in Table 2.

The experimental group consisted of relatively severe cases of school refusal. The control group consisted of regular school attenders who had not missed more than ten school days during the year and who were matched with the school refusing children for age, sex, school, and year.

The clinic population includes children aged between nine and 16 years who were attending Bouverie Clinic, a child psychiatric clinic, for a variety of childhood psychiatric problems other than school refusal.

We found that the scale worked very well in discriminating between these three groups of children (Lang and Tisher, 1978). We further found that the children "enjoyed" using the scale, and that the use of the scale opened up considerable communication both between the child and ourselves and between the child and the parents. Although we had not used the scale with a group of depressed children, we considered on the basis of this initial pilot project that it was sufficiently promising to publish the scale as a research edition so that it could be widely used by many investigators and so that hopefully we could use the responses from different people and data collected by different investigators in pruning the scale further and producing a first edition. The Children's Depression Scale was published by the Australian Council for Educational Research, in August, 1978 (Lang and Tisher, 1978).

Table 2 Distribution of Sample

	Children				
Group	Boys	Girls	Total	Mothers	Fathers
Experimental	25	15	40	39	20
Control	22	15	37	37	34
Clinic population	12	7	19	0	0

All children were aged between nine and 16 years ($\bar{x}$ age: 13 years, 1 month).

USES OF THE CDS

1. The CDS enables the clinician to establish the extent of the child's depression both from the child's responses and from the responses of others (parents, teachers, etc) about the child. Preliminary results (Tables 3 and 4) indicate that parents generally tend to obtain lower scores than their children.

While parents in both groups tend to score lower than their children, this pattern is more consistent in the normal group than in the depressed group. In the depressed group, there is a slight tendency for parents (particularly mothers) to score higher than their children on the depressive scales (not on the positive scales).

Table 3 Parents and Children–Control Group

	Parents		Children			
	$\bar{x}$	SD	$\bar{x}$	SD	T value	p
Dep.	102.78	18.59	116.89	35.78	−2.18	< 0.03
Aff. Res.	15.32	3.81	17.43	6.09	−1.78	NS
Soc. Prob.	16.14	3.68	17.38	7.00	−1.10	NS
Self Est.	17.26	3.79	21.19	7.29	−3.02	< 0.00
Sick/Death	13.79	2.74	16.08	5.04	−2.53	< 0.01
Guilt	17.12	3.44	20.43	7.12	−2.58	< 0.01
p Scale	38.59	4.79	41.54	9.07	−2.40	< 0.02
Plsr.	15.32	2.18	16.00	4.90	−0.92	NS

Mean and SD scale and subscale scores of parents (CDS–Adult) and children (CDS) (n = 37 matched pairs).

Table 4 Parents and Children–Experimental

	Parents		Children			
	$\bar{x}$	SD	$\bar{x}$	SD	T value	p
Dep.	159.77	24.82	156.95	28.65	0.56	NS
Aff. Res.	27.74	5.82	25.70	6.44	1.84	NS
Soc. Prob.	28.22	5.51	26.55	6.47	1.47	NS
Self Est.	26.06	5.25	26.55	5.16	−0.51	NS
Sick/Death	21.81	5.53	21.83	5.55	−0.01	NS
Guilt	23.93	4.37	25.15	5.35	−1.36	NS
p Scale	49.15	10.46	53.27	11.45	−2.85	< 0.00
Plsr.	22.23	5.97	23.83	5.94	−2.05	< 0.04

Mean and SD CDS–Adult scores of parents and children's CDS scores (n = 40 matched pairs).

There are several possible interpretations for this finding. It may be that the parents of the depressed child are confronted by their child's depression in a way that makes it impossible for them to deny his or her depression. Hence the greater agreement between the scores. It is possible that the normal parent, while perhaps aware of his or her child's unhappiness, can see it in a broader context or as a transitory phenomenon and sees the child's depression in a more hopeful or positive light. Hence the greater discrepancy between the scores of parents and children in the normal group.

It may be that in the depressed families there is an enmeshed system between the parents and the child in which the boundaries become weak and therefore the child is unable to keep to him or herself the feelings of unhappiness. Consequently, it is shared and mutually amplified (Minuchin, 1974). In normal families, on the other hand, boundaries between parents and child are clearer. The child aged between nine and 16 years is likely to keep some of his feelings to him/herself. This would account for the greater discrepancy between parents' and children's score.

In any event, estimation of depression in the child can be done in the context of differences between scores of parents and child.

2. The CDS gives the clinician a clearer understanding of the nature of the child's depression by providing scores on a range of subscales which represent different areas of depression. For example, a child may score high on all subscales except social problems on which he/she does not receive a high score. This suggests that social functioning is an area of relative strength in a child who is otherwise depressed and points to a direction for therapy. Or a child may receive low scores on all subscales except the pleasure subscale, where he/she scores high. This suggests that the child is having difficulties in enjoying him/herself and that this is a problem area—although his/her general score on depression may be low.

3. The CDS permits the clinician to compare the child's responses with those of parents and others and to compare responses of mothers, fathers, and others with each other; this gives the clinician some understanding of the child's depression as it relates to the context in which he/she lives. For example, if the child receives a low score on depression, that is, he/she reports him/herself as not depressed, but both parents report him/her as depressed, questions may be raised in the clinician's mind—is the child unable/unwilling to communicate his/her depression? Are the parents' perceptions inappropriate? Are they perhaps seeing the child as depressed because they have problems of their own, etc. Or, if the CDS is given to all children in the family, not just the child with the present problem, other children in the family, hitherto perceived by the parents as "fine" or "very happy" may use the CDS to communicate their depression. This occurred with one family who came for treatment because of problems with one child, and the discussion of the CDS results resulted in a marked

change of family dynamics–mother and father became aware of the distress of the other child and realized that the "identified patient" was not the only or main problem.

The CDS has therapeutic uses in that it facilitates communication in the family and also between the family and the therapist. In our clinical use of the CDS with families we have had some dramatic and very rewarding experiences with families, where parents have for the first time often found out from the children that they are depressed and what sort of things are worrying their children. We have found parents grateful for being alerted to the possibility that their children are unhappy. We have found children relieved for the opportunity to tell their parents of feelings and attitudes which they have often been bottling up inside them for fear that their parents might not understand, or be angry with them, or feel that they have failed as parents. Perhaps the most useful aspect of the CDS in this context is that the items are written down on cards for the family members to read. In itself, this shows that the feelings stated are not unique to themselves, that others feel similarly, and that it is perhaps permissible for children to feel the way they do. In reviewing the uses to which the CDS has been put since its publication, we regret that more people have not used the CDS with families and we hope that rewriting the adult form, in paper and pencil form (see later, section on Research) will facilitate this use of the CDS in a family context.

RECENT DEVELOPMENTS AND RESEARCH

Questionnaire

In September 1979, that is, a year after publication, a questionnaire was devised and sent to all known users of the CDS. All in all 97 questionnaires were sent out.

Of the 97 respondents to whom the CDS was sent, 16 were overseas users (Canada, Japan, United Kingdom, United States, Norway, New Zealand, Israel, and Germany). Forty replies were received, and these are summarized briefly. Fifteen of the respondents were guidance officers with the counselling, guidance, and clinical services division of the education department. Most other respondents came from a range of positions, including consulting psychologists, university positions, court counsellors, social workers, and clinical child workers. In descriptions of their jobs, most people worked with children and families either in a clinical or school setting. Four people worked primarily in research.

At the time of reply, most respondents had been using the CDS for between nine and 12 months and the overwhelming majority used it mainly with children (that is, they used the CDS, not the CDS–Adult Form). It is interesting that

only one person reported using it with persons outside the nuclear family, namely with nurses in a hospital situation and comments that it was very valuable in this context.

Many respondents (74 percent) describe the subscales of the CDS as important. Two open-ended questions about the CDS were asked:

1. "The most useful things to me about the CDS are as follows." By far the most frequently expressed comment is that the CDS allows and encourages children to talk about things they did not usually express, to talk about things which otherwise are difficult for them to open up about, that it greatly improves and facilitates rapport between the child and the therapist, and that it encourages children to talk to the therapist.

The CDS was seen to provide an objective test and re-assurance for the user about his or her subjective opinions about the child. Many people felt that the boxes were extremely important and that they were much better than the pencil and paper form or other card-sorting tests that were available. Other useful things about the CDS include its usefulness in opening up communications between members of the family, its use in highlighting problem areas in the child's environment, its appeal to the child which frequently led to relief, and its opening up of areas as potential follow-up with the client. Several persons particularly found the subscales helpful in the context of diagnosis. Other useful things noted include research use, use of the CDS–Adult Form, especially where the children were too young or insufficiently verbal to do the CDS themselves, the school related questions for use in schools, the simplicity of administration, the opportunity to compare parent's and children's scores, and the format of the record form, namely, having the deciles on the scoring sheets so that there is no need to look up in the manual.

2. "The things I would like to change about the CDS are as follows." Most comments related to administrative difficulties, for example, scoring, confusing card colors, specific wording. Some requests for larger standardization samples were also made.

Ongoing Research and Preliminary Results

Some of the ongoing research using the CDS is briefly described in this section. There may of course be considerably more work in progress than we report; we only report work of those researchers who have made contact with us. We are interested in hearing from others similarly engaged.

Except where otherwise acknowledged, reported are our statistical analyses of results sent to us by researchers. We express appreciation to workers in the field for their cooperation. Professor Kodaki at Shimane University in Izumo, Japan, has translated the CDS into Japanese and has used a paper and pencil form of the CDS with 389 boys and girls in normal schools from fifth grade to

12th grade, that is, aged nine years through to 18 years. We have carried out some statistical analysis of these results (Tables 5 and 6).

Of the variables age and sex, age contributes to differences in scores more heavily than sex. With respect to sex differences, girls obtain higher scores on social problems ($p < 0.002$) and on full D scale (approaching significance, $p < 0.059$). With respect to age, boys over 14 years obtain higher scores on all depression scales and subscales except sickness/death. The pleasure subscale and p scale scores are opposite in direction to the depression scale and subscale scores; this may reflect some interesting cultural differences or it may be that in the process of translation some of the specific colloquial meanings of the items are different. It may also be that the reverse scoring procedures have been carried out differently.

Erica Frydenberg, in Melbourne, Australia, is looking at childhood depression in a normal school population of 11-year-olds. The CDS and other measures of childhood depression, including the Children's Depression Inventory, are being used. The relationship between general abilities, educational achievement, socioeconomic status, and depression is being investigated. Use of several measures of depression will yield important findings regarding validity of the CDS and some of its correlates. The relationship between cognition and

Table 5 Japanese Sample: Age Differences

Variable	Age	$\bar{x}$	SD	Value	DF	p
Affective response	14 years and older	17.952	4.855	2.94	387	< 0.003
	Under 14 years	16.415	5.367			
Social problems	14 years and older	20.257	4.89	3.62	387	< 0.000
	Under 14 years	18.465	4.67			
Self-esteem	14 years and older	25.687	5.611	7.03	387	< 0.000
	Under 14 years	21.654	5.492			
Sickness/death	14 years and older	16.583	3.782	0.89	300.43	< 0.374
	Under 14 years	16.195	4.502			
Guilt	14 years and older	22.348	4.367	3.21	387	< 0.001
	Under 14 years	20.969	3.852			
Full D scale	14 years and older	129.703	22.163	4.55	383	< 0.000
	Under 14 years	119.000	23.370			
Pleasure	14 years and older	23.604	4.616	3.36	387	< 0.001
	Under 14 years	25.226	4.765			
Full P scale	14 years and older	53.696	7.676	2.88	387	< 0.004
	Under 14 years	55.956	7.502			

n = 230 for 14 years and older; n = 159 for under 14 years.

Table 6 Japanese Sample: Sex Differences

Variable	Sex	$\bar{x}$	SD	Value	DF	p
Affective response	Boys	16.502	4.417	3.21	365.35	< 0.001
	Girls	18.149	5.632			
Social problems	Boys	19.313	4.744	0.86	387	< 0.391
	Girls	19.737	4.999			
Self-esteem	Boys	23.118	5.979	3.12	387	< 0.002
	Girls	24.964	5.685			
Sickness/death	Boys	16.631	3.902	1.00	387	< 0.319
	Girls	16.217	4.272			
Guilt	Boys	21.626	4.132	0.74	387	< 0.458
	Girls	21.943	4.301			
Full D scale	Boys	123.140	21.425	1.89	374.64	< 0.059
	Girls	127.604	24.774			
Pleasure	Boys	24.436	4.905	0.70	387	< 0.483
	Girls	24.098	4.572			
Full P scale	Boys	54.989	7.780	0.95	387	< 0.341
	Girls	54.247	7.574			

Boys n = 195; girls n = 194.

depression is also being looked at; high and low CDS scorers will be given verbal and numerical tasks to perform. Following from Beck's work with adults, the prediction is that high CDS scorers will judge their performance poorly, predict further performances poorly, and will be more reluctant to perform further cognitive tasks.

Tonkin and Hudson, also working in Melbourne, have completed a study titled "The Childrens Depression Scale: Some Additional Psychometric Data" (Tonkin and Hudson, 1980). They report upon a sample of 60 pupils of a Melbourne outer-city primary school—"Almost all of the children lived in high-rise accommodation and were of migrant background." The children were aged nine to 13 years, including 33 boys and 27 girls. Tonkin and Hudson report that girls score higher than boys but that there are no significant differences among the age groups. The mean scores of children in their sample are considerably higher than mean scores of normal children reported in the CDS manual—an interesting finding which is discussed below in relation to results of other studies. Tonkin and Hudson administered the CDS on a test-retest basis, each child being given the scale twice; the interval between test and retest ranged from seven to ten days. Subscale coefficient alphas ranged from 0.54 to 0.77 and the overall scale coefficient alpha was 0.92. The test-retest correlation

Table 7 Gardiner Sample: Age Differences

Variable	Age	$\bar{x}$	SD	Value	DF	p
Affective response	Up to 11.2 years	21.888	5.904	0.53	188	< 0.596
	11.3 years and over	21.409	6.278			
Social problems	Up to 11.2 years	24.250	6.037	1.04	188	< 0.299
	11.3 years and over	23.236	7.021			
Self-esteem	Up to 11.2 years	24.838	6.357	0.33	188	< 0.744
	11.3 years and over	24.518	6.859			
Sickness/death	Up to 11.2 years	20.488	5.047	0.14	188	< 0.891
	11.3 years and over	20.382	5.352			
Guilt	Up to 11.2 years	25.825	5.681	1.34	188	< 0.182
	11.3 years and over	24.618	6.428			
Full D scale	Up to 11.2 years	146.863	26.938	0.77	188	< 0.443
	11.3 years and over	143.482	31.930			
Pleasure	Up to 11.2 years	- 22.738	4.767	0.38	188	< 0.705
	11.3 years and over	23.036	5.753			
Full P scale	Up to 11.2 years	39.938	8.678	0.74	188	< 0.458
	11.3 years and over	40.945	9.612			

Up to 11.2 years, n = 80; 11.3 years and over, n = 110.

was 74 for each of the depression and positive scales (Tonkin and Hudson, 1980).

A study was begun at the Austin Hospital in Melbourne under the direction of Bruce Tonge, MD, using the CDS to look at depression in children who are hospitalized. The CDS was administered to children on their first day of hospitalization, on the fifth day of hospitalization, and the follow-up was carried out six months later after their return home. Nurses and parents were also asked to complete the CDS Adult Form. Unfortunately, owing to staff shortages, this study has not yet been completed.

Gardiner has completed a study: "An Investigation of the Relationships between Lateral Preferences and Personality and Emotional Characteristics in Children" (Gardiner, 1980). Gardiner used the Eysenck Personality Questionnaire (Junior) (EPQ) and the CDS with 192 children and reports that "the hypothesis that there are significant relationships between lateral preferences and personal and emotional characteristics in children cannot be accepted."

Analysis of CDS scores indicates no sex or age differences (Tables 7 and 8). The absence of age differences is consistent with results of Tonkin and Hudson and may be expected as his sample also spanned a small age range of nine to 12 years, with most children aged 10 and 11). The absence of sex differences,

Table 8 Gardiner Sample: Sex Differences

Variable	Sex	$\bar{x}$	SD	Value	DF	p
Affective response	Boys	22.102	6.440	1.03	188	< 0.304
	Girls	21.186	5.813			
Social problems	Boys	23.876	6.930	0.41	188	< 0.683
	Girls	23.480	6.383			
Self-esteem	Boys	24.829	7.184	0.34	188	< 0.734
	Girls	24.500	6.158			
Sickness/death	Boys	20.250	5.463	0.43	188	< 0.666
	Girls	20.578	5.008			
Guilt	Boys	24.921	6.198	0.43	188	< 0.669
	Girls	25.304	6.111			
Full D scale	Boys	145.773	32.197	0.37	188	< 0.711
	Girls	144.157	27.910			
Pleasure	Boys	17.284	5.130	0.74	188	< 0.461
	Girls	17.833	5.093			
Full P scale	Boys	40.602	8.946	0.11	188	< 0.911
	Girls	40.451	9.493			

Boys n = 88; girls n = 102.

however, is interesting in the light of results reported in the CDS Manual (Lang and Tisher, 1978) and by Tonkin and Hudson which showed that girls scored higher than boys. These comparative results are further discussed below.

A table of correlations between CDS and EPQ scores was obtained (Table 9). Nearly all the correlation coefficients reported in the table are significant, indicating that scale and subscale scores of the CDS correlate positively with psychoticism and neuroticism and negatively with extraversion as well as with the lie scale. The highest level of correlation is between the full D scale score and neuroticism—a finding which may be expected in view of Eysenck's description of "... the typical high N scorer as being an anxious, worrying individual, moody and frequently depressed. He is likely to sleep badly, and to suffer from various psychosomatic disorders" (Eysenck, 1975). Overall, the scale and subscale scores correlate most highly with neuroticism, although the pleasure scale and subscale scores are also highly correlated negatively with extraversion. Eysenck described "the typical introvert" as "a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant except to intimate friends" (Eysenck, 1975). It is appropriate that this sort of person will be unable to enjoy life as expressed in the pleasure scale and subscale scores, also in the 0.27 correlation with social problems scores.

Table 9 Correlation Between CDS Scale and Subscale Scores and EPQ Scores

	PSYCH	EXTRA	NEURO	LIE
SUBAFF	0.1665	−0.2743	0.6050	−0.1415
	(190)	(190)	(190)	(190)
	S = 0.011	S = 0.001	S = 0.001	S = 0.026
SUBSOC	0.1644	−0.274	0.4925	−0.0327
	(190)	(190)	(190)	(190)
	S = 0.012	S = 0.001	S = 0.001	S = 0.327
SUBSELF	0.1685	−0.1610	0.5385	−0.1598
	(190)	(190)	(190)	(190)
	S = 0.010	S = 0.013	S = 0.001	S = 0.014
SUBSD	0.2509	−0.1508	0.5441	−0.1583
	(190)	(190)	(190)	(190)
	S = 0.001	S = 0.019	S = 0.001	S = 0.015
SUBGUILT	0.1761	−0.0432	0.3617	−0.1453
	(190)	(190)	(190)	(190)
	S = 0.008	S = 0.277	S = 0.001	S = 0.023
SMISCD	0.1003	−0.0870	0.5413	−0.6133
	(190)	(190)	(190)	(190)
	S = 0.084	S = 0.116	S = 0.001	S = 0.012
FULLD	0.2048	−0.2083	0.6356	−0.1572
	(190)	(190)	(190)	(190)
	S = 0.002	S = 0.002	S = 0.001	S = 0.015
SUBPLEA	0.1618	−0.4817	0.3228	−0.3145
	(190)	(190)	(190)	(190)
	S = 0.013	S = 0.001	S = 0.001	S = 0.001
SMISCP	0.0279	−0.4370	0.2645	−0.1582
	(190)	(190)	(190)	(190)
	S = 0.351	S = 0.001	S = 0.001	S = 0.015
FULLP	0.1064	−0.5192	0.3291	−0.2673
	(190)	(190)	(190)	(190)
	S = 0.072	S = 0.001	S = 0.001	S = 0.001

Correlations with the psychoticism and lie scale scores are more difficult to comment upon—Eysenck says of the p scale: "The nature of the p variable can of course only be guessed at, at the moment" (Eysenck, 1975). Of the lie scale, he states, "The main difficulty seems to be that in addition to measuring dissimulation, the L scale also measures some stable personality factor which may possibly denote some degree of social naiveté," and "hence the scale must measure some stable personality function; unfortunately little is known about the precise nature of this function" (Eysenck, 1975).

Table 10 Showing Comparative Mean and Standard Deviation Scores on Full D Scale for Different Samples Studies

Sample		Total D score $\bar{x}$	Total D score SD
Lang and Tisher (1978)			
Control group	Boys (n = 22)	106.3	36.5
	Girls (n = 15)	132.5	30.3
Experimental group	Boys (n = 25)	153.6	25.3
	Girls (n = 15)	162.6	31.9
Clinical group	Total (n = 19)	134.5	23.9
Tonkin and Hudson (1980)	Boys (n = 33)	132.46	24.24
	Girls (n = 27	141.32	25.95
Gardiner (1980)	Boys (n = 88)	145.773	32.197
	Girls (n = 102)	144.157	27.910
Kodaki (1980)	Boys (n = 195)	123.140	21.424
	Girls (n = 194)	127.604	24.774

The results of the six samples reported to date have been put together for preliminary comparative purpose and are set out in Table 10. Total depression scores only are reported and scores for boys and girls are reported separately. Inspection of the table indicates that, with the exception of Gardiner's sample, girls consistently obtain higher scores than boys. It is important to look at the differences in scores between samples. For example, the scores in both Tonkin and Hudson's sample and Gardiner's sample are more similar to the scores of the clinical group reported by Lang and Tisher than to their control group. Unfortunately, no socioeconomic correlational data is available with respect to the three samples other than that of Lang and Tisher. However, both Tonkin and Hudson's sample and Gardiner's sample deal mainly with 11 to 12-year-olds (while Lang and Tisher dealt with nine to 16-year-olds) and both report that their samples are from outer-city schools; indeed Tonkin and Hudson's were almost all migrant and from high-rise accommodation and Gardiner's sample including a heavy percentage of migrant children. Findings of levels of depression comparable to that of a general clinical control group may be entirely appropriate, and certainly foreshadow the importance of a wide-scale assessment of depression in the community. Scores of the Lang and Tisher control group are lower than scores of children from other samples; the control group was obtained on the basis of empirical criteria which probably yielded a super-normal sample-children who had not missed more than ten school days of an entire school year. These children probably also knew they were participating

because they were a "normal" group and this may have influenced them to respond in a "normal" way.

The Japanese sample shows scores between those of the Lang and Tisher control group and those of the two outer-city samples. It is also interesting that in the Japanese sample, older children obtain higher scores than younger children. In the Gardiner sample and Tonkin and Hudson sample, no age differences are present; however, this is probably due to the small age range in both these samples. However, the age range in the Japanese sample is similar to that in the Lang and Tisher sample, where age differences were not significant, but tended to be in the direction of younger children obtaining higher scores. Again, the importance of cross-cultural comparison is highlighted.

The data available for proper interpretation of this table is unfortunately sparse. Nonetheless, we report it because it opens up questions about levels and areas of depression in difference groups in the community.

Further Developments

In addition to the work of Professor Kodaki in translating the CDS into Japanese, negotiations are presently in progress for translation of the CDS into several other languages (Italian, Dutch, Spanish, French, and Hindu).

Several changes in the next edition of the CDS may be foreshadowed. The CDS–Adult Form will be produced in paper and pencil form; the reverse scoring of the positive items will be altered so as to be consistent with scoring of depression items; and the colors of the cards will be more distinguishable from each other. The preliminary norms suggested in the research manual will be updated and reported on the basis of larger samples.

We plan to develop the CDS–Adult Form for use with younger children and are devising items that would be appropriate for use with preschool children. We hope to develop a brief form of the CDS–Adult Form so that teachers and others can rate children on the essential features of depression even if they do not have the time to complete the full CDS–Adult Form. Use of the subscales for rating purposes would be a good starting point, that is, rating children on affective response, social problems, self-esteem, preoccupation with own sickness and death, guilt, and pleasure.

It is clear that in measuring depression it is important to obtain a profile of depression in different areas (subscales) as well as global scores of depression. We plan to look at the subscales statistically and try to determine how the different subscales of depression interrelate with each other, and the extent to which their interrelationships or their relative significance is a function of age, family variables, etc. We also intend to use independent diagnostic criteria to identify a group of depressed children (while being aware of the difficulties in discovering such a sample–see Raskin, 1977), a group of children attending

clinics or hospitals for reasons other than depression, and a normal group in the community, and compare CDS scores of children in all three groups.

Finally, we are working toward establishing the extent and nature of childhood depression in the general community as well as in specific groups of children, such as those who under-achieve academically, children of parents who are separated, children who are bereaved, children who are hospitalized, and so on.

Two and a half years after publication of the CDS, we are encouraged by the high level of interest shown in the scale and by research, both ongoing and foreshadowed.

We look forward to hearing from clinicians and researchers who use the scale and to working together in further developments in the area of childhood depression.

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