

MANUAL
for the
REVISED BEHAVIOR PROBLEM CHECKLIST

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PREFACE

The ease with which the RBPC may be both completed (by many different informants) and scored should not be taken as suggesting that the RBPC can be used by persons without adequate training in child psychopathology and tests and measurements. The RBPC, as is the case with any assessment tool, should be used to make decisions about individuals only in conjunction with other types of measures — intelligence and achievement tests, behavior observations, and interviews with the individual and significant others in the environment. The administration, and especially the interpretation, of any of these assessments is generally the province of the psychologist trained at the Master's level or beyond.

As of the date of this Manual, early commentaries on the Revised Behavior Problem Checklist may be found in Lahey and Piacentini (1985), Knoff (1985), and Martin, Hooper, and Snow (1986).

Introduction

The original Behavior Problem Checklist (BPC), first made available in 1967, was the outgrowth of a series of factor analytic inquiries into the structure of deviant behavior in children and adolescents which had begun in 1959. (See Quay, 1977 for a review.)

The BPC became widely used for a variety of purposes including screening for behavior disorders in the schools, as an aid in clinical diagnosis, as part of a battery of instruments for the classification of juvenile offenders, for the measurement of behavior change associated with psychological and pharmacological interventions and for the selection of subjects for research into the nature of the major dimensions of behavior disorder in children and adolescents. It was found useful in deaf, blind, and retarded populations and was translated into eight foreign languages. The BPC was the focus of, or was utilized in some way in more than 100 published studies.

A revision of the BPC was undertaken in 1980 to strengthen its psychometric characteristics. We did not seek to widen the scope of the BPC (although one new scale has been added) but rather we sought to improve upon the measurement of those wide-band dimensions best replicated in the entire multivariate literature (see Quay, 1986). We also sought to keep the Revised Behavior Problem Checklist (RBPC) within reasonable limits as regards length and to retain as simple a format as possible.

Development of the RBPC

The 99 new items on the 150 item experimental version were derived principally from a review of more than 40 published studies that had reported one or more factors that could reasonably be labeled as conduct disorder, anxiety-withdrawal, immaturity or attention deficit, and socialized aggressive disorder. Since items related to an autistic and/or psychotic dimension of psychopathology were rare in multivariate literature, Werry's (1979) review of these conditions was utilized as well. Additionally, and particularly in the case of socialized aggression, new items were written. In many instances items taken from the literature were rewritten for (hopefully) greater clarity and for consistent grammatical expression. Some of the original items of the BPC were also slightly reworded.

We avoided including six types of items: (1) those likely to be related to two or more dimensions, such as "does poor school work," "failing grades," or "has been arrested;" (2) items that had shown high frequencies of occurrence in random samples of normal children or whose significance to psychopathology was unclear, such as "nail-biting," "enuresis," and "thumb sucking;" (3) items seeming to require an excess of inference on the part of raters, such as "fears own impulses" and "sex preoccupation;" (4) items globally descriptive of pathological behavior, such as "obsessions" and "compulsions," whose meaning might be unclear to nonprofessional observers; (5) items describing somatic complaints whose relationship to psychopathology was unclear, such as "headaches," "stomach aches," and "vomiting;" and (6) items having to do with sexual behavior that, while they may possibly be valid syndrome indicators, would make the checklist unacceptable in some situations.

Factor Analyses

Data for four separate factor analyses were obtained on clinical samples representing a broad range of deviant behavior and an age range from 5 to almost 23. These samples are described below.¹

Sample 1 consisted of 276 cases in two private psychiatric residential facilities. The ratings were provided by staff including teachers, principals, child care staff, and supervisors. Seventy-two percent were males, 28% females; 87% were white, 13% black. The vast majority (94%) of this sample came from lower middle class homes. The age range was from 5 years 5 months to 22 years 11 months with a mean of 15 years and a standard deviation of just under 3 years. For the 253 cases on whom IQ data were available, the mean was 91.31. A number of different tests were used to obtain the IQ so that this mean must be interpreted cautiously. However, for the 139 cases on which the WISC or WISC-R was available, the mean PIQ was 106.15 and the mean VIQ was 95.81.²

Sample 2 was composed of 198 cases, both outpatients and inpatients, who were rated by their parents (the vast majority by mothers) at the time of intake to two different facilities. Sixty-four percent were male, 36% were female, 87% were white, 13% black. Forty-nine percent come from lower, 43% from middle, and 8% from upper class families. The ages ranged from 3 to 21 years; the mean was about 11 years 6 months (139.86 months) and the SD was just over 4 years (52.69 months). For those 95 inpatients on whom IQs were available, the mean Full scale score was 98.49 (SD = 13.27), the mean VIQ was 95.00 (SD = 15.17), and mean PIQ was 109.84.³

Sample 3 was comprised of 114 children attending a private school for children with learning disabilities. Eighty-two (72%) were males; 32 (28%) were females. The mean age was just at 10 years (122.59 months) with an SD of just over 2 years (25.52 months). Almost all of this sample was white, of a middle class background and of average intelligence.⁴

Sample 4 consisted of 172 ratings of children in a community-sponsored school for children with developmental disabilities. Thirty-nine ratings were of girls and 133 of boys. Sixteen percent of the children were from lower, 51% from middle, and 33% from upper class homes. Almost all were significantly impaired in intellectual functioning.⁵

As noted above, all four samples were factored independently. Only those items with a frequency of endorsement of greater than 15% and less than 85% were utilized. Principal axis analysis with R^2 as the initial communality estimate was utilized with subsequent rotation to the varimax criterion (Kaiser, 1958).

Items selected for inclusion in the RBPC were those that were: (1) most consistent in their factor placement, (2) had the highest loadings, (3) loaded on one factor only (except for trivial [$< .20$] loadings on other factors), and (4) contributed to the Alpha coefficient (Cronbach, 1951) of the scale in which they appear both in the samples used for the factor analyses and in three additional samples (see below).

These procedures resulted in four major scales: (1) Conduct Disorder (CD) (22 items), (2) Socialized Aggression (SA) (17 items), (3) Attention Problems-Immaturity (AP) (16 items), and (4) Anxiety-Withdrawal (AW) (11 items). Two additional scales with fewer items were also retained: Psychotic Behavior (PB) (6 items) and Motor Tension-Excess (ME) (5 items). The items comprising the six scales along with their factor loadings in the four samples are presented in Table 1.

Scoring of the RBPC

While the process described above resulted in incorporation of 77 items into the RBPC, the checklist currently contains an additional 12 items *which are not now scored*.

In contrast to the original BPC, the RBPC uses weighted scoring. Each item circled "1" earns one point and each item circled "2" earns two points for its respective scale. Thus, the maximum obtainable score for any of the six scales is two times the number of items on the scale (e.g., CD maximum score is 44) while the minimum score for all scales is obviously zero.

Scoring is mostly simply accomplished by the use of the scoring templates which are provided with each RBPC kit and which may be obtained separately as well. The two templates fit over the two inside pages (pages 2 and 3) of the checklist, respectively. Aligning the templates, first for CD, then SA, then AP, and so on, permits the scorer to count the "1s" and "2s" that appear in the appropriate boxes on the template. These "1s" and "2s" are summed to obtain the raw scale scores. Obviously, no obtained score can exceed the maximums as noted above.

Psychometric Properties of the RBPC

Scale Intercorrelations

While orthogonal rotation procedures (e.g., Varimax) result in uncorrelated underlying dimensions, the resulting factor scales provide only estimates of these dimensions. Thus, obtained scale scores may be correlated among themselves to varying degrees depending upon the operation of a variety of influences. It is worth noting that the utility of any single scale is diminished when it is found to correlate highly with one or more of the other scales. Users of rating scales should not be misled by the interpretive possibilities seemingly presented by a large number of (supposedly) independent scales. It should be obvious that two scales that are routinely found to correlate .80 and above are unlikely to make *independent* contributions to the prediction of any criterion measure — as both scales are measuring something very similar. Knowing the degree of intercorrelation among any set of scales allows the user to gain insight into the likelihood

that any one scale will add information beyond that provided by another scale.

Obtained intercorrelations among the subscales in six different samples are set out in Table 2. As expected, CD shares considerable variance with SA (9%-42%), AP (20%-31%), and ME (9%-49%) but is basically independent of AW (1%-14%) and PB (2%-23%). SA shares no more than 18% of its variance with any scale except CD. AP shares variance with CD as noted above and with AW (6%-27%), PB (12%-48%), and ME (10%-27%). AW relates to AP as noted above but is only minimally related to the other scales. Finally, PB and ME share little variance (0%-22%).

The correlation of CD with SA, AP, and ME reflect the "externalizing" (Achenbach, 1966) nature of all three dimensions although SA is only minimally related to AP and ME. The AP-ME correlation reflects the often-found association of motor overactivity with attentional problems. The relationship of AP to PB is likely due to a component of language and cognitive dysfunction common to the two dimensions. That AW correlates to any meaningful extent only with AP suggests that AP also has some features of the "internalizing" (Achenbach, 1966) dimension represented by the AW scale.

Reliability

Internal Consistency

As noted above, the extent to which an item contributed to the Alpha reliability of each subscale was a part of the criteria for the inclusion of that item. Table 3 presents the Alpha reliabilities for the subscales for three of the four samples described above. Additionally, alpha reliabilities appear for two additional samples not used in the factor analyses.

Sample 5 consisted of 72 diabetic children attending a summer camp who were rated, in all but four cases, by the mothers. Females composed 55% of the group while 45% were males; 95% were white, 5% black. Ages ranged from 7 years 4 months to 15 years 7 months with a mean of just under 12 years (143.26 months) and an SD of 27.29 months. The sample was predominately middle class (90%) with 10% of the cases coming from welfare homes.⁶

Sample 6 consisted of 294 children in grades one through eight in two public schools: one suburban, one rural.⁷

Interrater Reliability

In addition to factors inherent in the scales themselves (including the number and "observability" of the items), obtained interrater reliability is a function of the range of scores obtained, the situational generality of the behavior being measured, and the ability and motivation of the raters to carry out the task of making the ratings.

The majority of the developmentally disabled children in *Sample 4* were rated by ten teachers. Each of the ten teachers shared a rating with some other member of the staff on subsamples ranging from six to 20 pupils. The average intercorrelations among the raters were: CD .85, SA .75, AP .53, AW .52, PB .58, and ME .58.

Ratings from two teachers were obtained on a small subsample ($n=9$) of a large number of students in a public school for the seriously emotionally disturbed (see Section on Norms). The correlations were .87 for CD, .59 for SA, .74 for AP, .64 for AW, and .70 for ME (all significant at .05 or beyond). A correlation could not be calculated for PB as all nine students received zero scores from all raters; interrater agreement was obviously perfect in this case even though no correlation could be computed.

Ratings from both mothers and fathers were obtained on 70 children in the parent-rated

normative sample (see Section on Norms). The interparent correlations (all significant at the .05 level or better) were: CD = .70, SA = .93, AP = .73, AW = .55, PB = .67, and ME = .77.

Mother and father ratings on 63 Hispanic males (ages 6-11; $X = 8.9$) were obtained prior to entry into an experimental family therapy program.⁸ While these ratings were made on a Spanish translation of the RBPC, they are reported here because they represent interparent agreement when data were being collected for clinical purposes. The obtained interparent correlations were .73 for CD, .81 for SA, .24 for AP, .69 for AW, .54 for PB, and .97 for ME. With the exception of AP ($p = .03$), all were significant beyond the .001 level. The AP scale is clearly more difficult for parents to rate, especially fathers; many of the items are much more easily observed in the classroom than in the home.

Simpson and Humphrey (1984) have reported correlations between parents and teachers on samples of 3rd, 4th, and 5th grade children attending school in a rural community in the Southeast. They found parent-teacher correlations to be extremely variable across both the six scales and the three grades. Values for CD were .17, .71, and -.13; for SA .18, -.10, and -.06; for AP .41, .52, and .22; for AW -.61, .07, and .10; for PB .16, -.17, and -.08, and for ME .13, -.07, and -.03. When compared with the data given above, these values are so variable and some so low, even negative, as to lead one to question the competence of the parents in this rural sample to rate their children without some on-the-spot help in reading and interpreting the items.

Test-retest Reliability (Stability)

One hundred forty-nine children in grades one through six were rated by their teachers in October and again two months later.⁹ The stability correlations were .63 for CD, .49 for SA, .83 for AP, .79 for AW, .61 for PB, and .68 for ME. For all of the scales except PB the scale means were significantly lower at the time of the second rating. This finding may reflect a "settling-in" of the children, an increasing teacher tolerance for deviance, simple regression toward the mean, or some combination of all three.

The obtained stability correlations for SA and PB were attenuated by the *very* limited variance of the scores for two scales. On SA, 127 children (85% of the total) received zero scores in October; 125 also received zero scores in December. Thus, for 84% of the total sample, the two ratings agreed exactly. Of the 22 cases who received a score greater than zero at the first rating, only seven received a score greater than zero in December while 15 went from some score to no score. This shift to zero scores over time suggest that in putatively normal *elementary* age children, SA scores greater than zero should be interpreted cautiously.

On the PB scale, 145 children (97%) received zero scores on the first rating; 141 of these children also received zero scores at the second rating. Thus, 94% of the cases had scores (zero) which corresponded *exactly* from the first to the second rating. Of the four cases who received scores greater than zero in October, three also received greater than zero scores in December.

The low test-retest reliability of CD (the scale that, as noted above, has generally shown the greatest internal and interrater consistency) is apparently due to decreases in original scores greater than zero to zero over the two months. On CD 95 cases (64% of the total) initially received zero scores; of this group 88 (93%) also received zero scores in December. However, 54 children received scores greater than zero on the first rating; only 30 of this group received a score greater than zero in December. On the high side, however, 11 children (7% of the total) initially received scores 1.5 SD or greater above the mean for the entire sample. Of this group, 8 (73%) also received scores greater than 1.5 SD on the second rating.

In May, teacher ratings were obtained on all pupils attending a private school for children

with learning problems (see below).¹⁰ In March of the following year, 103 pupils (25 girls and 78 boys) still attending were again rated but by different teachers than in the previous year. Since this sample provided a very restricted range of values on most subscales (see below), Pearson correlations were not an adequate index of stability.

The data of greatest practical interest pertain to the stability of classification of individual children. For example, if one defined an obtained scale score equal to or greater than the sample mean plus one SD as a "problem" score, concern would center on the extent to which children may have shifted into or out of this range when the later rating was compared to the earlier.

On the CD scale 22 of 25 girls received scores *less* than the mean plus one SD at the first rating; none of them equaled or exceeded this critical score at the second rating, so that there was 100% stability in "nonproblem" group. Two girls who would have been in the "problem" group originally dropped below this level at the second rating so that stability for the three cases in the "problem" group was 33%. Since these were the only two cases in which the classification was changed from year one to year two, the overall stability of classification for the girls was 92%.

Sixty-two of the 78 boys (79%) had scores below the "problem" level at the first rating; 7 cases shifted into the "problem" group at the second rating. Thus, 89% of the "nonproblem" group remained stable. Of the 16 boys originally scoring in the "problem" range, 10 remained there at the second rating, while 6 shifted downward. Stability of "problem" cases was thus 68%, while overall stability was 83%.

For both sexes there were proportionately more shifts from "problem" to "nonproblem" than vice versa. No girls became CD "problems" in their second year, while of the three who met the criteria at the first rating, only 1 continued to do so. Seven boys (out of 62; 11%) who had been below the cut-off initially moved into the "problem" range at the second rating; of 16 boys who had earlier been in the "problem" category, 6 (37%) no longer fell into that category at the second rating.

At the first rating, 20 (of the 25) girls scored below the "problem" cut-off on AP; at the second rating, 2 cases had shifted into the "problem" range so that 90% of the original "nonproblem" group remained as they were. Five girls originally received scores in the "problem" range; 2 remained "problems," while 3 shifted downward into the "nonproblem" range (40% stability). Overall, the classification 20 of the 25 girls (80%) remained stable over the 10-month interval.

At the first rating 50 boys were below the critical score on AP; 11 of these had shifted into the "problem" range at the second rating, however, so that there was 78% stability for the "nonproblem" group. Twenty-eight boys originally scored in the "problem" range; 10 remained in that range, while 18 shifted into the "nonproblem" range so that the stability of the original "problem" group was only 36%. Thus, on AP there was 62% overall stability for the boys.

For girls, but especially for boys, the comparatively lower stability for AP (as compared to CD) was due primarily to proportionately greater shifts out of the "problem" range. Three of 5 girls (60%) and 18 of 28 boys (64%) shifted out of the "problem" into the "nonproblem" category with respect to the AP scale as compared to 2 of 3 girls but only 6 of 16 boys in regard to CD. These findings may well be the (desired) result of the program in effect at the school; a program aimed at the learning problem child with attentional problems rather than at the aggressive child.

AW was the only scale on which the mean for the second rating was significantly different (lower) than for the first. For girls a score of 10 or greater originally represented the mean plus

one SD, while at the second rating a score of 7 or more represented that cut-off. At the first rating, 19 of the 25 girls were below the cut-off score; later 4 of this group were now in the "problem" range so that the stability of the "nonproblem" group was 79%. At the time of the initial rating, 6 girls were in the "problem" range but at the second rating, only 1 remained so. The "errors" are disproportionately due to shifts out of the "problem" range. Overall stability, however, was only 64%.

Sixty-three boys obtained initial ratings below the cut-off for AW; 53 remained in the "nonproblem" range so that stability for this group was 84%. Fifteen boys were in the "problem" category on the initial rating but only 4 remained so in 1983; only 27% stability. Overall stability was 78%.

Again, shifts among both boys and girls were disproportionately toward moving out of the "problem" group. Only 21% of the original "nonproblem" girls became "problems," while 83% of the original "problem" girls shifted to the "nonproblem" category. Sixteen percent of original "nonproblem" boys moved into the "problem" range but 73% of the "problem" boys were no longer in this category.

On the ME scale, 18 of the girls received initial ratings placing them below the critical score. None of these girls shifted into the "problem" range at the second rating. Seven girls originally scored in the "problem" range but 5 shifted into the lower category at the second rating. Thus, stability was 100% for the "nonproblem" group, 28.5% for the "problem" group, and 80% overall.

Fifty-nine boys originally received "nonproblem" ME scores; 10 later shifted into the "problem" group so that stability was 83%. The first ratings of 19 boys placed them above the cut-off but 12 shifted into the "nonproblem" range at the second rating (37% stability). Overall stability was 76% as 56 of the 78 did not change category. As in the previous instances, a much higher proportion children shifted out of the "problem" category rather than into it (71% vs 0% for girls; 63% vs 17% for boys).

On the PB scale, 19 girls received initial scores of 0 and 3 received initial scores of 1. At the second rating, all but 4 received exactly the same score; none of these 4 scored higher than 1. Thus, 100% of those initially scoring less than 2 received scores of less than 2 at the second rating. Of the 3 girls who initially scored at 2 or above (the highest was 3), 1 subsequently scored at that level but the scores of the other 2 has dropped to 1 or 0. As only 2 girls shifted (both downward), the overall stability was 92%.

Sixty-eight (87%) of the boys initially received scores of 2 or less (49, 62%, received 0). Only two of these boys exceeded a score of 2 at the second rating so that stability within this group was 97%. Ten boys received scores of 3 or higher on the first rating, of these 10, 6 subsequently received scores lower than 3 so that the stability of the higher scores was only 40%. Overall stability was 90%.

As was expected, the SA scale scores for both girls and boys at both ratings were very low. Initially, 24 of the 25 girls received a score of 0; at the second rating, 22 of these girls received 0 scores, while two received scores of 1. Only 1 girl initially received a score greater than 0 (4) and this girl subsequently received a score of 1. Stability of this scale among the girls was very high as 92% received zero scores on both ratings.

At the first rating, 77 of the 78 boys received scores of less than 3 (64 received scores of 0). At the second rating, 5 boys received scores of 3 or greater so that stability in this low-scoring group was 94%. The one boy who originally received a score of 3 or higher later received a score in the same range. Again, there was very high stability for this scale.

As noted above, the children in this sample were the targets of an intensive academic and social-behavioral program; thus, one would expect changes in the ratings over a year's time to reflect the effects of this intervention. The consistent finding of very high stability in the of "nonproblem" group with much less stability (toward a lowering of scores) in those originally scoring in the "problem" range very likely reflects the effects of the program on the behavior of the children as well as factors associated with errors of measurement. It should also be noted that different teachers were involved in the second rating so that both interrater agreement and longer-term stability are being assessed.

Validity

Relationship Between the BPC and RBPC

While the psychometric characteristics of the RBPC are generally superior to those of the original BPC, there remains not only conceptual overlap but considerable actual item overlap as well. In order that the extensive validation of the BPC could be generalized to the RBPC, we had hoped for reasonably high correlations between the original and revised scales. Table 4 provides the correlations between the original and revised scales obtained from three samples, both normal and clinical, and from teachers, parent, and institution staff raters. For all scales, except possibly PB, the obtained relationships suggest that most results already obtained with the BPC can be generalized to the RBPC.

Concurrent Validity

Differentiation of Deviant *vs* Normal Children

To establish the concurrent validity of the scales against the dichotomy of clinical *vs* normal, normal children (293 males and 273 females) in grades one through six (ages approximately 6 to 12) were contrasted with a much more limited number of clinical cases (66 males and 33 females) in the six to 12 age range taken from Samples 1, 2, and 3 as described earlier.

For both sexes, the difference between the means of all six scales of the two groups was substantial and all but one was significant at beyond the .01 level (see Table 5). For boys, a multiple discriminant function (into which all scales entered) correctly classified 85.5% of all cases. Seventy-seven percent of the clinical group were correctly classified (sensitivity) as were 87% of the normals (specificity). Twenty-three percent of the clinical group were misclassified as normal (false negatives) while 13% of the normals were misclassified as clinical (false positives).

A similar approach was taken in New Zealand by Aman and Werry (1984) who compared 267 children in the community with 266 children who were patients in child psychiatric units. Scores, mainly from mother ratings, on all six scales were significantly higher ($p < .001$) in the clinic group. These investigators also reported internal consistency reliabilities for the six scales generally comparable to those presented in Table 3.

The RBPC and DSM-III

A comparison of the categories of The Children and Adolescents' Section of the *Diagnostic and Statistical Manual* (DSM-III; American Psychiatric Association, 1980) to the empirically derived dimensions of the RBPC can be approached in two ways. The conceptual similarity between DSM-III categories and RBPC scales can be assessed by inspection of the behavioral characteristics subsumed by each. On this basis it seems reasonable to conclude that the Under-socialized Aggressive and Socialized Aggressive conduct Disorders of DSM-III are represented by the CD and SA scales of the RBPC, respectively. There are no RBPC counterparts to the Under-socialized Nonaggressive, Socialized Nonaggressive, and Oppositional Disorder categories.

However, the empirical evidence for the existence of these narrower categories is weak (see Quay, 1986), and the former two do not appear in the revised version DSM-III (DSM-III-R; American Psychiatric Association, 1986).

Attention Deficit Disorder as described in DSM-III seems represented by the AP scale and the with- and without-hyperactivity differentiation made by DSM-III (but unfortunately, not in DSM-III-R) can be made in terms of scores of the ME scale and possibly the AW scale as well (see below). The AW scale encompasses a number of more narrowly defined categories of DSM-III including Separation Anxiety Disorder, Avoidant Disorder, Overanxious Disorder, and Dysthymic Disorder.

A second approach to a cross-walk between the RBPC and DSM-III involves comparing scale scores of cases independently given DSM-III diagnoses. This approach is complicated by at least three factors: (1) more than one DSM-III category is subsumed by a single RBPC scale, (2) the reliability of certain DSM-III categories has been shown to be very questionable (see Quay, 1986b), and (3) the unfamiliarity of practicing psychiatrists with DSM-III would likely lead to even poorer reliability in the early stages of its use when the data described below were collected. To obviate these problems to the greatest extent possible, DSM-III diagnoses were collapsed into much broader groups. For 112 cases in an inpatient sample (Sample 1 as described earlier) on whom DSM-III diagnoses were available (made totally independently of the staff ratings on RBPC), all Conduct Disorder diagnoses were combined and labeled externalizing, all "neurotic" diagnoses were combined and labeled internalizing, and all psychotic diagnoses (many made using the adult categories) were similarly grouped. Unfortunately, there were far too few cases in this sample diagnosed as attention deficit disorder to permit statistical analysis (see Table 6).

In all instances, the differences in scale scores were subject to analysis of variance followed by post-hoc "t" tests with alpha set at .05. On the CD scale the externalizing group scored significantly higher than either the internalizing or psychotic group who did not differ from each other. On the SA scale the externalizing group again exceeded both other groups who again did not differ. On AP the psychotics exceeded both internalizers and externalizers who did not differ. On AW the psychotics exceeded the externalizers but not the internalizers; the latter two, contrary to expectation did not differ. On PB the diagnosed psychotics exceeded both of the other groups who did not differ. On ME the psychotics were again the highest exceeding the internalizers but not the externalizers; the latter two did not differ.

These results are generally consistent with expectations. It also seems that those clinically diagnosed as psychotic, at least in this sample, manifest severe and diffuse behavior problems cutting across the AP, AW, and ME as well as PB dimensions.

Construct Validity

The process of establishing the construct validity for any measure involves investigating the relationship of that measure to various other measures. Ideally, the nature of these relationships should be predictable from an understanding of the psychological meaning of both measures. Furthermore, the measure against which the measure in question is to be validated should involve a different method of information gathering. The scales of the RBPC can, and have been validated against other rating scales but their associations with other types of measures have also been assessed. It is important to recognize that no single obtained relationship is definitive in either establishing or failing to establish construct validity. The more data are obtained and the more the observed relationships form a coherent mosaic, the more confidence can be placed in the construct validity of the instrument.

Correlations of Scales with Behavioral Observations and Peer Nominations

In the context of a larger research project, Dr. Jane Ledingham and her colleagues of the University of Ottawa obtained RBPC ratings from the teachers of 34 children (24 males and 10 females) attending school at a children's mental health center. This sample ranged in age from 7 years, 3 months to 12 years, 5 months (mean = 123.9 months, SD = 18.32 months). Additional data obtained included peer ratings of aggression, withdrawal, and likability on the Pupil Evaluation Inventory, a peer nomination technique (Pekarik, Prinz, Liebert, Weintraub, & Neale, 1976) and behavior observations obtained on the playground during recess. Fifteen observation periods of two minutes each were collected for each child for a total of 30-minutes observation; interrater reliabilities ranged from .80 to 1.00. The 15 observational categories related to who the child was with and what he was doing. Certain of these categories were predicted to relate to RBPC scales (see Table 7).

Since the sample sizes were quite limited, males and females have been combined. Peer rated aggression correlated very highly with CD, less strongly, but significantly with SA, and significantly with AP and PB as well. Withdrawal related significantly only to AW. Likeability was significantly correlated (negatively) with both CD and AP; the latter relationship is in accord with research indicating poor peer relations among children with "hyperactivity" (Campbell & Werry, 1986). The pattern of relationships of the scales to the peer nominations was very much in accord with expectations.

The interrelationships between observed behavior and the RBPC scales were generally as might be expected. The only unexpected findings were the failure of AW to correlate with the frequency of being alone and the failure of observed gross motor behavior to correlate with ME. It is of interest that cooperating behavior was negatively related to all the subscales but significantly so only to CD and AP. Initiating aggression was especially strongly related to CD.

Correlations of Scales with Intelligence and Academic Achievement

In a sample of 143 normal children in grades 4, 5, and 6, intelligence (Short Form Test of Academic Aptitudes) and achievement scores (Comprehensive Test of Basic Skills) were obtained along with the teacher rating on the RBPC by Drs. Wayne and Lesley Ann Wheatley. While all of the scales were negatively related to the ability measure, the values for AP were the highest and were all significant beyond the .001 level (see Table 8). With ability partialled out, only AP showed consistent negative relationships with the achievement measure. It was the only subscale with a significant (negative) correlation with the total achievement measure. These data suggest that AP is differentially related to academic achievement, even with ability held constant, a finding supporting the validity of this scale as a measure of attentional problems and behavioral maturity.

Additional information on the relationship of RBPC scales to ability and achievement has been provided by Hinshaw, Morrison, Carte, & Cornsweet, in press). They found that the correlation of teacher ratings of AP with subscales of the Kaufman Assessment Battery for Children were (all significant) higher for AP than for CD. The values for AP were -.28 with Simultaneous Processing, -.26 with Sequential Processing, and -.32 with the Mental Processing Composite Score; the values for CD were -.08, -.11, and .22 for the same Kaufman Scales. The same pattern was found for subscales of the Stanford Early School Achievement Test; the correlation of AP with Mathematics, Sounds and Letters, and Word Ready were -.38, -.31, and -.26, respectively; the values for CD were -.08, -.01, and -.04. These findings clearly corroborate the differential validity of the AP scale with respect to both ability and achievement.

Aman and Turbott (1986) utilized AP to select "hyperactive" children who were then compared with a control group on laboratory measures of central and incidental learning as well

as measures of distractibility and sustained attention. They found the hyperactive (high AP score group) to make more errors in the central learning task; the effect was significant, however, only for the youngest (ages 5 and 6) group of subjects. There were no differences on the incidental learning task. On the sustained attention task, the high AP group committed significantly more errors of both omission and commission. This finding clearly adds to the validity of the AP scale as a measure of attention. These investigators also looked at the relationship of the other RBPC scales to their laboratory measures. Errors in the central learning task were significantly related to the ME scale. ME was also (negatively) related to performance on the accuracy portion of the sustained attention task while the PB scale predicted omission errors. Surprisingly, SA was also negatively related to accuracy on the attention task. These results indicate that ME (in company with high AP used to select the subjects in the first place) is also (negatively) related to task attention.

Correlations of the RBPC Scales with Other Measures

The Child Behavior profile (CBP) is a factor analytically derived rating scale measuring some of the same dimensions as the RBPC as well as some factors unique to this scale. Achenbach and Edelbrock (1983, p. 54) have reported correlations of parent ratings in clinic-attending girls and boys separately on conceptually similar scales of the two instruments. RBPC CD correlated .88 with CBP Aggressive and .77 with CBP Delinquent scales for boys. For the girls sample CD correlated .82 with the Aggressive and .68 with the Cruel CBP scales. For boys SA correlated .52 with the Delinquent scale of the CBP. For girls SA correlated .80 with the Delinquent and .72 with the Cruel Scales. The AP scale correlated .65 and .88 with the CBP Hyperactive scale for boys and girls, respectively. For boys AW correlated .44 with CBP Schizoid or Anxious, .78 with Depressed, .62 with Uncommunicative, and .34 with Social Withdrawal. For girls AW correlated .89 with CBP Depressed and .78 with Social Withdrawal. For boys, PB correlated .40 with Schizoid or Anxious, and .61 with Obsessive Compulsive. The ME Scale correlated .42 and .88 with CBP Hyperactive for boys and girls, respectively.

The CBP also can be scored for two higher order scales, Externalizing and Internalizing. For boys the Externalizing scale correlated .84 with CD, .43 with SA, and .43 with AP. For girls, Externalizing correlated .77 with CD, .75 with SA, .88 with AP, and .92 with ME. The Internalizing Scale correlated .65 and .84 with AW and .51 and .45 with PB for boys and girls, respectively

These correlations suggest considerable equivalence in conceptually similar scales from the two instruments as should be the case. They also support the conceptualization of CD, SA, and AP and to a lesser extent, ME as measures of externalizing psychopathology, while AW and PB measure the internalizing dimension

Strauss, Forehand, Frame, and Smith (1984) selected children who had high scores on the Children's Depression Inventory (CDI; Kovacs & Beck, 1977) and compared them to a matched comparison group with low scores. The high CDI group obtained significantly higher scores (teacher ratings) on AW and AP but not SA or CD (ME and PB were not utilized in this study). These findings with respect to AW are clearly as might be expected. The elevated AP scores in the high CDI group can be taken as further evidence that AP is related to internalizing psychopathology. The CDI-AP relationship may also be the result of the modest positive correlations between AP and AW obtained in other samples (see Table 3).

Teacher ratings on a large sample of kindergarten children were correlated with a number of other measures by Hinshaw, Morrison, Carte, and Cornsweet (1987). The CD, AP, AW and PB scales were correlated with the five scales of SNAP Checklist (Swanson, Nolan, & Pelham; 1981). As expected, AP was more strongly associated with the SNAP Inattention Scale ($r = .91$) than was CD ($r = .56$). The CD scale was more highly correlated with SNAP Peer interaction/

aggression (.92) than was AP ($r = .59$). Thus, these two scales were found to have differential validity against the two similar SNAP scales. Both CD and AP were equally correlated (.74 and .76) with the Hyperactivity and the Popularity (.40 and .40) scales of the SNAP. The correlations of CD, AP, AW, and PB with Socioeconomic status were all low; the highest value obtained was .16.

An additional aspect of this study involved classifying the children as either "at-risk" or "not at risk" for later school problems. All four scales used (CD, AP, AW, and PB) were significantly higher for the at-risk group ($p < .001$). The largest difference was on AP suggesting the importance of this scale to academic performance. (See the preceding section on Intellectual Functioning and Academic Achievement.)

While and predictable differential relationships of RBPC scale scores to other variables constitute an important aspect of construct validity, there is also another approach which is exemplified in the work of Lahey and his colleagues. These investigators have used RBPC scale scores (based on teacher ratings) to select different groups whom they have then contrasted on other characteristics. Their major interest has been in studying differences between Attention Deficit Disorder with and without associated hyperactivity. However, their use of RBPC scales to select subjects in the first place make their findings relevant to the construct validity of the scales they have used

In the original study (Lahey, Shaughency, Strauss, & Frame, 1984), they selected one group of children who had scores above the mean for normals on both AP and MP and contrasted them with children who had scores above the mean only on AP and to children whose scores were below the mean for normals on both scales. The three groups, equated for sex, race, age, and grade level, were then compared on the other RBPC scales, on sociometric and peer measures, on teacher ratings of academic performance and on performance in sports, and on two self-report measures the CDI and the Piers-Harris Self Concept Scale (Piers & Harris, 1964). The children with high AP but low ME scores were rated by their teachers as poorer in both academics and sports; both deviant groups were rated as poorer in academics than the controls. Five peer measures of popularity were significantly lower for both groups than for the controls. The high AP, high ME group was nominated as least liked significantly more often than the group high on AP only. This group was also more likely than the other two to be nominated as "fighters." Both groups were different (lower) from the controls in self-perceived academic status while the AP-ME group rated themselves as less popular and as less acceptable in their behavior. The high AP-ME group saw themselves as less physically attractive, more anxious and less happy-satisfied with themselves. The two groups differed among themselves only in self-reported academic status where the high AP group was lower than the AP-ME group. Both groups reported themselves to be more depressed than the controls but did not differ from one another.

In a second study (Lahey, Shaughency, Frame, & Strauss, 1985) a comparison of the individual items on the AP scale was made between the high AP-ME and high AP group. The former group had higher scores in those items describing irresponsibility-distractibility, impulsivity and sloppiness; while the latter had higher scores on sluggishness and slowness.

A small number of additional studies, while not focused on the RBPC, have also provided relevant data. Stringer and La Greca (1985) found mothers' ratings of CD significantly correlated with a scale measuring child abuse potential in a sample of boys, but not girls. For both sexes, a group of mothers with high CAPI scores rated their children as significantly more deviant on CD, SA, AP, AW, and ME (PB was not scored) than did mothers with low CAPI scores.

Strauss, Smith, Frame, and Forehand (1985) found obese children (as compared to those of normal weight) to receive significantly higher teacher ratings on CD, but not on SA, AP, or AW. Forehand, Long, Brody, & Fauber (1986) reported that teacher ratings on CD were related

to mother's self-reported depression and a measure of conflict between adolescents and both their mothers and fathers.

The use of scales of the RBPC to assess the effects of various types of interventions has also been reported. Aman, Mitchell, and Turbott (in press) found that essential fatty acid supplementation resulted in parent-rated changes (decreases) on AP and ME, although teacher ratings on other rating scales were not affected nor were a number of psychomotor performance tests.

For convenient reference, the major correlates of the six RBPC scales are summarized in Table 9.

Norms

While norms based on a random or representative sample of children and adolescents may represent the "ideal," such norms may not always be the most appropriate single reference point for making decisions about individual children. For example, judgment about the degree of disorder exhibited by a child in rural Wyoming can best be made against a background of knowledge about other children in the same circumstances (local norms). Degree of disturbance can also be judged in relation to knowledge about the scale scores obtained by children identified as "cases" by various social service systems — clinics, hospitals, schools, and juvenile correctional institutions.

For those who wish to make large scale use of the RBPC as a screening or diagnostic instrument (the latter part of an assessment battery, of course), we strongly advocate the development of local norms. School systems in particular can develop such norms relatively easily, selecting a sample of children to represent their own ethnic and SES mix in such a way as to burden individual teachers with only a few ratings.

The norms provided in this *Manual* consist of means and standard deviations for scale scores that are based on a wide range of different samples — both normal and "clinical." While some of these data were collected through our own efforts, others were graciously supplied by individual researchers and clinicians. In most instances, children are subdivided by sex and by either age or school grade; the latter two in various degrees of narrow *vs* broad groupings depending upon the sample sizes and/or how those collecting the data chose to subdivide the sample.

Thus, the user of the RBPC has recourse to a number of comparison groups against which to interpret individual (or group) scores. The most appropriate reference sample to use is a function of the setting and the reasons for assessing the individual.

Teacher ratings: Normal samples

Table 10 provides means, SDs, and ranges for the scales by sex and grade for 869 unselected public school children in suburban and rural schools in South Carolina, New Jersey, and Iowa. The parents of these children were predominately from working and middle class backgrounds. The ethnic composition was not known exactly but was about 90% white. Although children in special education classes were not included, no attempt was made to screen out children who might have been eligible for services for behavior problems. For more stable values, the smaller samples were also collapsed into larger groups; K-3, 4-6, and K-8.

Data on students in grades 9-12 are much more limited. The data in Table 11 come from 40 males and 59 females in a parochial high school located on Long Island, N.Y.¹¹ and from 65 males and 81 females in suburban New Jersey public schools. While all of the means are quite low, an examination of individual scores suggested a prevalence of about 15% for all behavior disorders — very close to expectations for an unselected group (see e.g., Gould,

Wunsch-Hitzig, & Dohrenwend, 1981).

Table 12 presents data on fourth grade gifted children rated both by their homeroom teachers and by the teachers of the gifted classes.¹² Data on a random sample of fourth grade children in the same school system are also given. As can be seen, the scores for the randomly selected group are very similar to those reported for fourth graders in Table 10. Scores for the gifted children are uniformly lower. For boys, scores on CD, SA, and AP are significantly lower ($p < .05$); for girls the SA, AP, and AW scores are significantly lower ($p < .05$). The largest difference for both sexes ($p < .001$) is on the AP scale providing additional evidence for the already-noted (negative) relationship of AP scores to academic achievement and intellectual ability.

In Table 13¹³ descriptive data on all children in grades 4, 5, and 6 in a university laboratory school are provided. Although university based, this school does select children to represent the community at large. While the scale means are generally below those reported in Table 10 for grades 4-6, none of the differences were statistically significant for boys. However, for girls, the lab school group was significantly lower on AP, AW, and PB ($p < .05$).

Simpson and Humphrey (1984) have provided data on third, fourth, and fifth graders attending a middle school in a rural town in the Southeast. Their data (see Table 14) is subdivided by both sex and ethnicity. As the authors noted, the means and SDs were "generally equivalent" to those here reported in Table 10.

Teacher ratings: clinical samples

Table 15 provides data on children who were attending classes for children labeled as Seriously Emotionally Disturbed (SED) during the spring of the school year in a very large urban-suburban, multi-ethnic school system in the State of Florida. To be eligible for these classes, children had been judged by a placement team as meeting the State of Florida and Federal definition for placement in a Special Education SED class.

It is obvious that the scale scores obtained by this sample are all much higher than those of the grades K-8 and 9-12 samples in Tables 10 and 11. For example, on the CD scale the means for the four SED subgroups exceed the means of their age-comparable normal groups by 1.5 SDs (5-12 males), almost 2.5 SDs (5-12 females), more than 3 SDs (13-18 males), and more than 5 SDs (13-18 females).

Ratings on a much smaller sample of SED children are provided in Table 16. This sample came from a single school serving only SED children in a middle-sized county in Florida.¹⁴ A small number of children in classes for autistic children are not included in these ratings. The relatively small sample sizes did not permit an age breakdown for females. Scores obtained by this sample are generally comparable to those of the larger SED sample in Table 16. They are, in fact, somewhat more elevated on the CD, SA (for the older males), and AP scales.

Table 17 presents data on a small sample of both boys and girls attending a special school for emotionally disturbed students associated with a mental health center.¹⁵ These children ranged in age from 7 years, 4 months to 12 years, 6 months ($X = 123.9$ months, $SD = 18.32$ months). These children are well above those of comparable normal samples (Table 10) but generally below those of the SED students (Tables 16 and 17)

In Table 18 may be found scale means and SDs for a group of children attending a private school for children with learning disabilities.¹⁶ In this group, the mean age was about 10.5 years, with the vast majority in the 8 to 12 range, making this group comparable to children in grades three to seven. These scores are generally below those of children identified as behaviorally disordered (Tables 16, 17, and 18). With respect to normal children, their relatively greatest

elevations are on AP, AW, and ME, which is consonant with behavioral descriptions usually associated with learning disabled children.

Parent ratings — Normal sample

Obtaining parent ratings on a random or representative sample of normal children is a difficult undertaking that can only be accomplished at great expense. The majority of the data (mother ratings) in Table 19 were obtained through the cooperation of 13 pediatricians practicing in different areas of Dade County (Miami), Florida and from a pediatric clinic attached to a public hospital serving low-income families. About one-fourth of the cases were obtained from cooperating individuals on both the East and West Coasts of the United States. While these cases constitute a "sample-of-convenience," all SES groups (low 13%, middle 58%, and high 28%) are represented.¹⁷

The effect of sex, age, and SES on the six scale scores was examined. Sex was a significant factor only for CD with males, as expected, receiving higher scores. Age had a significant effect only on SA where, again as would be expected, the oldest group had significantly higher scores than the youngest group. SES, however, was a significant factor on all scales, with the lowest group obtaining significantly higher scores than either of the other two groups. The relatively small proportion of lower SES cases did not, however, lend itself to separate norms by SES, sex, and age.

Scores earned by this sample were also compared to those provided by Aman, Werry, Fitzpatrick, Lowe, and Waters (1984) for a representative sample of children in Auckland, New Zealand. Only 4 of 24 age group and sex comparisons were significantly different at the .05 or better. U.S. boys ages 9-12 had a significantly higher mean on SA (1.50 *vs* .44), a difference that might be expected on the basis of cultural differences. U.S. girls ages 5-8 were significantly higher on (4.37 *vs* 1.94) on AP and PB (.61 *vs* .20) while the 5-8 year old boys were significantly higher on ME (1.63 *vs* .93). The lack of obtained differences argues both for the cross-cultural generality of the RBPC between the United States and New Zealand and suggests that more confidence can be placed in the representativeness of these mother ratings than might otherwise be warranted.

Parent ratings — Clinical sample

Table 20 presents scale means and SDs on a combination of inpatients and outpatients (178 cases, ages 6-18 taken from sample 2 used for one of the factor analyses as described above).

Other raters — Clinical sample

Table 21 provides data on a sample of both boys and girls, ages 6-18 (a portion of sample 1 used for factor analyses and described earlier). As noted earlier, these children were rated by various institutional staff.

In Table 22 may be found data on a random sample of 281 male juvenile delinquents incarcerated in two state institutions in Florida who were rated by living unit staff. This sample was 46% white and 56% black with a mean age of 16.42 years (SD = 1.17) and an age range of 13 to 19. It is of interest to note that the means are lower than those of children formally diagnosed as having some form of emotional or behavior disorder (see Tables 15, 16, 17, 18, and 21).

Interpretation of Obtained Scores

The foregoing section on norms provides descriptive data with respect to many different

groups against which any obtained score can be compared. By reference to Tables 10 to 22, it is possible to interpret a given score with respect to its distance from the means of varying normal and clinical samples.

What constitutes deviance from normal is, of course, arbitrary and depends upon the purpose for which the ratings have been obtained. A frequently used rule-of-thumb is to consider a score of two or more standard deviations above the mean as significantly deviant. If the distribution of scores is normal, only about 2% of individuals will fall above the cut-off. However, most scores reflecting behavioral deviancy are, in the normal population, not normally distributed; they are skewed toward the lower end of the scale. This skew is often accompanied by a small number (but usually greater than 2%) of scores near the other (high) extreme with comparatively few scores in the middle range. This situation makes for a relatively "low" mean but a large standard deviation so that the usual relationship between the mean, the standard deviation, and the expected frequency of scores of various magnitudes is not maintained.

This situation can be corrected somewhat by utilizing normalized T scores. As do "regular" T scores, normalized T scores have a mean of 50 and a standard deviation of 10. Thus, converting raw scores to normalized T scores permits comparison of one scale score against another and estimation of the degree to which a given raw score deviates from the mean (of the particular group used to calculate the T scores).

Normalized T Scores

Normalized T scores for all possible raw scores on the six scales for teacher-rated children in grades K-3, 4-6, and 7-8 are presented, for males and females separately, in Table 23. By inspection it can be seen that the raw score scale means, taken from Tables 10 and 11 will generally correspond to a T score of about 50; the mean plus one standard deviation will correspond to a T score of about 60 and the mean plus two standard deviations to a T score of about 70. On most scales, the highest values were never attained by any child in the normal samples or attained so infrequently that corresponding normalized T scores had to be estimated by extrapolation. Note that a raw score of zero does not always convert to the same T score. This is due to the fact that different proportions of the samples received zero scores on the six scales. Thus, T score differences between zero raw scores should not be interpreted. Note also that many extreme raw scores convert to the same T score, due to very infrequently observed raw scores at the more extreme scale values. The highest T score (80) generally is associated with the highest score attained (or attainable).

Table 24 provides T scores for the sample of children classified as severely emotionally disturbed by official public school procedures. Users in educational settings may find these T scores particularly useful as they permit scales scores for an individual child to be compared to a group known to be behaviorally deviant in the public schools. Note, of course, that in Table 24, a given raw score translates into a much lower T score since the scale means for this group, as would be expected, are much higher.

It is generally the case that a raw score which converts to a T score of 70 (2 SDs above the mean) or above using the normals in Table 23 will be close to a T of 50 (at the mean) for the disturbed sample in Table 24. For example, a CD score of 26 obtained by a male in grades K-6 converts to a T of 70 using Table 23 and a T score of 55 in Table 24.

Converting raw scores to normalized T scores also permits comparison of the extent to which different scales are different from each other for the same child. If, for example, a child obtains a CD T score of 70: and an AP T score of 60, he is relatively more deviant on CD (two SDs above the mean) than on AP (one SD above the mean).

With respect to elevations on more than one scale, it should be noted that although the six scale scores are reasonably independent, elevations on more than one scale are possible and, in behaviorally deviant children, not that unusual. Many children presenting at clinics receive more than one diagnosis. Elevated scores on both CD and AP are common in younger children as are elevations on CD and ME and AP and ME. In older children and adolescents, CD and AP may both be elevated. Extreme scores on all scales or on very dissimilar scales (e.g., AW & SA) should alert the user to the possibility of invalid ratings, incorrect scoring, or incorrect addition of obtained "1s" and "2s".

Some Final Words

We wish to reiterate that interpretation of the RBPC should be undertaken only by those trained at the Master's level or beyond with appropriate course work in assessment and psychometrics.

We also wish to reiterate the desirability of large-scale users establishing local norms. The author will cooperate in such endeavors by providing limited technical consultation (gratis) and discounts on large orders of RBPCs for this purpose.

Finally, we want to emphasize that validation is an on-going process. We would be pleased to receive published papers, copies of convention presentations, unpublished papers, and even raw data relating scale scores to concurrent in predictive criteria.

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Footnotes

- ¹ A fifth factor analysis of a clinical sample obtained in Auckland, New Zealand was done independently by Aman, Werry, Fitzpatrick, Lowe, & Waters (1982) at the University of Auckland. Except for Psychotic Behavior, the results of this analysis were so closely parallel to the "composite" analysis, even with the cultural differences, that the RBPC as described herein was subsequently normed in New Zealand. See Table 1.
- ² Sample courtesy of Drs. Richard Toister and Charles R. Bell, III.
- ³ Sample courtesy of Drs. Richard Toister and Richard Mattison.
- ⁴ Sample courtesy of Dr Philip Mann.
- ⁵ Sample courtesy of Dr. Joan Bornstein.
- ⁶ Sample courtesy of Dr. Annette M. La Greca.
- ⁷ A portion of this sample courtesy of Drs. Wayne and Lesley Ann Wheatley and Dr. Annette Shtier.
- ⁸ Data courtesy of Drs. Arturo Rio and Jose Szapacznik.
- ⁹ These data courtesy of Dr. Annette Shtier.
- ¹⁰ Sample courtesy of Dr. Annette M. La Greca.
- ¹¹ Sample courtesy of Drs. Alfred Hirshoren and Robert Pullo.
- ¹² Sample courtesy of Dr. Carl Schnittjer.
- ¹³ Sample courtesy of Dr. Larry LaVoie.
- ¹⁴ Sample courtesy of Dr. Henry Tenenbaum and staff.
- ¹⁵ Sample courtesy of Dr. Jane Ledingham.
- ¹⁶ Sample courtesy of Dr. Annette M. La Greca.
- ¹⁷ Sample courtesy of Ms. Ana Calleja.

Table 1
 Items Comprising the Six Scales of the RBPC with
 Rotated Factor Loadings from the Five Samples

		SCALE I. Conduct Disorder (CD) (22 items)				
Item No.	Item	1	2	3	4	5 ¹
2	Seeks attention; "shows-off"	64	33	56	67	.49
5	Disruptive; annoys and bothers others	73	41	46	74	.61
17	Fights	58	63	-.2	81	.55
19	Has temper tantrums	48	54	--	41	.65
26	Disobedient; difficult to control	66	67	44	83	.75
28	Uncooperative in group situations	59	35	54	75	--
33	Negative; tends to do the opposite of what is requested	59	64	--	77	.54
34	Impertinent; talks back	74	62	46	86	.69
38	Irritable, hot-tempered; easily angered	71	66	--	59	.67
40	Argues; quarrels	75	58	78	79	.72
41	Sulks and pouts	46	35	61	33	.49
42	Persists and nags; can't take "no" for an answer	52	53	75	54	.72
49	Tries to dominate others; bullies, threatens	70	64	--	79	.58
50	Picks at other children as a way of getting their attention; seems to want to relate but doesn't know how	63	59	38	58	.43
55	Braggs and boasts	58	36	48	--	--
65	Teases others	68	73	37	74	.58
71	Selfish; won't share; always takes the biggest pieces	46	36	--	--	.59
75	Not liked by others; is a "loner" because of aggressive behavior	30	52	--	--	.48
77	Cannot stand to wait; wants everything right now	45	50	67	36	.71
78	Refuses to take directions; won't do as told	58	55	--	67	.77
79	Blames others; denies own mistakes	60	35	81	56	.65
83	Deliberately cruel to others	71	63	--	85	.49

		SCALE II. Socialized Aggression (SA) (17 items)				
Item No.	Item	1	2	3	4	5
3	Stays out late at night	72	71	--	--	--
7	Steals in company with others	41	41	--	--	--
11	Belongs to a gang	66	53	--	--	--
18	Loyal to delinquent friends	80	81	--	--	.77
20	Truant from school, usually in company with others	65	77	--	--	.68
24	Has "bad" companions, ones who are always in some kind of trouble	79	79	--	--	.82
46	Uses drugs in company with others	77	80	--	--	--
51	Steals from people outside the home	40	41	--	--	--
54	Freely admits disrespect for moral values and laws	62	76	--	--	.52
59	Is part of a group that rejects school activities such as team sports, clubs, projects to help others	53	65	--	--	.49
60	Cheats	35	45	--	--	--
61	Seeks company of older, "more experienced" companions	48	46	--	--	.57
69	Will lie to protect his friends	69	76	--	--	.68
72	Uses alcohol in company with others	70	72	--	--	--
80	Admires and seeks to associate with "rougher" peers	68	63	--	--	.78
87	Runs away; is truant from home	54	51	--	--	.56
88	Openly admires people who operate outside the law	71	76	--	--	--

Table 1 (cont'd.)

SCALE III. Attention Problems - Immaturity (AP) (16 items)						
Item No.	Item	1	2	3	4	5
13	Short attention span; poor concentration	54	67	--	62	.69
15	Inattentive to what others say	47	53	44	33	.56
23	Irresponsible, undependable	52	56	--	38	.45
29	Passive, suggestible; easily led by others	48	22	60	--	.51
31	Distractible; easily diverted from the task at hand	51	67	--	42	.69
35	Sluggish, slow moving, lethargic	80	--	65	--	--
36	Drowsy; not "wide awake"	80	--	65	--	--
44	Answers without stopping to think	41	40	43	42	.42
45	Unable to work independently; needs constant help and attention	50	60	--	72	.62
47	Impulsive; starts before understanding what to do; doesn't stop and think	40	55	41	39	.50
56	Slow and not accurate in doing things	38	64	60	67	.69
58	Does not finish things; gives up easily; lacks perseverance	56	55	41	65	.59
66	Absentminded; forgets simple things easily	39	62	53	64	.68
67	Acts like he or she were much younger; immature, "childish"	31	50	46	46	.51
68	Has trouble following directions	58	67	60	74	.64
73	School work is messy, sloppy	33	51	35	52	.59

SCALE IV. Anxiety-Withdrawal (AW) (11 items)						
Item No.	Item	1	2	3	4	5
4	Self-conscious; easily embarrassed	71	55	62	73	.58
6	Feels inferior	79	41	68	44	.43
9	Shy, bashful	37	28	56	79	.52
14	Lacks self-confidence	68	53	66	48	.63
21	Hypersensitive; feelings are easily hurt	67	47	51	--	.40
22	Generally fearful; anxious	48	23	--	--	--
27	Depressed; always sad	63	27	--	--	.49
53	Says nobody loves him or her	48	40	--	--	--
64	Difficulty in making choices; can't make up mind	45	37	50	--	--
70	Afraid to try new things for fear of failure	65	66	43	--	.41
84	Feels he or she can't succeed	74	59	--	--	.54

SCALE V. Psychotic Behavior (PB) (6 items)						
Item No.	Item	1	2	3	4	5
12	Repetitive speech; says same thing over and over	72	--	--	--	--
16	Incoherent speech, what is said doesn't make sense	54	--	--	--	--
39	Expresses strange, far-fetched ideas	56	48	--	--	--
52	Expresses beliefs that are clearly untrue (delusions)	77	64	--	--	--
85	Tells imaginary things as though true; unable to tell real from imagined	73	67	--	--	--
89	Repeats what is said to him or her; "parrots" others' speech	62	--	--	--	--

Table 1 (cont'd.)

		SCALE VI. Motor Excess (ME) (5 items)				
Item No.	Item	1	2	3	4	5
1	Restless; unable to sit still	62	70	--	--	.50
25	Tense; unable to relax	66	47	--	69	.58
30	Hyperactive; "always on the go"	60	63	--	--	--
37	Nervous, jittery, jumpy; easily startled	61	24	--	76	.52
82	Squirms, fidgets	60	52	--	--	.47

¹ From the study of Aman and his colleagues (see Footnote 1).

² Dash indicates that either the item did not have an adequate frequency of endorsement or that it did not load on the factor.

Table 2
Intercorrelations Among the Scales

Scales	Samples	SCALES				
		SA	AP	AW	PB	ME
CD	1	.65	.56	.19	.48	.58
	2	.43	.52	.18	.15	.49
	3	.56	.49	-.12	.24	.30
	4	.30	.51	.14	.27	.48
	5	.40	.55	.33	.43	.41
	6	.55	.45	.37	.40	.70
SA	1		.44	.18	.41	.29
	2		.45	.18	.06	.28
	3		.26	-.23	.16	-.01
	4		.05	.20	-.15	-.09
	5		.27	.20	.00	.09
	6		.36	.24	.42	.41
AP	1			.47	.55	.51
	2			.37	.34	.37
	3			-.01	.38	.31
	4			.44	.69	.52
	5			.51	.47	.37
	6			.52	.48	.51
AW	1				.36	.23
	2				-.02	.17
	3				.04	.04
	4				.38	.21
	5				.33	.12
	6				.34	.32
PB	1					.32
	2					.16
	3					-.05
	4					.42
	5					.29
	6					.47

1. Unselected public school students, grades K-8 (N = 505) rated by teachers
2. Gifted 4th grade students (N = 136) rated by their teachers
3. Behavior problem elementary students (N = 34) rated by their teachers.
4. Inpatients rated by staff (N = 151)
5. Inpatients rated by parents (N = 100)
6. Outpatients rated by their teachers (N = 50)

Table 3
Alpha Reliability Coefficients for the Scales

Scales	Samples				
	1	2	4	5	6
CD	.94	.92	.95	.93	.95
SA	.93	.93	.89	.85	.87
AP	.91	.90	.87	.90	.94
AW	.89	.84	.79	.74	.88
PB	.80	.73	.70	.75	.68
ME	.83	.75	.75	.70	.76

Table 4
Correlation Between Similar Scales of BPC and RBPC
for Clinical and Normal Groups

BPC Scales	RBPC Scales									
	CD	SA		AP		AW		PB		
CP	.95 ¹	.89 ²	.87 ³							
SD		.93	.97	.92						
II				.73	.85	.75				
PP							.82	.92	.86	
PB										.71 .63 .67

¹ Normals, grades 1-6, teacher ratings, (N = 296)

² Inpatients, staff ratings, (N = 48)

³ Inpatients, parent ratings, (N = 100)

Table 5
Comparisons of Means of Normal and Clinical Samples (ages 6-12)

Scales	Males							
	Normal Sample			Clinical Sample			t	p
	N	\bar{X}	SD	N	\bar{X}	SD		
CD	293	6.06	8.01	66	20.40	10.58	10.37	<.001
SA		1.54	3.13		3.61	5.00	3.20	.002
AP		5.56	6.40		12.27	6.87	7.26	<.001
AW		2.31	3.19		6.94	4.77	7.51	<.001
PB		.45	1.18		2.70	2.64	6.74	<.001
ME		1.52	2.08		4.63	3.02	7.95	<.001
Females								
CD	273	2.26	4.30	30	14.86	10.05	6.80	<.001
SA		.43	1.14		2.10	3.31	2.74	.01
AP		2.43	4.66		9.97	7.90	5.12	<.001
AW		2.22	3.22		6.16	5.24	4.04	<.001
PB		.19	.70		1.93	2.91	3.27	.003
ME		.54	1.14		3.40	2.59	5.97	<.001

Table 6
Scale Scores by Psychiatric Diagnosis

Diagnostic Group	N	Scale											
		CD		SA		AP		AW		PB		ME	
		\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
Psychotic	72	13.58	10.47	5.43	8.05	12.09	7.55	5.79	4.53	2.95	2.82	3.05	2.95
Externalizing	24	19.70	9.75	10.08	8.05	7.00	5.67	3.04	3.09	1.25	1.59	2.54	2.24
Internalizing	16	9.62	9.25	5.37	8.27	4.87	3.86	4.68	4.02	.81	2.04	1.00	1.54

Table 7¹
Correlations of RBPC Scales with Peer Nominations
and Behavior Observations
Scales

	CD	SA	AP	AW	PB	ME
Peer Nominations						
Aggression	.72***	.44**	.36*	-.09	.42**	.25
Withdrawal	.01	-.13	.18	.39*	.23	.10
Likeability	-.39*	-.21	-.41**	-.23	-.26	-.24
Observations						
Alone	.18	.00	.12	.18	.34*	-.14
With Peers	-.09	.03	-.17	-.17	-.38*	.20
Unoccupied	.10	.15	-.03	.03	.27	-.36*
Gross Motor Activity	.01	-.26	.12	.04	.32	.00
Initiating Aggression	.60**	.25	.15	-.34*	-.07	-.03
Rough and Tumble Play	.09	.05	.27	-.09	-.10	.35*
Cooperating	-.45**	-.07	-.49**	-.25	-.27	-.24

¹ Data courtesy of Dr. Jane Ledingham
*p < .05 **p < .01 ***p < .001

Table 8
Correlations of Scales with Ability and Achievement
in Normal Children Grades 4, 5, and 6¹

Scales	Ability			Achievement ²			
	Language	Non-Language	Total	Reading	Language	Arithmetic	Total
CD	-.23**	-.15*	-.23**	-.09	-.19**	-.03	-.12
SA	-.21**	-.15*	-.21**	-.07	-.08	-.02	-.05
AP	-.44***	-.30***	-.47***	-.19**	-.35***	-.20**	-.28***
AW	-.21**	-.07	-.20**	-.05	-.15*	-.07	-.10
PB	-.09	-.13	-.14*	-.05	-.06	-.15*	-.11
ME	-.11	-.02	-.11	.03	-.11	-.04	-.06

¹ These data courtesy of Drs. Wayne and Lesley Ann Wheatley

² With total ability partialled out
*p < .05 **p < .01 ***p < .001

Table 9

Summary of principal obtained correlates of RBPC Scales with other variables

Scale	Variables
CD	DSM-III "Externalizing" diagnoses Peer nominated aggression Observed to initiate aggression Peer nominated likeability (negative) Observed to be uncooperative CBP Aggressive, Delinquent and Cruel scales CBP Externalizing scale SNAP Peer Interaction/aggression scale
SA	DSM-III "Externalizing" diagnoses CBP Delinquent and Cruel Scales CBP Externalizing Scale Peer nominated aggression Task accuracy (negative)
AP	Teacher rated as poor in academics and sports Lower self-reported academic status Peer nominated likeability (negative) Observed to be uncooperative Language achievement (negative) Overall academic achievement (negative) Kaufman Mental Processing Composite (negative) Sustained attention (negative) CBP Hyperactive Scale CBP Externalizing Scale (girls) CDI depression SNAP Inattention Scale SNAP Hyperactivity Scale
AW	Peer nominated withdrawal Observed not to initiate aggression CBP Schizoid or Anxious, Depressed, Uncommunicative and Social Withdrawal Scales CBP Internalizing Scale CDI depression
PB	DSM-III Psychotic diagnoses Omission errors on a CPT task CBP Schizoid or Anxious, Obsessive-compulsive Scale CBP Internalizing Scale
ME	Observed rough and tumble play Task accuracy (negative) CBP Hyperactive Scale CBP Externalizing Scale

Table 10
Scale Means and SDs and Ranges for Teacher ratings of
Public School Students in Grades K-8

Grade	Scale	Males				Females			
		N	\bar{X}	SD	Range	N	\bar{X}	SD	Range
K	CD	47	4.78	7.27	0-28	34	1.00	2.43	0-12
	SA		.74	1.60	0-8		.32	.81	0-4
	AP		5.65	6.84	0-26		2.82	4.57	0-17
	AW		2.11	2.56	0-10		2.56	3.78	0-14
	PB		.85	1.89	0-8		.06	.34	0-2
	ME		1.70	2.29	0-8		.47	.99	0-4
1	CD	65	6.13	8.56	0-39	50	4.70	6.91	0-25
	SA		1.83	4.16	0-19		1.10	1.67	0-6
	AP		8.20	6.78	0-23		5.64	7.26	0-25
	AW		4.01	4.53	0-16		4.56	4.91	0-17
	PB		.74	1.31	0-7		.96	1.77	0-6
	ME		2.16	2.49	0-10		1.52	2.12	0-8
2	CD	47	8.27	8.50	0-38	38	5.81	9.75	0-38
	SA		2.08	2.94	0-10		1.71	2.88	0-12
	AP		7.69	6.96	0-28		6.97	7.28	0-27
	AW		3.74	4.47	0-19		6.21	5.16	0-17
	PB		.72	1.33	0-6		.68	1.66	0-8
	ME		2.76	2.12	0-7		2.26	2.30	0-7
3	CD	49	4.59	7.81	0-31	56	.42	1.21	0-7
	SA		1.02	2.83	0-13		.16	.82	0-6
	AP		3.77	5.34	0-21		1.62	2.67	0-12
	AW		1.22	1.83	0-7		1.10	1.64	0-6
	PB		.10	.37	0-2		.00	.00	0-0
	ME		1.20	2.00	0-9		.30	.69	0-3
4	CD	70	5.05	7.87	0-30	65	1.40	3.45	0-22
	SA		1.05	2.82	0-14		.34	.92	0-5
	AP		5.78	6.58	0-26		2.04	4.30	0-23
	AW		1.75	2.49	0-11		1.12	1.71	0-7
	PB		.44	1.08	0-5		.17	.60	0-3
	ME		.97	1.40	0-6		.28	.74	0-4
5	CD	83	8.57	11.15	0-41	76	2.36	4.43	0-28
	SA		2.56	4.98	0-23		.32	.90	0-4
	AP		8.24	7.40	0-27		4.80	6.84	0-27
	AW		3.24	3.72	0-14		3.64	4.55	0-21
	PB		.43	1.01	0-6		.34	.97	0-5
	ME		1.74	2.16	0-10		1.02	1.78	0-10
6	CD	91	6.01	7.94	0-31	79	2.12	4.41	0-21
	SA		1.43	2.67	0-14		.66	1.64	0-8
	AP		6.69	7.64	0-29		1.92	4.18	0-29
	AW		2.07	2.78	0-20		1.86	2.47	0-12
	PB		.50	1.81	0-7		.11	.62	0-5
	ME		1.44	2.19	0-10		.43	1.07	0-5

Table 10 (cont'd.)

Grade	Scale	Males				Females			
		N	\bar{X}	SD	Range	N	\bar{X}	SD	Range
7	CD	27	5.81	6.86	0-22	26	4.15	5.43	0-24
	SA		2.40	3.02	0-11		.96	1.51	0-5
	AP		4.70	5.23	0-18		2.15	3.61	0-14
	AW		.44	.80	0-3		1.00	1.74	0-8
	PB		.00	.00	0-0		.07	.27	0-1
	ME		.16	.37	0-6		1.44	2.10	0-5
8	CD	32	6.06	6.64	0-27	37	2.91	4.01	0-17
	SA		1.65	2.26	0-9		.59	.80	0-3
	AP		1.68	2.37	0-9		1.00	2.32	0-13
	AW		1.87	1.88	0-8		1.86	1.87	0-9
	PB		.06	.24	0-1		.03	.16	0-1
	ME		.66	1.26	0-6		.16	.37	0-1
K-3	CD	208	5.95	8.09	0-39	178	2.88	5.94	0-38
	SA		1.44	3.13	0-19		.78	1.70	0-12
	AP		6.46	6.52	0-28		4.12	5.69	0-27
	AW		2.86	3.63	0-19		4.07	3.33	0-17
	PB		.61	1.33	0-8		.43	1.22	0-8
	ME		1.96	1.73	0-10		1.14	1.65	0-8
4-6	CD	244	6.60	9.14	0-41	220	1.99	4.15	0-28
	SA		1.70	3.60	0-23		.45	1.22	0-8
	AP		6.96	7.26	0-29		2.95	5.28	0-29
	AW		2.38	3.06	0-20		2.26	3.19	0-21
	PB		.45	1.37	0-7		.21	.75	0-5
	ME		1.41	1.98	0-10		.9	1.29	0-10
K-8	CD	511	6.26	8.52	0-41	461	2.53	5.18	0-38
	SA		1.63	3.37	0-23		.62	1.47	0-12
	AP		6.30	6.87	0-29		3.20	5.47	0-29
	AW		2.44	3.32	0-20		2.61	3.72	0-17
	PB		.47	1.18	0-8		.27	.96	0-8
	ME		1.59	2.12	0-10		.76	1.52	0-10

Table 11

Scale Means and SDs and Ranges for Teacher Ratings of Students in Grades 9-12

Scale	Males				Females			
	N	\bar{X}	SD	Range	N	\bar{X}	SD	Range
CD	105	2.15	4.26	0-31	140	1.14	2.41	0-19
SA		.09	2.19	0-12		.64	2.09	0-13
AP		2.66	3.50	9-19		1.20	2.31	0-12
AW		.93	1.59	0-7		1.43	2.08	0-8
PB		.4	.42	0-2		.07	.27	0-2
ME		.81	1.68	0-7		.28	.75	0-10

Table 12
Scale Means and SDs for Randomly Selected and
Gifted Fourth Graders

Random Sample						
Scale	Males			Females		
	N	\bar{X}	SD	N	\bar{X}	SD
CD	68	4.45	6.52	70	1.67	4.25
SA		1.06	2.65		.51	1.89
AP		4.88	5.45		2.53	4.02
AW		2.20	2.47		2.16	2.58
PB		.35	.69		.16	.50
ME		1.28	1.51		.34	.96
Gifted: Special Teacher						
CD	74	2.53	5.14	60	1.04	2.50
SA		.30	.72		.05	.23
AP		2.48	4.07		.68	1.24
AW		1.72	2.12		1.16	1.68
PB		.18	.57		.09	.34
ME		1.00	1.99		.26	.72
Gifted: Homeroom Teacher						
CD	69	2.30	3.77	81	.82	2.42
SA		.43	1.34		.17	.50
AP		1.87	3.43		.65	2.16
AW		1.36	2.55		1.03	1.48
PB		.22	.45		.06	.24
ME		.74	1.49		.28	.78

Table 13
Scale Means, SDs and Ranges for Children in
Grades 4-6 Attending a University Laboratory School

Scale	Males				Females			
	N	\bar{X}	SD	Range	N	\bar{X}	SD	Range
CD	90	5.35	8.26	0-35	82	1.29	4.26	0-30
SA		1.28	3.19	0-14		.24	1.00	0-7
AP		5.90	6.68	0-29		1.78	3.10	0-13
AW		2.37	2.99	0-12		1.13	2.00	0-15
PB		.24	.96	0-6		.01	.11	0-1
ME		1.92	2.50	0-10		.32	1.12	0-7

Table 16
Scale Means and SDs for Children Attending a Single Public School
for Seriously Emotionally Disturbed Students

Scale	Males						Females		
	Ages 5-13			Ages 13-18			Ages 5-18		
	N	\bar{X}	SD	N	\bar{X}	SD	N	\bar{X}	SD
CD	20	21.15	11.18	23	18.52	12.35	11	21.55	10.54
SA		2.20	2.90		9.17	7.08		5.27	3.98
AP		15.90	6.24		12.39	5.87		14.36	8.98
AW		7.95	5.70		4.22	3.46		6.82	5.24
PB		2.80	2.33		1.78	2.26		2.73	3.35
ME		4.45	2.76		3.87	2.99		2.64	2.16

Table 17
Scale Means and SDs for a Sample of Children Attending
a Special School for Behavior Disorders

Scale	Males			Females		
	N	\bar{X}	SD	N	\bar{X}	SD
CD	24	15.33	10.10	10	10.60	11.26
SA		2.12	2.75		2.60	4.50
AP		11.08	7.07		8.50	7.16
AW		6.20	3.97		4.30	4.16
PB		2.12	2.99		.30	.67
ME		3.67	3.18		1.00	1.15

Table 18
Scale Means and SDs for Children with Learning Disabilities

Scale	Males			Females		
	N	\bar{X}	SD	N	\bar{X}	SD
CD	115	6.86	9.27	43	4.21	8.74
SA		.34	.88		.11	.62
AP		8.62	7.03		5.69	4.78
AW		4.32	4.14		6.26	4.82
PB		1.13	2.05		.48	.96
ME		3.31	3.07		1.74	2.21

Table 21
Scale Means and SDs for Inpatient Clinical Cases Rated by Staff

Ages 6-12						
Scale	Males			Females		
	N	\bar{X}	SD	N	\bar{X}	SD
CD	16	23.25	11.12	7	13.29	10.98
SA		2.50	3.01		1.00	1.29
AP		12.75	6.73		5.57	7.72
AW		4.37	4.17		2.42	2.37
PB		2.18	2.59		2.00	2.77
ME		4.06	3.02		1.86	2.97
Ages 13-18						
CD	76	19.70	10.89	38	17.26	10.39
SA		10.83	8.20		10.50	7.14
AP		11.59	7.33		8.42	6.38
AW		10.84	5.28		10.76	4.56
PB		2.58	3.17		1.42	2.19
ME		3.61	2.96		2.39	2.25

Table 22
Scale Means, SDs and Ranges for a Random Sample
of Institutionalized Juvenile Delinquents (ages 13-19)

Scale	N	\bar{X}	SD	Range
CD	281	11.08	10.55	0-40
SA		6.34	6.15	0-28
AP		6.27	6.39	0-32
AW		3.63	4.12	0-18
PB		.93	2.04	0-16
ME		1.86	2.28	0-10

Table 23

Table for converting (raw) RBPC scale scores to normalized T scores, for teacher of normal children at three (combined) grade levels by sex

Raw	Males					
	Grades K-3					
	CD	SA	AP	AW	PB	ME
	T	T	T	T	T	T
0	41	46	38	43	43	43
1	48	57	43	48	50	50
2	50	58	46	51	63	54
3	52	59	49	54	65	56
4	54	60	50	57	69	59
5	55	62	51	60	75	60
6	56	64	52	61	75	64
7	56	65	53	62	75	70
8	57	67	54	64	76	73
9	59	68	56	66	76	75
10	59	68	57	68	78	80
11	60	69	59	68	79	
12	60	71	61	69	80	
13	60	75	62	70		
14	60	75	64	73		
15	60	75	65	75		
16	61	75	67	78		
17	61	75	66	80		
18	62	77	68	80		
19	62	78	69	80		
20	63	80	70	80		
21	64	80	73	80		
22	65	80	75	80		
23	67	80	75	80		
24	68	80	76	80		
25	69	80	77			
26	70	80	78			
27	70	80	79			
28	71	80	80			
29	73	80	80			
30	74	80				
31	75	80				
32	76	80				
33	78	80				
34	79	80				
35-44	80					

Table 23 (cont'd.)

Males						
Grades 4-6						
	CD	SA	AP	AW	PB	ME
Raw	T	T	T	T	T	T
0	40	45	37	41	47	42
1	47	56	43	48	59	51
2	48	58	45	51	62	56
3	49	59	48	54	65	60
4	51	61	49	56	68	62
5	52	62	50	58	72	67
6	54	63	51	61	78	68
7	55	64	52	68	79	70
8	56	65	54	66	80	73
9	56	66	55	68	80	76
10	57	67	55	70	80	80
11	57	68	56	75	80	
12	58	69	57	75	80	
13	59	70	59	76		
14	59	72	59	76		
15	60	78	60	77		
16	61	78	62	79		
17	61	79	63	80		
18	62	80	64	80		
19	63	80	65	80		
20	64	80	67	80		
21	65	80	67	80		
22	66	80	68	80		
23	67	80	69			
24	68	80	70			
25	69	80	73			
26	70	80	77			
27	73	80	78			
28	77	80	78			
29	77	80	79			
30	78	80	79			
31	78	80	80			
32	78	80	80			
33	79	80				
34	79	80				
35-44	80					

Table 23 (cont'd.)

Males						
Grades 7-8						
Raw	CD	SA	AP	AW	PB	ME
	T	T	T	T	T	T
0	38	42	41	43	49	45
1	44	50	49	52	66	55
2	48	54	52	57	71	60
3	51	56	54	62	75	62
4	51	60	56	64	77	63
5	52	62	57	68	79	64
6	53	63	59	71	80	68
7	54	65	60	72	80	70
8	55	66	60	74	80	74
9	55	67	61	74	80	78
10	56	70	62	75	80	80
11	58	74	63	75	80	
12	60	75	64	76	80	
13	61	77	66	77		
14	61	80	67	79		
15	62	80	70	80		
16	63	80	74	80		
17	64	80	75	80		
18	66	80	76	80		
19	68	80	76	80		
20	69	80	77	80		
21	70	80	79	80		
22	74	80	80	80		
23	75	80	80			
24	76	80	80			
25	78	80	80			
26	80	80	80			
27	80	80	80			
28	80	80	80			
29	80	80	80			
30	80	80	80			
31	80	80	80			
32	80	80	80			
33	80	80				
34	80	80				
35-44	80					

Table 23 (cont'd.)

Females Grades K-3						
	CD	SA	AP	AW	PB	ME
Raw	T	T	T	T	T	T
0	44	50	44	42	48	47
1	48	53	52	50	61	54
2	49	60	55	53	65	56
3	53	70	56	55	71	63
4	55	72	57	56	75	65
5	57	76	58	57	76	68
6	58	78	60	58	77	72
7	59	80	61	60	79	75
8	60	80	61	63	80	77
9	61	80	62	64	80	80
10	63	80	63	64	80	80
11	65	80	64	65	80	
12	67	80	65	66	80	
13	68	80	66	68		
14	69	80	67	72		
15	72	80	68	76		
16	73	80	69	78		
17	75	80	70	80		
18	77	80	72	80		
19	78	80	72	80		
20	79	80	75	80		
21	80	80	76	80		
22	80	80	78	80		
23	80	80	80			
24	80	80	90			
25	80	80	80			
26	80	80	80			
27	80	80	80			
28	80	80	80			
29	80	80	80			
30	80	80	80			
31	80	80	80			
32	80	80	80			
33	80	80				
34	80	80				
35-44	80					

Table 23 (cont'd.)

Females						
Grades 4-6						
	CD	SA	AP	AW	PB	ME
Raw	T	T	T	T	T	T
0	44	42	43	41	48	46
1	49	52	48	48	52	52
2	54	64	51	52	64	60
3	57	66	54	55	68	64
4	58	68	57	58	71	69
5	59	70	59	60	74	76
6	61	72	60	62	80	78
7	63	73	61	64	80	80
8	64	77	61	65	80	80
9	64	80	62	66	80	80
10	65	80	63	67	80	80
11	66	80	64	67	80	
12	66	80	64	68	80	
13	66	80	65	69		
14	67	80	66	71		
15	68	80	67	75		
16	68	80	68	77		
17	70	80	69	79		
18	71	80	70	80		
19	71	80	70	80		
20	72	80	70	80		
21	73	80	71	80		
22	80	80	72	80		
23	80	80	75			
24	80	80	77			
25	80	80	79			
26	80	80	80			
27	80	80	80			
28	80	80	80			
29	80	80	80			
30	80	80	80			
31	80	80	80			
32	80	80	80			
33	80	80				
34	80	80				
35-44	80					

Table 23 (cont'd.)

Females						
Grades 7-8						
	CD	SA	AP	AW	PB	ME
Raw	T	T	T	T	T	T
0	40	44	43	47	49	47
1	48	55	53	48	55	52
2	51	60	57	49	60	61
3	53	65	61	53	70	67
4	55	70	63	58	75	70
5	56	74	66	62	77	74
6	57	76	67	67	80	75
7	59	79	68	68	80	77
8	60	80	68	70	80	80
9	61	80	68	74	80	80
10	64	80	69	75	80	80
11	67	80	69	77	80	
12	67	80	70	78	80	
13	68	80	71	79		
14	70	80	74	79		
15	71	80	75	80		
16	72	80	75			
17	74	80	76			
18	75	80	76			
19	78	80	77			
20	79	80	78			
21	80	80	79			
22	80	80	80			
23	80	80	80			
24	80	80	80			
25	80	80	80			
26	80	80	80			
27	80	80	80			
28	80	80	80			
29	80	80	80			
30	80	80	80			
31	80	80	80			
32	80	80	80			
33	80	80				
34	80	80				
35-44	80					

Table 24

Table for converting (raw) RBPC scale scores to normalized T scores, for teacher ratings of public school students in classes for the seriously emotionally disturbed

Males - Grades K-6						
	CD	SA	AP	AW	PB	ME
Raw	T	T	T	T	T	T
0	27	40	23	31	41	25
1	32	47	29	36	48	40
2	35	51	32	39	51	43
3	36	53	34	42	54	47
4	37	56	37	42	60	50
5	39	58	38	44	63	53
6	40	59	40	47	65	56
7	41	60	41	48	68	58
8	42	61	43	50	73	65
9	42	62	44	52	79	66
10	43	63	46	54	80	71
11	44	63	47	56	80	
12	45	64	48	57	80	
13	46	66	49	59		
14	47	66	51	61		
15	47	67	53	63		
16	48	68	54	65		
17	49	69	56	67		
18	50	70	57	70		
19	51	71	59	73		
20	52	72	60	74		
21	53	76	61	76		
22	54	77	63	80		
23	55	78	65			
24	55	79	67			
25	55	80	69			
26	55	80	71			
27	56	80	73			
28	57	80	74			
29	58	80	75			
30	59	80	76			
31	61	80	78			
32	62	80	80			
33	62	80				
34	63	80				
35	64					
36	65					
37	66					
38	66					
39	67					
40	69					
41	73					
42	79					
43	80					
44	80					

Table 24 (cont'd.)

Males - Grades 7-12						
	CD	SA	AP	AW	PB	ME
Raw	T	T	T	T	T	T
0	30	39	30	32	42	37
1	35	46	34	38	49	43
2	37	49	37	41	52	47
3	38	51	39	43	55	50
4	39	52	40	45	57	53
5	40	54	42	48	58	55
6	41	55	42	50	60	57
7	42	57	44	51	63	60
8	44	57	45	53	65	63
9	45	58	46	55	66	65
10	46	59	47	57	68	71
11	46	59	49	59	70	
12	46	60	50	66	74	
13	47	61	51	62		
14	47	62	52	64		
15	48	62	54	65		
16	49	63	55	66		
17	50	64	57	68		
18	51	65	59	70		
19	52	66	60	71		
20	53	67	61	72		
21	54	68	62	74		
22	54	69	63	78		
23	55	69	64			
24	56	70	66			
25	56	70	69			
26	57	70	70			
27	57	71	71			
28	58	71	72			
29	59	71	73			
30	60	75	75			
31	60	76	78			
32	62	76	80			
33	63	77				
34	64	80				
35	65					
36	66					
37	68					
38	69					
39	70					
40	71					
41	73					
42	78					
43	79					
44	80					

Table 24 (cont'd.)

Females - Grades K-6						
	CD	SA	AP	AW	PB	ME
Raw	T	T	T	T	T	T
0	35	42	30	32	40	38
1	38	50	36	39	49	44
2	40	53	39	42	53	49
3	41	57	40	44	56	53
4	42	61	41	45	58	55
5	43	64	42	46	60	58
6	45	66	42	48	62	61
7	45	68	45	49	64	63
8	45	70	46	50	66	66
9	45	71	48	53	66	73
10	46	72	49	55	67	80
11	47	73	49	57	68	
12	48	76	50	59	73	
13	48	77	52	61		
14	49	80	54	65		
15	50	80	55	68		
16	51	80	55	68		
17	52	80	57	69		
18	53	80	60	70		
19	54	80	61	71		
20	55	80	61	72		
21	55	80	62	73		
22	56	80	63	78		
23	58	80	64			
24	60	80	64			
25	60	80	65			
26	61	80	67			
27	61	80	70			
28	61	80	73			
29	62	80	74			
30	63	80	76			
31	64	80	79			
32	65	80	80			
33	66	80				
34	68	80				
35	69					
36	70					
37	72					
38	73					
39	74					
40	75					
41	76					
42	77					
43	79					
44	80					

Table 24 (cont'd.)

Females - Grades 7-12						
	CD	SA	AP	AW	PB	ME
Raw	T	T	T	T	T	T
0	36	37	33	35	42	42
1	41	45	39	38	50	50
2	43	49	42	43	53	53
3	45	51	43	46	56	56
4	46	52	44	47	57	57
5	47	53	45	48	61	61
6	48	54	46	49	66	66
7	48	55	48	50	70	68
8	48	56	50	53	75	70
9	48	57	51	55	76	75
10	49	59	52	58	77	80
11	49	60	53	60	78	
12	49	61	55	61	80	
13	49	61	57	62		
14	50	61	59	63		
15	51	61	62	65		
16	51	62	64	66		
17	52	62	65	67		
18	52	62	65	68		
19	53	62	66	73		
20	54	62	66	75		
21	55	63	67	80		
22	55	65	67			
23	56	66	67			
24	58	67	68			
25	59	68	69			
26	59	70	70			
27	59	73	71			
28	60	75	72			
29	61	77	73			
30	62	80	74			
31	63	80	74			
32	63	80	76			
33	64	80				
34	65	80				
35	66					
36	66					
37	67					
38	67					
39	68					
40	70					
41	72					
42	73					
43	75					
44	75					

Table 1

Items Comprising the Six Scales of the RBPC with
Rotated Factor Loadings from the Five Samples

SCALE I. Conduct Disorder (CD) (22 items)						
Item No.	Item	1	2	3	4	5
2	Seeks attention; "shows-off"	.64	.33	.56	.67	.49
5	Disruptive; annoys and bothers others	.73	.41	.46	.74	.61
17	Fights	.58	.63	-.2	.81	.55
19	Has temper tantrums	.48	.54	--	.41	.65
26	Disobedient; difficult to control	.66	.67	.44	.83	.75
28	Uncooperative in group situations	.59	.35	.54	.75	--
33	Negative; tends to do the opposite of what is requested	.59	.64	--	.77	.54
34	Impertinent; talks back	.74	.62	.46	.86	.69
38	Irritable, hot-tempered; easily angered	.71	.66	--	.59	.67
40	Argues; quarrels	.75	.58	.78	.79	.72
41	Sulks and pouts	.46	.35	.61	.33	.49
42	Persists and nags; can't take "no" for an answer	.52	.53	.75	.54	.72
49	Tries to dominate others; bullies, threatens	.70	.64	--	.79	.58
50	Picks at other children as a way of getting their attention; seems to want to relate but doesn't know how	.63	.59	.38	.58	.43
55	Braggs and boasts	.58	.36	.48	--	--
65	Teases others	.68	.73	.37	.74	.58
71	Selfish; won't share; always takes the biggest pieces	.46	.36	--	--	.59
75	Not liked by others; is a "loner" because of aggressive behavior	.30	.52	--	--	.48
77	Cannot stand to wait; wants everything right now	.45	.50	.67	.36	.71
78	Refuses to take directions; won't do as told	.58	.55	--	.67	.77
79	Blames others; denies own mistakes	.60	.35	.81	.56	.65
83	Deliberately cruel to others	.71	.63	--	.85	.49

SCALE II. Socialized Aggression (SA) (17 items)						
Item No.	Item	1	2	3	4	5
3	Stays out late at night	.72	.71	--	--	--
7	Steals in company with others	.41	.41	--	--	--
11	Belongs to a gang	.66	.53	--	--	--
18	Loyal to delinquent friends	.80	.81	--	--	.77
20	Truant from school, usually in company with others	.65	.77	--	--	.68
24	Has "bad" companions, ones who are always in some kind of trouble	.79	.79	--	--	.82
46	Uses drugs in company with others	.77	.80	--	--	--
51	Steals from people outside the home	.40	.41	--	--	--
54	Freely admits disrespect for moral values and laws	.62	.76	--	--	.52
59	Is part of a group that rejects school activities such as team sports, clubs, projects to help others	.53	.65	--	--	.49
60	Cheats	.35	.45	--	--	--
61	Seeks company of older, "more experienced" companions	.48	.46	--	--	.57
69	Will lie to protect his friends	.69	.76	--	--	.68
72	Uses alcohol in company with others	.70	.72	--	--	--
80	Admires and seeks to associate with "rougher" peers	.68	.63	--	--	.78
87	Runs away; is truant from home	.54	.51	--	--	.56
88	Openly admires people who operate outside the law	.71	.76	--	--	--

Table 1 (cont'd.)

SCALE III. Attention Problems - Immaturity (AP) (16 items)						
Item No.	Item	1	2	3	4	5
13	Short attention span; poor concentration	54	67	--	62	.69
15	Inattentive to what others say	47	53	44	33	.56
23	Irresponsible, undependable	52	56	--	38	.45
29	Passive, suggestible; easily led by others	48	22	60	--	.51
31	Distractible; easily diverted from the task at hand	51	67	--	42	.69
35	Sluggish, slow moving, lethargic	80	--	65	--	--
36	Drowsy; not "wide awake"	80	--	65	--	--
44	Answers without stopping to think	41	40	43	42	.42
45	Unable to work independently; needs constant help and attention	50	60	--	72	.62
47	Impulsive; starts before understanding what to do; doesn't stop and think	40	55	41	39	.50
56	Slow and not accurate in doing things	38	64	60	67	.69
58	Does not finish things; gives up easily; lacks perseverance	56	55	41	65	.59
66	Absentminded; forgets simple things easily	39	62	53	64	.68
67	Acts like he or she were much younger; immature, "childish"	31	50	46	46	.51
68	Has trouble following directions	58	67	60	74	.64
73	School work is messy, sloppy	33	51	35	52	.59

SCALE IV. Anxiety-Withdrawal (AW) (11 items)						
Item No.	Item	1	2	3	4	5
4	Self-conscious; easily embarrassed	71	55	62	73	.58
6	Feels inferior	79	41	68	44	.43
9	Shy, bashful	37	28	56	79	.52
14	Lacks self-confidence	68	53	66	48	.63
21	Hypersensitive; feelings are easily hurt	67	47	51	--	.40
22	Generally fearful; anxious	48	23	--	--	--
27	Depressed; always sad	63	27	--	--	.49
53	Says nobody loves him or her	48	40	--	--	--
64	Difficulty in making choices; can't make up mind	45	37	50	--	--
70	Afraid to try new things for fear of failure	65	66	43	--	.41
84	Feels he or she can't succeed	74	59	--	--	.54

SCALE V. Psychotic Behavior (PB) (6 items)						
Item No.	Item	1	2	3	4	5
12	Repetitive speech; says same thing over and over	72	--	--	--	--
16	Incoherent speech, what is said doesn't make sense	54	--	--	--	--
39	Expresses strange, far-fetched ideas	56	48	--	--	--
52	Expresses beliefs that are clearly untrue (delusions)	77	64	--	--	--
85	Tells imaginary things as though true; unable to tell real from imagined	73	67	--	--	--
89	Repeats what is said to him or her; "parrots" others' speech	62	--	--	--	--

Table 1 (cont'd.)

Item No.	Item	SCALE VI. Motor Excess (ME) (5 items)				
		1	2	3	4	5
1	Restless; unable to sit still	62	70	--	--	.50
25	Tense; unable to relax	66	47	--	69	.58
30	Hyperactive; "always on the go"	60	63	--	--	--
37	Nervous, jittery, jumpy; easily startled	61	24	--	76	.52
82	Squirms, fidgets	60	52	--	--	.47

¹ From the study of Aman and his colleagues (see Footnote 1).

² Dash indicates that either the item did not have an adequate frequency of endorsement or that it did not load on the factor.

Table 2
Intercorrelations Among the Scales

Scales	Samples	SCALES				
		SA	AP	AW	PB	ME
CD	1	.65	.56	.19	.48	.58
	2	.43	.52	.18	.15	.49
	3	.56	.49	-.12	.24	.30
	4	.30	.51	.14	.27	.48
	5	.40	.55	.33	.43	.41
	6	.55	.45	.37	.40	.70
SA	1		.44	.18	.41	.29
	2		.45	.18	.06	.28
	3		.26	-.23	.16	-.01
	4		.05	.20	-.15	-.09
	5		.27	.20	.00	.09
	6		.36	.24	.42	.41
AP	1			.47	.55	.51
	2			.37	.34	.37
	3			-.01	.38	.31
	4			.44	.69	.52
	5			.51	.47	.37
	6			.52	.48	.51
AW	1				.36	.23
	2				-.02	.17
	3				.04	.04
	4				.38	.21
	5				.33	.12
	6				.34	.32
PB	1					.32
	2					.16
	3					-.05
	4					.42
	5					.29
	6					.47

1. Unselected public school students, grades K-8 (N = 505) rated by teachers
2. Gifted 4th grade students (N = 136) rated by their teachers
3. Behavior problem elementary students (N = 34) rated by their teachers.
4. Inpatients rated by staff (N = 151)
5. Inpatients rated by parents (N = 100)
6. Outpatients rated by their teachers (N = 50)

Sample 4 consisted of 172 ratings of children in a community-sponsored school for children with developmental disabilities. Thirty-nine ratings were of girls and 133 of boys. Sixteen percent of the children were from lower, 51% from middle, and 33% from upper class homes. Almost all were significantly impaired in intellectual functioning.⁵

As noted above, all four samples were factored independently. Only those items with a frequency of endorsement of greater than 15% and less than 85% were utilized. Principal axis analysis with R^2 as the initial communality estimate was utilized with subsequent rotation to the varimax criterion (Kaiser, 1958).

Items selected for inclusion in the RBPC were those that were: (1) most consistent in their factor placement, (2) had the highest loadings, (3) loaded on one factor only (except for trivial [$< .20$] loadings on other factors), and (4) contributed to the Alpha coefficient (Cronbach, 1951) of the scale in which they appear both in the samples used for the factor analyses and in three additional samples (see below).

These procedures resulted in four major scales: (1) Conduct Disorder (CD) (22 items), (2) Socialized Aggression (SA) (17 items), (3) Attention Problems-Immaturity (AP) (16 items), and (4) Anxiety-Withdrawal (AW) (11 items). Two additional scales with fewer items were also retained: Psychotic Behavior (PB) (6 items) and Motor Tension-Excess (ME) (5 items). The items comprising the six scales along with their factor loadings in the four samples are presented in Table 1.

Scoring of the RBPC

While the process described above resulted in incorporation of 77 items into the RBPC, the checklist currently contains an additional 12 items *which are not now scored*.

In contrast to the original BPC, the RBPC uses weighted scoring. Each item circled "1" earns one point and each item circled "2" earns two points for its respective scale. Thus, the maximum obtainable score for any of the six scales is two times the number of items on the scale (e.g., CD maximum score is 44) while the minimum score for all scales is obviously zero.

Scoring is mostly simply accomplished by the use of the scoring templates which are provided with each RBPC kit and which may be obtained separately as well. The two templates fit over the two inside pages (pages 2 and 3) of the checklist, respectively. Aligning the templates, first for CD, then SA, then AP, and so on, permits the scorer to count the "1s" and "2s" that appear in the appropriate boxes on the template. These "1s" and "2s" are summed to obtain the raw scale scores. Obviously, no obtained score can exceed the maximums as noted above.

Psychometric Properties of the RBPC

Scale Intercorrelations

While orthogonal rotation procedures (e.g., Varimax) result in uncorrelated underlying dimensions, the resulting factor scales provide only estimates of these dimensions. Thus, obtained scale scores may be correlated among themselves to varying degrees depending upon the operation of a variety of influences. It is worth noting that the utility of any single scale is diminished when it is found to correlate highly with one or more of the other scales. Users of rating scales should not be misled by the interpretive possibilities seemingly presented by a large number of (supposedly) independent scales. It should be obvious that two scales that are routinely found to correlate .80 and above are unlikely to make *independent* contributions to the prediction of any criterion measure — as both scales are measuring something very similar. Knowing the degree of intercorrelation among any set of scales allows the user to gain insight into the likelihood