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## ABSTRACT

### THE BEHAVIOR OF NORMAL AND CLINIC REFERRED CHILDREN AS PERCEIVED BY THEIR PARENTS

By

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The purpose of this study was to investigate the behavior patterns of normal and clinic referred children from the point of view, or perception, of their respective parents. That is, we were interested in how parents of a normal sample and parents of a clinic sample perceive their children's behavior.

The Children's Behavior Checklist was filled out by 201 parents of children (ages 5 to 11) who had been seen at the Michigan State University Psychological Clinic and 192 parents of normal elementary school children from the same geographical area. Two kinds of analyses were performed. First the checklists from the entire sample were factor analyzed. Three factors, "impulsivity", "competence", and "moodiness" were defined. The normal and clinic Ss were compared on each factor by means of an analysis of variance of composite scores. The results showed

significant differences between normal and clinic Ss on the impulsivity, competence and moodiness factors. Sex differences were found on the moodiness factor. In addition, a significant interaction between sex of parent and sex of child was observed on the competence factor.

In the second analysis the entire sample was divided into four subgroups: Mothers of Normals (MN), Fathers of Normals (FN), Mothers of Clinics (MC) and Fathers of Clinics (FC). The responses of each subgroup to the checklist were factor analyzed. Six factors were found among MN, five among FN, six among MC and eight among FC. The factor analysis of the entire sample was designated All Parents (AP) and five factors were observed in this group. The groups were compared with each other according to the factors present in each group. Behavior dimensions perceived by mothers and by fathers and the relation of these to childhood psychopathology were discussed.

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CHILDREN AS PERCEIVED BY THEIR PARENTS

By

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To my parents: For all those things that parents do

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## INTRODUCTION

This study investigated the behavior patterns of normal and clinic referred children from the point of view of their respective parents. That is, we were interested in how parents of normal children and parents of clinic referred children perceive their child's behavior. Furthermore, we were interested in such questions as: Can parental perceptions reliably differentiate normal from clinic referred children? Are there qualitative differences between mothers' and fathers' perceptions of their children within each group? Can we derive patterns of normal and deviant behavior? And lastly, are other variables such as socioeconomic status and family constellation related to certain behavior syndromes?

That personality development is related to parent-child interaction is certainly not a new idea nor one that has been generally neglected in the child development literature. Yet, Rothbart and Maccoby point out that "Previous studies of mother-father differences in the treatment of boys and girls have been of two major types. The first involves children's perceptions of their parents behavior; the second involves parents perceptions of their own behavior and attitudes toward their children" (1966, p. 237).

It is significant that the authors referred to parents' "attitudes towards" and not "perceptions of" their children for they are distinct, albeit related, variables. The difference between "attitudes" and "perceptions," as operationally defined here, is that an attitude reflects an evaluation of how behavior is or should be, whereas a "perception" is simply a description of behavior. For example, parents attitudes toward their children might express beliefs about child rearing practices whereas parents' perceptions of their child evoke a description of the child's behavior. And while the literature on parental attitudes is mountainous, studies of parents' perceptions of their children are scarce.

There is also a methodological consideration in the assessment of parental attitudes and perceptions. Most of the research on parent-child relations has relied upon self-report instruments such as interviews and questionnaires and Radke-Yarrow (1963) and others have pointed out the possible fallacies in using these instruments to gain information about child rearing practices. Furthermore, Ferguson (1969) has suggested that the interview and questionnaire are, in fact, measures of parental attitudes. Thus, one has to be familiar with the instrument used before determining whether a given study is measuring attitudes or, for the present purposes, perceptions.

Direct studies of parents' perceptions of their children's behavior have used more structured self-report instruments, such as the Q Sort (Colter and Shoemaker, 1969) and the checklist (Peterson, Becker, Shoemaker, Luria and Hellmer, 1969; Griffiths, 1952; Jenkins, 1966; and Conners, 1970). The present study utilized a behavior checklist developed by Ferguson, MacKenzie and Does to determine how parents of clinic referred children perceive their children's behavior. In addition, factor analytic techniques were employed to ascertain the principal dimensions of behavior suggested by the checklist. Similar procedures have been used by other investigators also using checklist instruments (Peterson et al., 1961; Jenkins, 1966; Quay and Quay, 1965; Conners, 1970).

Peterson et al. (1961) compared a clinic sample with a normal sample of kindergarten children, relating parental perceptions from a behavior checklist to parental attitudes based on an interview. Parental perceptions of the clinic group yielded three dimensions: conduct problems, personality problems and autism. These dimensions were then collapsed into the two categories of conduct disorders and personality disorders. Parental attitudes were not related to any behavior problems. In the normal sample, parental strictness, lack of warmth, and aggression were related to all kinds of children's problems, but these



attitudes did not discriminate between conduct problems, personality problems, or autistic behavior.

Quay and Quay (1965) in a similarly structured study found Peterson's conduct versus personality dimension to apply to their clinic subjects. Jenkins (1966) identified five clusters of pathological behavior by rating subjects from case records. The five clusters: shy-seclusive, overanxious-neurotic, hyperactivity with poor concentration, undomesticated, and social delinquent, were collapsed into the two broad categories of inhibited and aggressive behavior.

Recently, Conners (1970) compared clinic children with 365 normal children by using parental ratings of 73 symptoms. His factor analytic results confirmed Peterson's twofold distinction: an aggressive, uncontrolled, trouble-making syndrome and an anxious, shy and inhibited pattern. Conners then condensed the 73 symptoms into 24 categories of behavior. He reported that 21 of the 24 categories discriminated clinic subjects from normal subjects. Furthermore, he was able to identify 70% of the clinics and 83% of the controls from their scores on the behavior categories.

Stone (1965), using Peterson's categories, gave the PARI to parents of children with conduct problems and to parents of children with personality problems. It was found that the parental attitudes measured did not distinguish between the groups. Stone concludes that "The repeated

failure of the PARI to provide meaningful discriminations between various groups of clinic parents and between clinic parents and 'normals' implies that the attitudes that it 'measures' have little clinical relevance . . . it is parents' attitudes about the particular child in question, rather than their attitudes on the subject of child rearing in general, that are relevant" (p. 286). Again, we should like to add parents' perceptions, which are certainly clinically useful. In fact, at least one author (Glidewell, 1963) reported a positive relationship between the number of symptoms according to a child's mother and the child's degree of maladjustment as reported by the child's teacher.

Griffiths (1952) derived a checklist of forty-nine behavior items by having mothers list common problems. The checklist was then presented to parents of six to fourteen-year-old children. The parents indicated the frequency of occurrence of each behavior by checking "never," "sometimes," or "often." Each of the 49 items was grouped into one of four categories: aggressive behavior, withdrawing behavior, noncompliant behavior in the home, or delinquent related behavior. His sample was impressive in that he obtained 50 boys and 50 girls at each chronological age but, unfortunately, mother-father comparisons were not reported since one or both parents filled out the checklist. He found that "parents" perceived boys as more aggressive than girls at all ages although aggressive behavior decreased with

chronological age. Similarly, delinquent-related behavior decreased with age, again with boys showing more delinquent-related behavior than girls. Boys were also found to be more withdrawn than girls except at the six to eight age level where no differences were found. Withdrawing behavior decreased with age in girls, whereas boys were most withdrawn at ages nine to eleven and least withdrawn from twelve to fourteen. Lastly, boys were more noncompliant than girls and, for both sexes, parents perceived their children as most noncompliant during the middle age period (nine to eleven).

One of the problems in studying the perceptions of parents was revealed in a study by Colter and Shoemaker (1969). The authors expected to find that mothers who rated their sons favorably on a Q Sort and Self Esteem Picture Test would make higher estimates of their child's Block Design performance than those mothers who held less favorable opinions of their sons. However, the hypothesis was not supported because mothers consistently tended to rate their children as being more "average" than they really were.

The last study dealing with parents' perceptions of their children took a somewhat different approach. Rothbart and Maccoby (1966) used an ambiguous child's voice (age four) to elicit responses from different groups of parents. One group was told it was a boy's voice, the other group

was told it was the voice of a girl. Parents were then asked to respond to various statements made by the child. It was found that fathers showed greater permissiveness towards girls than boys for both dependency and aggression. Mothers, on the same dimension, showed greater permissiveness towards boys than girls.

As was mentioned earlier, studies of parental attitudes and studies of children's perceptions of their parents are numerous. And since we are concerned with the dynamics of family interaction, some of the more relevant findings are reviewed below.

At least three dimensions of parental treatment have been perceived by children: loving, punishment, and demanding (Seigleman and Marvin, 1965). Class differences have been reported, with middle class boys perceiving their parents as more competent, emotionally secure, accepting, and more interested in the child's performance than lower class boys (Rosen, 1964). It has also been reported that normal boys report different parental behavior than do delinquent boys (Schaefer, 1965). In another report, in which the PARI failed to relate the parents' attitudes to the child's symptoms or to yield differences in attitudes between the clinic and control parents, the major determinant of maternal attitudes in the clinic sample was SES. The less educated lower class mothers had more authoritarian, controlling attitudes (Zuckerman, Barrett and Bragiel, 1960).

That social development and emotional disturbance are related has been suggested by several writers. In one study (Wall, Pringle and Kellmer, 1966), the social maturity level of a clinic group (according to the Vineland Social Maturity Scale) was lower than that of a normal group. Low social maturity was associated with parental attitudes of unduly limited demands and overprotection.

Parental attitudes and behavior have been repeatedly shown to be related to maladjustment in the child, even though, as Radke (1964) has pointed out, contradictory results are not uncommon in the field of parent-child relations. General maladjustment of the parents (Liverant, 1959; Peterson et al., 1961; Becker, et al., 1959; and Peterson, et al., 1959), parent-child harmony (Becker, et al., 1959; McCord, et al., 1961; McCord, et al., 1962), and parental hostility, rejection and control (Becker, 1964; McCord, et al., 1962; McCord, et al., 1961; Peterson, et al., 1962; Medinnus, 1965; Peterson et al., 1959; and Winder and Rau, 1962), are some of the more prevalent dimensions related to childhood psychopathology. However, these are not clear cut dimensions as evidenced by Medinnus (1963) who found no relation between parental acceptance of the child and parental attitudes, or Gallagher (1957) who found no tendency for adults with authoritarian personalities to have rejecting or hostile attitudes towards children.

Some parental attitudes and characteristics have been associated with specific behavior disorders in children. Winder and Rau (1962) have pointed out the unique contribution of the father in the development of aggression among socially deviant boys. McCord, et al., (1961), studying non-delinquent boys, reported four conditions affecting the child's level of aggression: the emotional relationship between the parent and the child, parental control, the parental model, and the relationship between the parents. This last parameter has been discussed by Wyer (1965) as crucial to the understanding of the etiology of the child's adjustment. Becker, et al., (1959), found that aggressive, uncontrollable children in a clinic group were the product of parents who gave vent to emotions easily and thus provided a model for uncontrollable behavior. The mother was dictatorial and thwarting while the father tended not to enforce regulations. Aggression, according to Radke (1946), stems from inharmonious and rejecting homes, while Bandura (1960) prefers to stress direct training in aggression as well as imitation of parental models. Bandura (1960), comparing aggressive and withdrawn children, found that the significant explanatory factor in the choice of behavior deviation was not affectional deficits (deprivation, rejection, hostility, etc.) but the repertoire of learned reactions to frustration based on differing reinforcement

histories. He did not, however, compare his deviant groups with a normal or well-adjusted group.

Direct training and imitation were also used by Bandura (1960) to account for withdrawn and inhibited behavior whereas, Radke (1946) emphasized restrictive homes and dominating parents. Similarly, dependency in the child was related to pervasive parental guidance (McCord, et al., 1962), a thwarting father (Becker, et al., 1959) and to maternal rejection and sex anxiety and fathers' low esteem (Winder and Rau, 1962).

In one study, Peterson, et al., (1959) found personality problems in the child to be related to dictatorial attitudes and lack of concern in the father. Conduct problems were associated with the mothers' maladjustment and with feelings of overconcern in the father. In addition, both parents were overly permissive. In a later study, the same investigator (Peterson, et al., 1961) reported that parental attitudes could not discriminate between personality, conduct and autistic problems. Furthermore, Liverant (1959) divided a disturbed group of children into schizophrenic, delinquent or antisocial, psychosomatic and neurotic (non-acting out) classes. He found that parental pathology as measured by the MMPI was not related to particular behavior problems.

It seems almost superfluous to say that there are some serious methodological problems in the study of

parent-child interaction. Stone's point about the importance of studying attitudes toward the particular child is well taken. In addition, researchers should be aware of exactly what variable they are measuring (for example, attitudes or perceptions) as well as how the variables are defined. That is, Peterson, et al., (1961) and Liverant (1959), as well as others, have used gross divisions of behavior (personality, delinquent problems, etc.) and one wonders how meaningful such divisions are or if they can't be broken down into more manageable parameters.



## PROBLEM

It was primarily for the above methodological considerations that this study was exploratory in nature. A few hypotheses were advanced; however, the data were not organized around one or another set of behavioral constructs or categories. Rather, we addressed ourselves to the question of what patterns would emerge from a quite comprehensive inventory of items referring to child behaviors.

The question of behavior syndromes or patterns was studied according to the parents' perceptions of the behavior of their children. That is, how do parents of normal and clinic referred children perceive their children's behavior? Are there behaviors or behavioral dimensions that reliably differentiate normal from clinic children? In other words, can we rely on parents' perceptions of their children's behavior to furnish meaningful diagnostic patterns of behavior.

It was expected, for example that the clinic group would be characterized by more acting-out types of behavior than the control subjects. Such a prediction was based on previous research which showed clinic samples to be typified by twice as many boys as girls, with girls rarely exhibiting conduct problems (Stone 1965; Peterson, et al., 1961).

Similarly, Griffiths (1952) reported boys as having higher scores on all four dimensions studied; aggression, delinquent related behavior, noncompliant and withdrawing behavior.

Another hypothesis had to do with the difference between normalcy and deviancy. It has been suggested that deviant behavior is an exaggeration of normal behavior; that it is a difference in degree and not a difference in kind. According to Bandura (1962, p. 37) "It has frequently been claimed that normal behavior can best be understood by studying deviants, on the supposition that the latter exhibit extreme or more 'pure' forms of the phenomena under investigation." Cameron (1947) has suggested a "principle of continuity" in which normalcy and deviancy are regarded as modes of behavior on a continuum. Therefore, we expected to find roughly the same kinds of behavior in each group. That is, if clinic behavior is quantitatively but not qualitatively different from normal behavior, the same behavioral categories (such as conduct and personality problems, viz Peterson, et al., 1961) should apply to both groups. Deviant behavior would then be an extreme variation of normal behavior, but not categorically different.

The last prediction involved mother-father differences within each group and between the two groups. That is, do mothers and fathers differ in their perceptions of their children's behavior? The hypothesis was that mothers

would perceive more affective or emotional behaviors  
whereas fathers would perceive overt or conduct-related  
behaviors.

## METHOD

### Subjects

The sample consisted of 217 children; 112 had been seen at the Michigan State University Psychological Clinic and 105 were normal children from the same geographical area. "Normal" was defined as not having been referred to a mental health agency. The clinic sample was composed of 83 boys and 29 girls. As was noted previously, this distribution of the sexes is typical of clinic samples. There were 55 boys and 50 girls in the normal sample. The ages in each group ranged from five to eleven with a mean of 8.48 among the normals and 7.68 among the clinic group. The Children's Behavior Checklist (Ferguson, MacKenzie and Does) was filled out by 393 parents from both groups. Included were 99 fathers and 112 mothers from the normal sample with a mean SES of 2.98 on a five level scale (Hollingshead, 1957). The clinic parents were composed of 85 fathers and 107 mothers with a mean SES of 2.72. The characteristics of the two sample are shown in Table 1.

### Instrument

The Children's Behavior Checklist (Ferguson, MacKenzie and Does) consists of 154 interpersonal and

TABLE 1  
 Characteristics of Normal and Clinic Samples

Age	<u>Normal</u> (N=105)		<u>Clinic</u> (N=112)	
	Male	Female	Male	Female
5	3	4	4	4
6	9	5	10	2
7	8	11	12	5
8	8	3	9	3
9	7	12	24	5
10	10	6	16	6
11	10	9	8	4
Total	55	50	83	29
Mean	8.48		7.68	
SD	1.95		1.89	
<u>SES</u>	<u>N</u>		<u>N</u>	
Level 1	18		31	
Level 2	19		12	
Level 3	24		30	
Level 4	40		35	
Level 5	5		5	
Mean	2.98		2.73	
SD	1.14		1.27	

symptomatic behaviors of children. The behavior items were derived from parents' descriptions of their children and from observations of children in both play therapy sessions and classes for the emotionally disturbed. An attempt was made to include only readily observable, rather than inferential, characteristics or actions. The checklist is fairly evenly balanced between socially desirable items and those referring to maladjustive or undesirable behavior.

There are two columns following each behavior item. The first column is labeled "Does this apply at all?" and the other "Is it characteristic?" The parents were instructed to go through the checklist and put a checkmark in the first column if that behavior applied to their child. Then the parent was asked to survey the items checked and to put a checkmark in the second column if those behaviors characterized their child. If the parent did not know whether or not a particular item applied or never had the opportunity to observe the behavior, they were to write a "0" in column one.

### Procedure

The clinic sample was obtained over the course of several years by asking all parents who brought their child to the Michigan State University Psychological Clinic to fill out the checklist. General demographic data consisting of occupation and level of education reached by the head of the household, educational level of the mother, age and sex of the child; number and ages of siblings were obtained from subsequent files.

The normal sample was collected in Holt, Lansing and East Lansing, Michigan. In Holt, the investigators went to a public elementary school and distributed stamped, addressed envelopes to the children, requesting them to bring the envelopes home to their parents. Each envelope

contained a letter of explanation to the parents, two checklists, and an information sheet requesting the demographic data (See Appendices A, B, and C). In Lansing and East Lansing, the envelopes were distributed directly to the parents at PTA meetings. The only information the parents received about the study was from the letter of explanation. The letter asked their cooperation in a study of children's behavior and instructed them to fill out the checklists independently and without consultation. About 20% of the checklists distributed to the non-clinic parents were returned. Thus this sample cannot be considered representative of the total population of parents, but does provide a reasonable contrast group for the clinic sample. If anything, it is probably biased in the direction of positive adjustment.

To determine SES the Hollingshead Scale (1957) was used. This scale makes use of two items: occupation and level of education attained by the head of the household. An individual's score is based on seven occupation and education levels. The occupation and education factors are weighted four and seven respectively and the two scores are summed. Scores range from 11 - 77 and are divided into five social classes, class one having the highest SES.

Each pair of mother-father checklists was inspected to insure that the behavior items were not checked identically. If at least five disagreements were not found

between a given pair, those checklists were dropped from the sample on the suspicion that the parents may have discussed the behavior items. A total of 12 pairs of checklists were dropped for this reason and were not included in the original sample totals.

The sample was then divided into the normal and clinic groups. A frequency count of each item was conducted for the two groups. The frequency, in percent, of each item was compared between the normal and clinic groups. If the magnitude of the difference in frequency of each item between the two groups was less than 10 percent, that item was dropped from the checklist. It was felt that such a procedure would eliminate those behavior items that were not useful in discriminating between the normal and the clinic children. A total of 65 items were dropped from the checklist.

The scores on the remaining 97 behavior items constituted the raw data for the subsequent analysis. These items are starred in Appendix B. In addition, only those items checked in the "characteristic" column by a particular parent were counted since it was felt that this column would yield more reliable behavior than the "applied" column. That is, the former column demands a greater degree of specificity of behavior than the latter. The responses to these items were then intercorrelated (product moment method) for the entire sample of parents and for the four



subgroups of mothers of normals, fathers of normals, mothers of clinics, and fathers of clinics, considered separately.

## RESULTS

### Analysis I

A principal axis factor analysis using Guttman type communalities was performed on the entire sample. Included in this analysis were any behaviors checked by mothers or fathers on their separate checklists. This procedure yielded a measure of parental perceptions and the sample was designated All Parents (AP).

A varimax rotation produced 28 factors comprising 75.38% of the variance. Since there were many items with high (greater than .3) loadings on more than one factor, the following criteria were employed in further refining the factors: (1) An item had to load at least .45 on a factor. (2) An item could not have a loading greater than .30 on any other factor, or there had to be a difference of at least .20 between an item's loading on its two highest factors. (3) A factor had to be defined by at least three items.

Based on the AP data, three factors met the above criteria accounting for 21.98% of the variance. The factors were labeled as:

I Impulsivity

## II Competence

## III Moodiness

The items comprising each factor are listed in Table 2.

TABLE 2

Factor Analysis of All Parents' Responses (N=393)

Factor	Variable	Loading
I-Impusivity	Can't wait--must have things immediately . . . . .	.79
	Gets irritated or angry easily . . .	.74
	Gets carried away by his feelings, acts on them right away . . . . .	.65
	Has uncontrollable outbursts of anger	.62
	When told to do something he doesn't want to do becomes very angry . .	.72
	Blows up very easily when troubled by someone . . . . .	.73
	Plays with boys in a rough way . .	.55
	Proportion of the variance = 8.52	
II-Competence	Is concerned about the feelings of others . . . . .	.56
	Activity focused on a particular purpose, seems to accomplish what he sets out to do . . . . .	.62
	Can accept new ideas without getting upset . . . . .	.67
	Starts things off when with others	.53
	Others seem to want to be with him	.71
	Makes friends quickly and easily .	.60
	Self confident . . . . .	.57
	Able to stand up for himself . . .	.67
	Polite and cooperative with others	.62
	Shows appreciation when others help or do things for him . . . . .	.71
	Energetic . . . . .	.54
	Shows pleasure and involvement in most things he does--enthusiastic	.76
	Competes with other children . . .	.59
	Quick and clever . . . . .	.54

TABLE 2--Continued

Factor	Variable	Loading
	Learns quickly from others . . . .	.65
	Proportion of the variance = 10.15	
III-Moodiness	Moods often change for no apparent reason . . . . .	.65
	Very moody--sad one minute and happy the next . . . . .	.68
	Often seems angry for no particular reason, expresses it in many different ways . . . . .	.69
	Proportion of the variance = 3.36	
	Total proportion of the variance = 21.98	

To compare the normal and the clinic children on each factor, each subject was assigned two composite scores. One derived from the mother's checklist and the other derived from the father's checklist. A composite score was the number of behavior items constituting a given factor which were checked for that subject. For example, factor I is composed of seven items. A subject's score could range from 0-7 on factor I. To control for family variability, cases in which only one parent filled out the checklist were omitted. As a result, 96 pairs of parents were included in the normal sample and 80 pairs of parents made up the clinic sample. Three hypotheses were advanced:

- I. That the clinic children would score higher than the normal children on the impulsivity factor.
- II. That the normal children would score higher than the clinic children on the competence factor.
- III. That the clinic children would score higher than the normal children on the moodiness factor.

A 2 (normal-clinic) by 2 (male-female) by 2 (mother-father) analysis of variance was conducted for each set of composite scores. The least squares solution (Winer, p. 276) was used since it was assumed that the disproportionate number of boys and girls in the clinic sample was characteristic of clinic samples in general. A repeated measures analysis was performed on the mother-father dimension, since both parents were describing the same child.

Table 3 shows the analysis of variance for factor I, impulsivity. The clinic children received significantly higher scores than the normal children ( $F=4.957$ ,  $p < .05$ ), confirming hypothesis I. The group (normal versus clinic) by sex means are reported in Table 4. No other significant main or interaction effects were found. Appendix D shows the group by sex by parent mean scores for factor I.

Hypothesis II was also confirmed. As shown in Table 5, normals received significantly greater mean competence scores than did clinics ( $F=8.766$ ,  $p < .01$ ). The group by sex means are reported in Table 6. In addition, a significant sex by parent interaction affect was

TABLE 3

Analysis of Variance for Factor I (Impulsivity)

Source	SS	df	MS	F
Normal-Clinic (A)	2.531	1	2.531	4.957*
Male-Female (B)	.136	1	.136	.267
A X B	.022	1	.022	.042
Subjects within groups	177.706	348	.511	
Father-Mothers (C)	.182	1	.182	.344
A X C	.246	1	.246	.466
B X C	.762	1	.762	1.440
A X B X C	.993	1	.993	1.880
C X Subjects within groups	183.817	348	.528	

\*p &lt; .05

TABLE 4

Group X Sex Mean Scores for Factor I (Impulsivity)

	Male	Female	Total
Normal	1.898	1.830	3.728
Clinic	2.267	2.150	4.417
Total	4.165	3.980	8.145

TABLE 5

Analysis of Variance for Factor II (Competence)

Source	SS	df	MS	F
Normal-Clinic (A)	13.663	1	13.663	8.766**
Male-Female (B)	1.586	1	1.586	1.017
A X B	1.506	1	1.506	.966
Subjects within groups	542.425	348	1.559	
Father-Mother (C)	.334	1	.334	.242
A X C	2.246	1	2.246	1.581
B X C	13.776	1	13.776	9.698**
A X B X C	1.763	1	1.763	1.241
C X Subjects within groups	494.397	348	1.421	

\*\*p &lt; .01

TABLE 6

Group X Sex Mean Scores for Factor II (Competence)

	Male	Female	Total
Normal	5.184	5.404	10.588
Clinic	4.483	4.300	8.783
Total	9.667	9.704	19.371

observed ( $F=9.698$ ,  $p < .01$ ). An analysis of variance for simple effects (Table 7) revealed two significant differences. The mean competence score was higher for fathers of females than for mothers of females ( $F=7.586$ ,  $p < .01$ ) and

for fathers of females as compared to fathers of males ( $F=8.294$ ,  $p < .01$ ). Mean competence scores for the sex by parent dimensions are shown in Table 8. Appendix E shows the behavior by sex by parent mean scores for factor II.

TABLE 7

Analysis of Variance for Simple Effects of Sex  
and of Parents for Factor II (Competence)

Source	SS	df	MS	F
Parents for males (C for category $b_1$ )	3.344	1	3.344	2.354
Parents for females (C for category $b_2$ )	10.777	1	10.777	7.586**
C X Subjects within groups	494.397	348	1.421	
Fathers for sex (B for category $c_1$ )	12.355	1	12.355	8.294**
Mothers for sex (B for category $c_2$ )	3.007	1	3.007	2.019
Within Cell	1036.822	696	1.490	

\*\*p < .01

TABLE 8

Sex X Parent Mean Scores for Factor II (Competence)

	Father	Mother	Total
Male	2.275	2.530	4.805
Female	2.821	2.254	5.075
Total	5.096	4.784	9.880



Lastly, Table 9 shows the results for the moodiness factor. The normals received significantly higher mean moodiness scores than did the clinics ( $F=2.991$ ,  $p < .05$ ). Thus hypothesis III was supported. A significant difference was also found between males and females on mean scores for moodiness with males scoring higher ( $F=12.932$ ,  $p < .01$ ). The group by sex means are reported in Table 10. The sex by parent interaction effect also approached significance ( $F=3.332$ ,  $p < .10$ ). Appendix F shows the group by sex by parent mean scores for factor III.

TABLE 9  
Analysis of Variance for Factor III (Moodiness)

Source	SS	df	MS	F
Normal-Clinic (A)	.573	1	.479	2.991*
Male-Female (B)	2.479	1	2.479	12.932**
A X B	.220	1	.220	1.460
Subjects within groups	66.718	348	.192	
Father-Mother (C)	.284	1	.284	1.696
A X C	.003	1	.003	.020
B X C	.558	1	.558	3.332 <sup>i</sup>
A X B X C	.353	1	.353	2.110
C X Subjects within groups	58.301	348	.168	

\* $p < .05$  one tailed test  
 \*\* $p < .01$   
<sup>i</sup> $p < .10$

TABLE 10

Group X Sex Mean Scores for Factor III (Moodiness)

	Male	Female	Total
Normal	1.898	1.681	3.579
Clinic	2.133	1.600	3.733
Total	4.031	3.281	7.312

Analysis II

The 393 checklists filled out by the parents of the original sample of 217 children were divided into the following subgroups: Mothers of Normals (MN), Fathers of Normals (FN), Mothers of Clinics (MC) and Fathers of Clinics (FC). The groups consisted of 102, 99, 107 and 85 members respectively. The AP group, which had been factor analyzed earlier, remained the same (N=393).

A principal axis factor analysis using Guttman type communalities was performed on each of the five groups. Factors were rotated according to the varimax procedure yielding 28 factors per group. The percent of the variance accounted for by the 28 factors in each group was as follows:

MN 90.66%

FN 88.69%

MC 90.42%

FC 90.33%

To select factors for discussion a procedure different from the one used in the first analysis was employed. In the earlier analysis, an attempt was made to derive "pure" factors, that is specific and non-overlapping patterns of behavior that might quantitatively discriminate between the two groups in the analysis of variance which followed. Therefore, it was important that an item did not load too highly on other factors. The purpose of the second analysis was to locate behavioral trends or patterns which typified a given group and to compare syndromes in the four subgroups. Therefore, the following criteria were used in the selection of factors: (1) An item had to load at least .45 on a given factor. (2) At least four items were needed to define a factor.

Six factors, comprising 33.72% of the total variance were found in the MN group. These factors are labeled and the items comprising them are listed in Table 11.

TABLE 11

Factor Analysis of Mothers of Normals (N=102)

Factor	Variable	Loading
I-Impulsivity	Can't wait--must have things immediately . . . . .	.65
	Tends to go too far unless frequently reminded of rules . .	.83
	Often has to be reminded of what he can and cannot do . . . . .	.70
	Likes to perform for company . . .	.50

TABLE 11 Continued

Factor	Variable	Loading
	Once he makes up his mind about something, its hard for him to change . . . . .	.53
	Quickly moves from one activity to another . . . . .	.55
	Gets carried away by his feelings, act on them right away . . . . .	.49
	Frequently disappointed . . . . .	.47
	Proportion of the variance = 5.61	
II-Competence	Makes strange or distorted faces .	.71
	Looks awkward when he moves around	.69
	Is left out of things and ignored by others . . . . .	.93
	Seems unable to change way of doing things . . . . .	.95
	Seems afraid to try anything new .	.65
	Acts in ways that make others not like him . . . . .	.46
	Acts helpless to get attention . .	.45
	Rebels when routine is upset . . .	.49
	Prefers following others to taking the initiative . . . . .	.54
	Learns quickly from others . . . .	-.46
	Can accept new ideas without getting upset . . . . .	-.79
	Seems comfortable in new situations	-.70
	Self confident . . . . .	-.73
	Starts things off when with others	-.45
	Proportion of the variance = 10.23	
III-Conduct	Does what other adults ask him to do	.62
	Plays mostly with younger or smaller children even when children of own age are around .	-.87
	Will lie to get out of a tight spot . . . . .	-.53
	Gets other children stirred up to mischief . . . . .	-.83
	Proportion of the variance = 3.80	

TABLE 11 Continued

Factor	Variable	Loading
IV-Competition	Plays to win . . . . .	.81
	Easily embarrassed . . . . .	.52
	Prefers competitive games . . . . .	.64
	Likes to do things well so others will notice him . . . . .	.69
	Competes with other children . . . . .	.61
	Energetic . . . . .	.49
	Proportion of the variance = 4.87	
V-Aggression	Seems to do things just to get others angry at him . . . . .	-.91
	Threatens to hit or hurt others . . . . .	-.92
	Acts as if everyone were against him . . . . .	-.76
	Acts angry when adults show attention to other children . . . . .	-.87
	Proportion of the variance = 3.84	
VI-Moodiness	Seldom satisfied with what others do for him--unappreciative . . . . .	-.77
	Moods often change for no apparent reason . . . . .	-.67
	Seems sad and unhappy . . . . .	-.88
	Refuses to share things with others . . . . .	-.67
	Often angry for no particular reason, expresses it in many different ways . . . . .	-.91
Proportion of the variance = 5.37		
Total proportion of the variance = 33.72		

The FN group revealed five factors, totaling 31.11% of the total variance. These factors are defined in Table 12.

TABLE 12  
Factor Analysis of Fathers of Normals (N=99)

Factor	Variable	Loading
I-Impulsivity	Looks awkward when he moves around	.88
	Seldom satisfied with what others do for him--unappreciative . . .	.57
	Seems unable to change ways of doing things . . . . .	.86
	Often angry for no particular reason, expresses it in many different ways . . . . .	.77
	Has uncontrollable outbursts of temper . . . . .	.53
	Seems afraid to try anything new .	.57
	Proportion of the variance = 5.49	
II-Competence	Activity focused on particular purpose, seems to accomplish what he sets out to do . . . . .	.64
	Seems comfortable in new situations	.72
	Able to stand up for himself . . .	.74
	Careful in explanations--precise .	.53
	Quick and clever . . . . .	.64
	Learns quickly from others . . . .	.69
	Starts things off when with others	.46
	Shows appreciation when others help or do things for him . . .	.49
	Prefers following others to taking initiative . . . . .	-.45
	Proportion of the variance = 6.47	
III-Conduct	Is tidy and neat, perhaps even a little bit fussy about it . . .	.77
	Can be depended upon to do what he is supposed to do without reminders . . . . .	.67

TABLE 12 Continued

Factor	Variable	Loading
	Likes to play with girls instead of boys . . . . .	.52
	Pitches in when things are to be done . . . . .	.81
	Retains composure even when those around him act in a boisterous way	.51
	Doesn't pay attention to what grown-ups say to him . . . . .	-.55
	Acts angry when adults show attention to other children . .	-.93
	Very moody--sad one minute, happy the next . . . . .	-.99
	Refuses to share things with others	-.62
	Seems selfish, always wants own way	-.78
	Proportion of the variance = 10.70	
IV-Aggression	Bullies other children . . . . .	-.90
	Will fight in a rough way when other could get hurt . . . . .	-.59
	Frequently disappointed . . . . .	-.53
	Aggressive and overpowering with children . . . . .	-.79
	Says he is not as good as others--feels bad about himself . . . .	-.57
	Acts as if everyone were against him . . . . .	-.81
	Proportion of the variance = 4.88	
V-Motoric	Act in ways that make others not like him . . . . .	-.78
	Memory poor, seems to forget what he is trying to say or things that just happened . . . . .	-.55
	Is left out of things and ignored by others . . . . .	-.52
	Appears stiff in walking or moving about . . . . .	-.87
	Proportion of the variance = 3.57	
	Total proportion of the variance = 31.11	

Table 13 shows the six factors in the MC group. These factors constituted 30.55% of the total variance.

TABLE 13  
Factor Analysis of Mothers of Clinics (N=107)

Factor	Variable	Loading
I-Impulsivity	Can't wait--must have things immediately . . . . .	.82
	Gets irritated or angry easily . .	.74
	Plays with toys in a rough way . .	.54
	Gets carried away by his feelings--acts on them right away . . . .	.70
	Tends to go too far unless frequently reminded of rules . .	.52
	Will fight in a rough way where others could easily get hurt . .	.51
	Has uncontrollable outbursts of anger . . . . .	.69
	When told to do something he doesn't want to do becomes very angry .	.82
	Blows up very easily when bothered by someone . . . . .	.66
	Proportion of the variance = 7.44	
II-Competence	Moves gracefully--is well coordinated . . . . .	.61
	Makes friends quickly and easily .	.50
	Quick and clever . . . . .	.79
	Learns quickly from others . . . .	.82
	Asks sensible questions in new situations . . . . .	.46
III-Conduct	Proportion of the variance = 4.84	
	Is concerned about the feelings of others . . . . .	-.52
	Seems comfortable in new situations	-.56
	Does what other adults ask him to	-.84
	Polite and cooperative with others	-.82
	Shows appreciation when others help or do things for him . . .	-.55



TABLE 13 Continued

Factor	Variable	Loading
	Pitches in when things are to be done . . . . .	-.67
	Is curious about things . . . . .	-.46
	Proportion of the variance = 5.69	
IV-Competition	Plays to win . . . . .	.75
	Starts things off when with others	.57
	Prefers competitive games . . . . .	.59
	Likes to do things well so others will notice him . . . . .	.55
	Shows pleasure and involvement in most things he does--enthusiastic	.56
	Competes with other children . . . . .	.87
	Proportion of the variance = 4.88	
V-Withdrawal	Acts in ways that make others not like him . . . . .	-.50
	Doesn't pay much attention to others, seems more involved with himself . . . . .	-.52
	Is left out of things and ignored by others . . . . .	-.80
	Spends most time sitting and watching--doesn't play and do things with others . . . . .	-.76
	Talks or mutters to self as if conversing with self . . . . .	-.52
	Proportion of the variance = 3.54	
VI-Family Constella- tion	Number of children in the family . . . . .	-.76
	SES . . . . .	-.82
	Ordinal position of child . . . . .	-.81
	Mother's education . . . . .	-.84
	Proportion of the variance = 4.16	
	Total proportion of the variance = 30.55	

There were eight factors manifest in the FC. These factors, exhibited in Table 14 composed 40.88% of the total variance.

TABLE 14  
Factor Analysis of Fathers of Clinics (N=85)

Factor	Variable	Loading
I-Impulsivity	Can't wait--must have things immediately . . . . .	.61
	Gets irritated or angry easily . .	.69
	Plays with toys in a rough way . .	.56
	Acts in ways that make others not like him . . . . .	.52
	Gets carried away by his feelings--acts on them right away . . . .	.54
	Bullies younger children . . . . .	.51
	Tends to go too far unless frequently reminded of rules . .	.85
	Refuses to share things with others	.57
	Has uncontrollable outbursts of temper . . . . .	.60
	When told to do something he doesn't want to do becomes very angry . . . . .	.72
	Will lie to get out of a tight spot	.65
	Aggressive and overpowering with other children . . . . .	.52
	Seems selfish, always wants own way	.66
	Blows up very easily when bothered by someone . . . . .	.75
	Says he is not as good as others--feels bad about himself . . . .	.57
	Acts as if everyone were against him . . . . .	.56
	Doesn't pay attention to what grown-up says to him . . . . .	.61
	Seems to do things just to get others angry at him . . . . .	.45
	Often has to be reminded of what he can and cannot do . . . . .	.49

TABLE 14 Continued

Factor	Variable	Loading
	Once he makes up his mind about something its hard for him to change . . . . .	.49
	Proportion of the variance = 10.68	
II-Competence	Can accept new ideas without getting upset . . . . .	.54
	Seems comfortable in new situations	.61
	Does what other adults ask him to	.76
	Plays to win . . . . .	.53
	Starts things off when with others	.50
	Makes friends quickly and easily .	.78
	Able to stand up for himself . . .	.87
	Likes to do things well so others will notice him . . . . .	.58
	Competes with other children . . .	.50
	Learns quickly from others . . . .	.45
	Proportion of the variance = 6.28	
III-Conduct	Is concerned about feelings of others . . . . .	-.74
	Polite and cooperative with others	-.60
	Shows appreciation when others help or do things for him . . .	-.88
	Pitches in when things are to be done . . . . .	-.51
	Proportion of the variance = 4.01	
IV-Moodiness	Moods often change for no apparent reason . . . . .	.76
	Often angry for no reason, expresses it in many different ways . . .	.83
	Play is aimless, doesn't seem to make or accomplish anything . .	.60
	Doesn't seem to care about how he looks--often looks sloppy . . .	.50
	Quickly loses interest in an activity . . . . .	.48
	Proportion of the variance = 5.02	

TABLE 14 Continued

Factor	Variable	Loading
V-Withdrawal	Spends most time sitting and watching--doesn't play and do things with others . . . . .	.50
	Talks or mutters to self as if conversing with self . . . . .	.91
	Plays mostly with smaller children even if own age are around . . .	.70
	Gets other children stirred up to mischief . . . . .	.57
	Proportion of the variance = 3.19	
VI-Family Constellation	Number of children in family . . .	-.76
	SES . . . . .	-.84
	Ordinal position of child . . . .	-.82
	Mother's education . . . . .	-.87
	Proportion of the variance = 4.22	
VII-Motoric	Looks awkward when he moves around	.68
	Is left out of things and ignored by others . . . . .	.59
	Appears stiff in walking or moving about . . . . .	.88
	Tires easily in activities . . . .	.60
	Proportion of the variance = 3.69	
VIII-Cognitive	Memory poor, forgets what he is trying to say or things that just happened . . . . .	.82
	Has trouble finding the right words to say what he means . . . . .	.80
	Seems out of touch with what is going on around him--off in own world . . . . .	.53
	Prefers following others to taking the initiative . . . . .	.47
	Proportion of the variance = 3.79	
	Total proportion of the variance = 40.88	

Two additional factors were added to the AP group as a result of the more "lenient" procedure for the selection of factors. Table 15 shows these five factors which include 28.58% of the total variance.

TABLE 15

Factor Analysis of All Parents (N=393)

Factor	Variable	Loading
I-Impulsivity	Can't wait--must have things immediately . . . . .	.79
	Gets irritated or angry easily . .	.74
	Plays with toys in a rough way . .	.55
	Gets carried away by his feelings, acts on them right away . . . .	.65
	Tends to go too far unless frequently reminded of rules . .	.65
	Has uncontrollable outbursts of temper . . . . .	.62
	When told to do something he doesn't want to do becomes very angry . . . . .	.72
	Seems selfish, always wants own way	.54
	Blows up very easily when bothered by someone . . . . .	.73
	Often has to be reminded of what he can and cannot do . . . . .	.46
	Once he makes up his mind about something its hard for him to change . . . . .	.46
	Proportion of the variance = 8.52	
II-Competence	Is concerned about feelings of others . . . . .	.52
	Activity founded on a particular purpose, seems to accomplish what he sets out to do . . . . .	.62
	Can accept new ideas without getting upset . . . . .	.67
	Seems comfortable in new situations	.61
	Does what other adults ask him to	.55

TABLE 15 Continued

Factor	Variable	Loading
	Starts things off when with others	.53
	Others seem to want to be with him	.71
	Makes friends quickly and easily .	.60
	Self confident . . . . .	.57
	Able to stand up for himself . . .	.67
	Polite and cooperative with others	.62
	Shows appreciation when others help or do things for him . . . . .	.71
	Energetic . . . . .	.54
	Asks sensible questions in new situations . . . . .	.63
	Shows pleasure and involvement in most things he does--enthusiastic	.76
	Competes with other children . . .	.59
	Pitches in when things are to be done . . . . .	.58
	Quick and clever . . . . .	.54
	Learns quickly from others . . . .	.65
	Proportion of the variance = 10.15	
III-Moodiness	Moods often change for no apparent reason . . . . .	.65
	Very moody--sad one minute and happy the next . . . . .	.68
	Often seems angry for no particular reason, expressed it in many dif- ferent ways . . . . .	.69
	Seems to do things just to get others angry at him . . . . .	.46
	Proportion of the variance = 3.36	
IV-Family Constella- tion	Number of children in family . . .	-.78
	SES . . . . .	-.75
	Ordinal position of child . . . .	-.76
	Mother's education . . . . .	-.77
	Proportion of the variance = 3.31	

TABLE 15 Continued

Factor	Variable	Loading
V-Withdrawal	Doesn't pay much attention to others, seems more involved with himself . . . . .	.78
	Spends most of time sitting and watching--doesn't play and do things with others . . . . .	.53
	Seems sad and unhappy . . . . .	.56
	Seems out of touch with what is going on around him--off in own world . . . . .	.50
	Seldom satisfied with what others do for him--unappreciative . . .	.45
Proportion of the variance = 3.24		
Total proportion of the variance = 28.58		

## DISCUSSION

The results will be discussed according to the two main types of analysis performed. First, the analysis of variance in which the normal and clinic subjects were compared on four behavioral dimensions suggested by a factor analysis of the entire sample will be considered. Then the factor analyses of the four subgroups and the AP group will be compared with each other. This will permit an examination of the kinds of factors found to typify each group.

The results of the analysis of variance were particularly salient in light of past research in the field. The predictions for this analysis were that clinic subjects would show more impulsive and moody behavior (hypotheses I and III), and that the normals would score higher than the clinics on the competence factor (hypothesis II). Such hypotheses were based on previous research, recalling such dichotomies as conduct and personality disorders (Peterson, 1961), aggressive and inhibited behavior (Jenkins, 1966) and Conners' distinction between an aggressive, uncontrolled, troublemaking syndrome and anxious, shy and inhibited behavior. In one sense, these findings were substantiated. Certainly, the two factors of impulsivity and moodiness qualify as conduct and personality problems. Thus, it can



be concluded that conduct and personality dimensions were observed to be more typical of the clinic group, confirming previous research findings.

However, none of the authors cited compared, in any quantitative manner, normal with clinic samples according to the behavioral categories. Peterson (1961), as mentioned, characterized his clinic subjects as manifesting conduct or personality problems. Yet, the control subjects were not compared with the clinics on these dimensions. Therefore, one is simply aware of a behavioral distinction within a clinic sample. Whether or not such a distinction successfully (i.e. quantitatively) discriminates clinic from normal subjects is unknown.

By contrast, the research reported here did compare normal and clinic samples quantitatively on the observed factors. The clinic children as a group were found to be both more impulsive and moodier than the normal children. Thus, it can be concluded that the dimensions of behavior suggested by past research not only characterize clinic samples but, more importantly, quantitatively discriminate clinic from normal samples. In addition, the results of the impulsivity factor confirm a hypothesis made earlier; that the clinic subjects would be characterized by more "acting out" types of behavior than the normal subjects.

The moodiness factor also yielded sex differences; boys were found to be moodier than girls. Given the previous results, that clinic children were moodier than normal children, it can be inferred that clinic boys were more emotionally labile than clinic girls. In fact, the sex difference is even more marked among the clinic children. Such an inference is congruent with previous research. Anthony, in his recent review (1970) pointed out that "Up until puberty it is extremely difficult to find a pathological condition in which the incidence among girls is greater than among boys" (p. 723). In addition, he reported that, among school children, boys are referred to a psychiatric clinic for personality problems more than two and a half times as often as girls. Similarly, Griffiths (1952), as mentioned earlier, reported boys as having higher scores on all dimensions studied, including withdrawing behavior.

Conduct dimensions have also yielded sex differences in the past. Peterson (1961) found that girls rarely have conduct problems and Griffiths (1952) also reported higher scores for boys on aggression and delinquent-related behavior. In addition, Anthony (1970) stated that boys are referred to a psychiatric clinic almost four and a half times as often as girls.

Sex differences on the impulsivity factor reported in this study were not found, however. This may have been

a consequence of dealing with parents' perceptions rather than with the actual behavior of children. The data reported by Anthony (1970) mentioned above, was based on an examination of actual clinic referrals. And while both Peterson (1961) and Griffiths (1952) were dealing with parents' perceptions of their children's behavior, other authors examining the perceptions of parents failed to report comparisons between boys and girls (Conners, 1970; Jenkins, 1966; Quay and Quay, 1965). Thus, it seems that sex differences in behavior as a function of parents' perceptions are unclear and this area merits further attention.

The competence factor was unique in this study and derives from the fact that it was built into the checklist. That is, the authors of the checklist included some items that were neither socially desirable nor maladjustive but which related to a general competence dimension. Other studies have generally polarized behavior items into desirable or undesirable categories, or included primarily symptomatic behaviors.

The fact that the normal children were perceived to be more competent than the clinic subjects was not built into the checklist, however, and this is an important finding. In fact, the competence factor proved the most discriminating, as between clinic and normal groups. An inspection of the items that constitute this factor suggest behaviors that have to do with succeeding in the social

world. Items such as "others seem to want to be with him," and "starts things off when with others," reveal a child who is able to play and get along with others. These social skills were lacking in the clinic subjects. This suggests that not only can normal and clinic children be differentiated on the basis of gross symptomatic categories such as personality and behavior disorders but perhaps also along more subtle dimensions such as competence. In other words, previous studies may have yielded extreme behavioral factors because they only studied extreme behavior items. There may be many finer categories of behavior, describing the general social performance of the child, which can also discriminate clinics from normals. Certainly such speculation is congruent with our present knowledge of the complexity of childhood psychopathology. One would hardly expect simple dichotomies to differentiate such dynamic behavior.

It should be pointed out again that we were dealing with parental perceptions and not actual behavior. Perhaps only parents are sensitive enough to make fine behavioral discriminations as are required for the competence factor. It is also possible that it is the maladjusted child's failure to live up to parents' expectations for social performance which is crucial in motivating parents to bring him to the clinic. In other words, the parents' decision to bring their child to a psychological clinic may be

partially a function of the child's lack of certain social skills; skills that are deemed important by the parents. Of course it is also possible that we are simply dealing with an artifact due to parents perceptions alone--that observations of the children's behavior would not yield a difference between the normal and clinic sample.

The competence factor yielded another exciting finding--the interaction between the sex and parent dimension. The analysis for simple effects showed that girls were seen as more competent by their fathers than by their mothers. That is, fathers perceived their daughters to be more competent than their mothers perceived them to be. Secondly, fathers perceived girls to be more competent than boys. In other words, fathers of daughters were found to be significantly different from all other groups on the competence factor.

The dynamics of the father-daughter relationship are virtually ignored in the child development literature. As mentioned earlier, Rothbart and Maccoby (1966) found that fathers were more permissive towards girls than boys for both dependency and aggression. Thus it is conceivable that this lenient attitude on the part of the father might apply to other behaviors such as competence. A more non-technical interpretation might be that both the results of Rothbart and Maccoby and those reported here confirm the well known phenomenon of a daughter's ability to manipulate

her father. Regardless of one's interpretation, as has been pointed out elsewhere (Becker, 1959; Peterson, 1959), the role of the father must be explored further.

The results of the analysis of variance were also germane to a hypothesis suggested earlier: That deviant behavior is an exaggeration of normal behavior. This was stated in Cameron's (1947) "principle of continuity" in which normalcy and deviancy are regarded as modes of behavior on a continuum. The hypothesis was confirmed. Of the factors which characterized the group of children as a whole all of the behavioral factors differed quantitatively. That is, we seem to be dealing with a difference in degree of roughly the same behavior, rather than with a categorical difference in the kind of behavior manifest by clinic and normal children.

The second analysis revealed many similarities among factors in the five groups. For example, the impulsivity factor was found in each group. There were two kinds of items comprising this factor, one having to do with the child's lack of control over his feelings and wants; for example, "can't wait--must have things immediately," or "gets carried away by his feelings, acts on them right away." The other type of behavior in this factor involved an inability to follow rules or submit to authority, such as "often has to be reminded of what he can and cannot do." This factor seemed to be a rather stable one in the

sense that it appeared in each subgroup as well as in the AP group. In addition, many of the same items repeated from group to group.

Interestingly, a related factor also appeared in the four subgroups but not among the AP. The factor, labeled conduct, described a well behaved child--one who "pitches in when things are to be done" and "does what other adults ask him to do." While both mothers and fathers of each group perceived a conduct dimension, there were differences with respect to the number of items comprising each conduct factor for each group. It had been hypothesized that fathers would perceive more conduct related behavior than mothers. Among parents of normals this hypothesis was supported. For the FN ten items composed the conduct factor whereas only four items defined this factor for the MN. Among clinic parents, however, the results were in the opposite direction. FC perceived four items and MC perceived seven items for the conduct factor. Thus the hypothesis was not supported among clinic parents. The findings suggest that it is perhaps the mothers of clinic children who are more aware of their children's conduct and relation to authority. If this is true, it would agree with the clinical observation that mothers of emotionally disturbed children often carry a disproportionate share of authority in the family.

It is curious that the conduct factor was not apparent in the AP group. However, these behavior items were not lost. The items that constituted the conduct factors in the subgroups were distributed among the factors in the AP group. This suggests an interesting perceptual phenomenon on the part of the clinic parents. The results of the analysis of variance revealed that parents perceive clinic children to be more impulsive and moody than normal children. Yet, good behavior was salient in the perceptions of clinic parents. It is possible that clinic parents perceive conduct behavior as different from impulsive behavior. That is, impulsivity may not be considered as bad behavior by clinic parents and thus it is possible for a child to be both impulsive and well-behaved. If this hypothesis is valid, it has interesting ramifications for the development of childhood psychopathology. Assuming that parents reinforce what they consider to be good behavior, if their perceptions of good behavior differ markedly from the perceptions of other adults that control the child (for example, the teacher) the child may develop a behavioral repertoire which does not conform to the behavior expected of him outside the home. Clinic parents, in other words, may be reinforcing what is considered by society at large to be negative behavior. The possibility for the development of delinquency is obvious, and one might study the perceptions of parents of delinquent



children and gain a profile of the kinds of behaviors they reinforce in their child.

Two sets of variables suggesting affective dimensions were perceived by some of the groups. Only the FN did not perceive any emotional factor, whereas two such factors were perceived by the FC: moodiness and withdrawal. It had been predicted that mothers would be more sensitive to affective dimensions than fathers. The hypothesis was supported among the normal parents, since the FN did not perceive general patterns of affective behavior. However, among the clinic parents, the fathers proved to be more sensitive to emotion laden behaviors than the mothers. The former perceived a total of nine items between the two factors of moodiness and withdrawal whereas the mothers' perception assigned five items to the single affective factor--withdrawal.

Moodiness was found in the MN, FC, and AP groups. This factor described a child whose emotive states were capricious. "Moods often change for no apparent reason" was a common item as was "often seems angry for no particular reason, expresses it in many different ways." Among the FC this factor varied somewhat. These fathers perceived a sense of apathy in the child's play and appearance that did not appear as part of this factor among MN and AP.

The related syndrome of withdrawal referred to a preference on the part of the child to be alone, to remain

inactive while others are participating, to talk or mutter to himself. Withdrawal was perceived by AP, FC and MN. There is a great deal of resemblance between this factor and the autism described by Peterson (1961), the shy-seclusive behavior in Jenkins' study (1966) and the syndrome reported by Conners (1970) of anxious, shy and inhibited behavior.

Both groups of mothers revealed a factor defined as competition. The factor was clearly related to the competence factor but was centered around such items as "competes with other children" and "prefers competitive games." It is a dimension which typically reflects the concerns of middle class parents. Becker (1964) and most recently Hess (1970) in their reviews of parental values have pointed out the distinct emphasis placed upon competition and achievement by middle class parents.

That competition was perceived by mothers and not by fathers is perhaps a reflection of the kinds of behaviors visible to a parent. Mothers, more than fathers, have the opportunity to observe their child's play and may feel more qualified to make a judgment about the child's competitive drive. For fathers, such behavior may be too dependent on social situations with which he is not familiar. As a result, many of these behaviors were subsumed under the related competence factor. Another possibility may be that competitive behavior carries the connotation of

competence for fathers (it's all part of the same thing) and not for mothers--i.e. mothers see it as separate and not necessarily an aspect of competence. They may not evaluate it as positively as fathers do.

Aggression was a revealing factor in that it was perceived as a specific pattern of behavior only by the normal groups. Given the aforementioned results, that the clinic subjects were more impulsive than the normal subjects, the question arises: Why was aggression prominent in the perceptions of parents of normal children and absent in the perceptions of parents of clinic children? One reason is that many of the items which constituted the aggression factor for the normal subjects were members of the impulsivity factor among the clinic subjects. For example, the item "aggressive and overpowering with other children" was related to aggression among the FN but to impulsivity among the FC. Thus, it may be that impulsivity has different connotations for clinic parents than it does for normal parents. The issues of control and authority are predominant in both groups, yet for clinic subjects aggression is also an ingredient while among normal subjects it is not.

To speculate further, aggression in the clinic children seems to be the behavioral result of impulsivity: the way in which lack of control is handled. Items such as "gets carried away by his feelings," were perceived by

parents of every group as at least partially defining the impulsivity factor. Yet only among the clinic parents is impulsivity accompanied by "will fight in a rough way where others could easily get hurt." Thus, the issues of following rules and controlling one's feelings are handled aggressively by clinic children and non-aggressively by normal children.

The remaining factors were peculiar to the two groups of fathers. Both the FN and the FC perceived a dimension labeled as motoric. This factor involved behaviors that reflected the child's physical appearance and coordination, such as "appears stiff in walking or moving about." Such behaviors might be most evident in athletic contests and it seems reasonable that fathers might be more sensitive to them. In addition, the clinic fathers indicated a factor relating to cognitive behaviors. Items which suggested an inability to communicate due to verbal and memory problems defined this cognitive factor.

## CONCLUSIONS

Several conclusions have been reached particularly with respect to methodological issues. The field of clinical-child psychology is replete with methodological problems. The wide array of instrumentation, sampling and statistical techniques and esoteric classificatory systems has led to vast inconsistencies of research findings. This is not to suggest that a point of diminishing returns has been reached. It is to suggest that corrective measures are desirable.

For example, the factor analytic techniques used in this study yielded 28 factors per analysis. As a result each factor accounted for a very small percent of the total variance for all the items. Thus there is a question as to whether or not the factors reported are meaningful. Even though rather stringent criteria were used to define the factors which were considered, in an effort to screen pure factors, no single factor accounted for more than 11% of the total variance, and no set of factors included more than 41% of the total variance for any one group. Therefore, while the factors reported are real factors, legitimate questions can be raised as to their relative importance when

viewed as comprising only a fraction of the total variance in the parents' perceptions.

Whether the large number of factors was due to the statistical analysis or to a nondiscriminating instrument is unknown. Factor analysis is still a debatable procedure and it would be useful to compare the result of other statistical procedures with the factor analytic results. For example, a cluster analysis or an item clustering followed by a factor analysis might be feasible. An alternative to factor analysis is a procedure similar to that used by Conners (1970). He conducted a discriminant function analysis based on groupings of behaviors. Thus not only are behavior characteristics of a given sample obtained, but quantitative comparisons between samples are also readily available. This is especially important because it reaches beyond the capabilities of a method such as factor analysis. That is, factor analysis is a useful starting point. It enables one to identify dimensions within a group. But whether or not factors differ between groups requires further testing, as in the analysis of variance performed here.

Conners' (1970) method is germane for another reason. By grouping similar behaviors into categories he was able to achieve a high degree of specificity of behavioral dimensions. That is, he was able to break down behavioral polarities such as conduct versus personality

problems into more discrete, manageable behaviors. Whether or not such black and white distinctions are diagnostically helpful is questionable. Certainly it was gratifying to find in this study that categories such as personality and conduct problems were relevant and, more importantly, quantitatively discriminated normal from clinic children. Yet in this study the additional dimension of competence built into the checklist also differentiated the two groups. One wonders, therefore, how many other behavioral dimensions might also discriminate between normal and clinic children. The need, it seems, is for a careful examination of specific, well-defined behaviors rather than a search for broad categories or quick and easy formulas. In addition, these behaviors should be compared between normal and clinic subjects by means of a quantitative analysis. As mentioned earlier, the discovery of factors within a clinic sample does not imply such factors differentiate clinic from normal children.

Another methodological suggestion is the importance of dealing with sex differences. As mentioned earlier, many authors have studied parents' perceptions of their children's behavior but failed to report sex comparisons (Conners, 1970; Jenkins, 1966; Quay and Quay, 1965). The degree to which these results were confounded by sex differences is simply unknown. That such contamination is

likely is suggested by the unequal distribution of boys and girls in most clinic samples.

Lastly, data on the actual or "real" behavior of the clinic subjects from other sources would be helpful. This study dealt exclusively with parental perceptions and the accuracy of those perceptions is questionable. We have, in fact, no idea what our subjects were "really" like. Probably, the most salient study would be one which compared parental perceptions with the child's behavior as observed by other, presumably more objective judges and related those perceptions to personality dimensions of the parents. Such a procedure would not only furnish data on the accuracy of parental perceptions but might also yield information concerning parent-child relations. That is, what kind of parents perceive and misperceive what kinds of children? Or how does the personality of the parent relate to the parent's perception of the child? It is this kind of comprehensive study that could most profitably contribute to our knowledge of the dynamics of childhood psychopathology.



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## APPENDICES

APPENDIX A Letter to Parents

APPENDIX B Children's Behavior Checklist

APPENDIX C Information Sheet

APPENDIX D Mean Scores for Factor I (Impulsivity

APPENDIX E Mean Scores for Factor II (Competence)

APPENDIX F Mean Scores for Factor III (Moodiness)





MICHIGAN STATE UNIVERSITY . East Lansing

Department of Psychology . Olds Hall

Dear Parents:

The field of child psychology has taught us much about the development of children's behavior. We, as members of the Psychology Department at Michigan State University, are interested in studying the behavior of school-age children. Since we believe that parents know more about their children's behavior than anyone else, we are asking you to help us gather data for our study.

Enclosed you will find two copies of the Children's Behavior Checklist - one to be completed by each parent - and a short family Information Sheet. After choosing one of your children between the ages of 5 and 11 who is presently attending school (kindergarten included), we would appreciate your filling out the checklist with respect to this child. Instructions are included on the first page of the checklist.

We realize mothers and fathers have had different opportunities to observe their child, so we would prefer your filling out the checklists independently and without consultation. After both checklists have been completed, we would appreciate your placing them and the information sheet in the enclosed pre-addressed and stamped envelope and mailing the envelope at your earliest convenience.

Thank you for your cooperation. We will send you a brief report of our findings when the study is completed.

Lucy R. Ferguson, Ph.D.

*Lucy R. Ferguson*

Barry Lester

*Barry Lester*

Lisa Partyka

*Lisa Partyka*

LRF:mc

Enc.

## M.S.U. Department of Psychology

CHILDREN'S BEHAVIOR CHECKLIST

Name of child: \_\_\_\_\_ Age: \_\_\_\_\_ Date: \_\_\_\_\_

Name of person filling out checklist: \_\_\_\_\_

Relationship to child (mother, father, teacher, clinician, etc.): \_\_\_\_\_

Situation in which child has been observed (home, school, clinic, etc.): \_\_\_\_\_

This is a list of items describing many aspects of children's behavior--things that children do or ways they have been described by others. Not all of the items will apply to the particular child you are describing, but quite a few of them will. First, go through the list and put a checkmark (✓) in the first column by each item which applies to this child. If there are some items which you do not check because you do not know whether they apply or not, or have never had the opportunity to observe them (for instance, "He (she) is a finicky eater," if you see this child only in school and don't know anything about his (her) eating habits), put an (0) in the first column.

After you have gone through the list, please go back through those items you have checked and put another checkmark (✓) in the second column opposite those that are now most characteristic of this child, that describe how he (she) is most of the time.

	Does this apply at all?	Is it char- acteristic?
H 1. Is happy when he (she) has done a "good job."	_____	_____
AH *2. Is tidy and neat, perhaps even a little bit fussy about it.	_____	_____
M *3. Is concerned about feelings of others	_____	_____
HA *4. Can't wait - must have things immediately.	_____	_____
H *5. Gets irritated or angry easily.	_____	_____
H 6. Is a finicky eater.	_____	_____
AA *7. Makes strange or distorted faces.	_____	_____
*8. Plays with toys in a rough way.	_____	_____
9. Sometimes makes meaningless or strange noises	_____	_____
10. Doesn't go out of his (her) way to make friends.	_____	_____
11. Hurts self when angry.	_____	_____
12. Often wakes up crying in the middle of the night--complains of nightmares.	_____	_____
13. Wants very much to be approved of.	_____	_____
*items used in the analysis		

	Does this apply at all?	Is it char- acteristic?
*14. Doesn't pay attention to what grown-up says to him (her).	_____	_____
15. Pouts and becomes sullen when refused help.	_____	_____
*16. Looks awkward when he (she) moves around.	_____	_____
17. Sometimes says odd things.	_____	_____
*18. Acts in ways that makes others not like him (her).	_____	_____
*19. Doesn't pay much attention to others, seems more involved with himself (herself).	_____	_____
20. Feelings are apparent in facial expression.	_____	_____
21. Has trouble falling asleep at night.	_____	_____
*22. Acts helpless to get attention.	_____	_____
*23. Rebels when routine is upset.	_____	_____
24. Becomes embarrassed when praised for doing something well.	_____	_____
*25. Handles small objects skillfully.	_____	_____
*26. Memory seems poor, forgets what he (she) is trying to say or forgets things that have just happened.	_____	_____
27. Never goes out of the way to help others, even when asked.	_____	_____
28. Seldom laughs or smiles.	_____	_____
*29. Is left out of things and ignored by others.	_____	_____
*30. Seldom satisfied with what others do for him (her) - unappreciative.	_____	_____
*31. Can be depended on to do what he (she) is supposed to do without reminders.	_____	_____
32. Never gets excited about anything, even when you would expect him (her) to be pleased with something.	_____	_____
33. Often giggles or smiles for no apparent reason.	_____	_____
*34. Activity is focused on a particular purpose, seems to accomplish what he (she) sets out to do.	_____	_____
35. Asks many silly questions	_____	_____
*36. Likes to play with girls instead of boys.	_____	_____
37. Hates to lose.	_____	_____



	Does this apply at all?	Is it char- acteristic?
38. Doesn't fight back when other people attack him (her).	_____	_____
*39. Can accept new ideas without getting upset.	_____	_____
40. Asks for help on tasks that he (she) can very well do on his (her) own.	_____	_____
*41. Seems unable to change ways of doing things.	_____	_____
*42. Moods often change for no apparent reason.	_____	_____
*43. Appears stiff in walking or moving about.	_____	_____
44. Doesn't start a conversation, others must begin first.	_____	_____
*45. Acts angry when adult shows attention to other children.	_____	_____
46. Shows pride in accomplishment.	_____	_____
47. Breaks down and cries for no apparent reason.	_____	_____
*48. Seems comfortable in new situations.	_____	_____
49. Comes to others for protection, even when it is not necessary	_____	_____
*50. Does what other adults ask him (her) to.	_____	_____
51. Blames himself (herself) when he (she) has done nothing wrong.	_____	_____
*52. Has trouble finding the right words to say what he (she) means.	_____	_____
*53. Moves gracefully - is well coordinated.	_____	_____
*54. Seems to do things just to get others angry at him (her).	_____	_____
*55. Plays to win.	_____	_____
56. Is a "copycat" - always imitating others.	_____	_____
*57. Starts things off when with others.	_____	_____
*58. Spends most of time sitting and watching - doesn't play and do things with others.	_____	_____
59. Very critical of others - always telling others what is wrong with them.	_____	_____
*60. Gets carried away by his (her) feelings, acts on them right away.	_____	_____

	Does this apply at all?	Is it char- acteristic?
*61. Others seem to want to be with him (her).	_____	_____
62. Seems distrustful of others; doesn't think he (she) can rely on others or believe their promises.	_____	_____
63. Feelings are easily hurt.	_____	_____
64. Talks in a funny way (e.g. stutter, lisp).	_____	_____
65. Asks the same question over and over again.	_____	_____
66. Seems quiet when around other children.	_____	_____
*67. Has a characteristic mannerism or nervous habit. Specify: _____	_____	_____
*68. Makes friends quickly and easily.	_____	_____
69. Lacks pep and complains of being tired.	_____	_____
*70. Quickly loses interest in an activity.	_____	_____
71. Sucks thumb.	_____	_____
*72. Very moody - sad one minute and happy the next.	_____	_____
73. Will interrupt someone else in order to state his (her) opinions.	_____	_____
*74. Talks or mutters to self as if conversing with self.	_____	_____
*75. Self confident.	_____	_____
*76. Bullies younger children.	_____	_____
*77. Plays mostly with younger or smaller children - even when children of own age are around.	_____	_____
*78. Seems sad and unhappy.	_____	_____
79. Uses "baby talk."	_____	_____
*80. Tends to go too far unless frequently reminded of rules.	_____	_____
81. Often becomes so stuck on one idea that he (she) can't stop thinking or talking about it.	_____	_____
82. Does not wait for others to approach but seeks others out.	_____	_____
*83. Talks all the time.	_____	_____
*84. Will fight in a rough way where others could really get hurt.	_____	_____

	Does this apply at all?	Is it char- acteristics?
* 85. Refuses to share things with others.	_____	_____
86. Brags about what he (she) can do.	_____	_____
87. Holds a grudge.	_____	_____
88. Often tries to do more than he (she) can handle on his (her) own.	_____	_____
89. Prefers standing by adults when other children are present.	_____	_____
* 90. Often has to be reminded of what he (she) can and cannot do.	_____	_____
91. Is frightened of being alone.	_____	_____
92. Uses mostly gestures or movements to express or communicate feelings.	_____	_____
93. Avoids talking about himself (herself).	_____	_____
* 94. Threatens to hit or hurt others.	_____	_____
* 95. Seems out of touch with what is going on around him (her) - off in his (her) own world.	_____	_____
* 96. Often seems angry for no particular reason, expresses it in many different ways.	_____	_____
* 97. Has uncontrollable outbursts of temper.	_____	_____
* 98. Able to stand up for himself (herself).	_____	_____
* 99. Likes to perform for company.	_____	_____
* 100. Polite and cooperative with others.	_____	_____
* 101. Easily embarrassed.	_____	_____
102. Body often looks tense, as if expecting a fight.	_____	_____
* 103. Careful in explanations - precise.	_____	_____
* 104. Often breaks the rules in games with others.	_____	_____
105. Avoids physical contact with others.	_____	_____
106. Easily scared.	_____	_____
107. Doesn't like to let others know how he (she) feels.	_____	_____
* 108. Frequently disappointed.	_____	_____
109. A new situation seems to bring out the show-off in him (her).	_____	_____

	Does this apply at all?	Is it char- acteristic?
*110. When told to do something he (she) doesn't want to do, he (she) becomes very angry.	_____	_____
111. Often acts silly.	_____	_____
*112. Play is aimless, doesn't seem to make or accomplish anything.	_____	_____
*113. Is curious about things.	_____	_____
*114. Prefers competitive games.	_____	_____
115. Likes to play with boys instead of girls.	_____	_____
*116. Shows appreciation when others help or do things for him (her).	_____	_____
*117. Seems afraid to try anything new.	_____	_____
118. Doesn't like to ask others for help.	_____	_____
*119. Will lie to get out of a tight spot.	_____	_____
120. Nothing seems to interest him (her).	_____	_____
*121. Energetic.	_____	_____
*122. Asks sensible questions in new situation.	_____	_____
*123. Aggressive and overpowering with other children.	_____	_____
*124. Likes to do things well so others will notice him (her).	_____	_____
*125. Shows pleasure and involvement in most things he (she) does - enthusiastic.	_____	_____
*126. Seems selfish, always wants own way.	_____	_____
*127. Doesn't seem to care about how he (she) looks - often looks sloppy.	_____	_____
128. Bossy with others.	_____	_____
*129. Makes faces and acts "silly."	_____	_____
*130. Tires easily in activities.	_____	_____
131. Speech often seems unrelated to what is going on.	_____	_____
*132. Blows up very easily when bothered by someone.	_____	_____
133. Stays to self during games.	_____	_____
*134. Prefers following others to taking the initiative.	_____	_____



	Does this apply at all?	Is it char- acteristic?
*135. Says he (she) is not as good as others - feels bad about himself (herself).	_____	_____
*136. Competes with other children.	_____	_____
137. Does what is expected to do, but grumbles about it.	_____	_____
138. When he (she) likes someone, he (she) tells them so.	_____	_____
*139. Pitches in when things are to be done.	_____	_____
*140. Fidgety and restless.	_____	_____
141.. Speaks only in response to direct questioning.	_____	_____
*142. Gets other children stirred up to mischief.	_____	_____
*143. Acts as if everyone were against him.	_____	_____
144. Makes rules for others.	_____	_____
*145. Quick and clever.	_____	_____
*146. Learns quickly from others.	_____	_____
*147. Once he (she) makes up his (her) mind about something, it's hard for him (her) to change.	_____	_____
148. Shows delight when hurting others.	_____	_____
149. Affectionate - enjoys being physically close to others.	_____	_____
*150. Retains composure even when those around him (her) are acting in a boisterous way.	_____	_____
*151. Prefers playing with older or bigger children even when child of own age are around.	_____	_____
152. Often tattles on others.	_____	_____
153. Speaks so rapidly he (she) is difficult to understand.	_____	_____
*154. Quickly moves from one activity to the next.	_____	_____

After completing this checklist, you may think of some other descriptions which you feel characterize this child but are not included in the checklist. Please write any such items or comments in the space below.

APPENDIX C  
INFORMATION SHEET

Name of child to be described: \_\_\_\_\_

Sex: \_\_\_\_\_

Age of child: \_\_\_\_\_

Other children in family - ages: \_\_\_\_\_

Sexes: \_\_\_\_\_

Name of mother: \_\_\_\_\_

Education: \_\_\_\_\_

Occupation: \_\_\_\_\_

Name of father: \_\_\_\_\_

Education: \_\_\_\_\_

Occupation: \_\_\_\_\_

# APPENDIX D

## Mean Scores for Factor I (Impulsivity)

		Father	Mother	Totals
Normal	Male	1.000	.898	1.898
	Female	.957	.872	1.829
Clinic	Male	1.067	1.200	2.267
	Female	1.250	.900	2.150
	Totals	4.274	3.870	8.144

# APPENDIX E

## Mean Scores for Factor II (Competence)

		Father	Mother	Totals
Normal	Male	2.490	2.694	5.184
	Female	3.021	2.383	5.404
Clinic	Male	2.100	2.383	4.483
	Female	2.350	1.950	4.300
Totals		9.961	9.410	19.371

# APPENDIX F

## Mean Scores for Factor III (Moodiness)

		Father	Mother	Totals
Normal	Male	1.000	.898	1.898
	Female	.851	.830	1.681
Clinic	Male	1.133	1.000	2.133
	Female	.700	.900	1.600
Totals		3.684	3.628	7.312

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