DOCUMENT RESUME

ED 268 770 EC 182 386

AUTHOR Margalit, Malka; Shulman, Shmuel
TITLE Social Adjustment and Academic Competency of Children with Conduct Disorders.
PUB DATE Apr 86
NOTE 36p.; Paper presented at the Annual Convention of the Council for Exceptional Children (64th, New Orleans, LA, March 31-April 4, 1986).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Age Differences; *Behavior Disorders; *Competence; Elementary Secondary Education; *Interpersonal Competence; *Maturity (Individuals); *Self Control; *Social Adjustment

ABSTRACT

The adjustment and competence patterns of boys with conduct disorders were investigated using a developmental approach to psychopathology. The sample consisted of 438 boys divided into two matched subgroups: boys with and without conduct disorders. In each subgroup, three age groups were defined. The Conners Abbreviated Symptom Questionnaire and the Aggressive Behavior Scale assessed the self management level of each child. The Classroom Behavior Inventory was used to assess the levels of competence, and Teacher Adjustment Ratings provided global ratings for the children's classroom situation. The results demonstrated that boys with conduct disorders are distinctive from their control peers on several aspects of social adjustment and academic competence, even at the first stages of their academic experience. The significant maturational change that occurred in the older age groups, of boys without conduct disorders, was not evident in the conduct disordered group, suggesting a developmental arrest in the abilities for controlling and inhibiting behavior. The academic distinction was evident through adolescence, although different developmental processes were demonstrated in the social aspects. The implications for theoretical understanding of the developmental aspects of the syndrome, family perspectives, and psychological interventions in the school are discussed. (Author/CL)]

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
[X] This document has been reproduced as received from the person or organization originating it.
[ ] Minor changes have been made to improve reproduction quality
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.



ED268770

# Social Adjustment And Academic Competency Of Children With Conduct Disorders

Malka Margalit  Shmuel Shulman

School of Education

Tel Aviv University

Deep appreciation is expressed to Dee M. Bargteil for critical reading of the manuscript.

Running head: CONDUCT DISORDERS

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Malka Margalit
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."



CG018386
ERIC

## Abstract

The adjustment and competence patterns of boys with conduct disorders were investigated using a developmental approach to psychopathology. The sample consisted of 438 boys divided into two matched subgroups: boys with and without conduct disorders. In each subgroup, three age groups were defined. The ASQ and the Aggressive Behavior Scale assessed the self management level of each child. The CBI was used to assess the levels of competence, and Teacher Adjustment Ratings provided global ratings for the children's classroom situation. The results demonstrated that boys with conduct disorders are distinctive from their control peers, on several aspects of social adjustment and academic competence, even at the first stages of their academic experience. The significant maturational change that occurred in the older age groups, of boys without conduct disorders, was not evident in the conduct disordered group, suggesting a developmental arrest in the abilities for controlling and inhibiting behavior. The academic distinction was evident through adolescence, although different developmental processes were demonstrated in the social aspects. The implications for theoretical understanding of the developmental aspects of the syndrome, family perspectives and psychological interventions in the school are discussed.

# Social Adjustment and Academic Competency of Children with Conduct Disorders

When Guy was fourteen years old, his parents once again consulted the school psychologist. Unhappily, they joined his teachers in complaining about his disobedience and uncontrolled outbursts. His academic achievements were deteriorating; most of the time he seemed lonely and unhappy. The parents reminded the psychologist that similar problems had been noted in their son at different age levels. He had already recieved various kinds of professional help, and for some time the whole family had even participated in family therapy. Yet, his general trend of development consisted of increasing difficulties, with short periods of relief. Now the angry adolescent seemed beyond any control, and the worried parents seemed desparate.

This is just one of many case studies highlighting the need for reevaluation of our theoretical models for understanding children with conduct disorders.

Physical aggression, non-compliance, destructiveness, verbal combativeness and negative relationships with peers and adults serve as a definition of conduct disorders. These characteristics emerge from studies of normal and treatment populations, across the span of childhood, from preschool age through adolescence (Achenbach & Edelbrock, 1978; Quay, 1983; Quay & Werry, 1979). Of childhood behavior disorders, perhaps the most prevalent and salient are the externalizing disorders

involved with continuous conflicts with the environment: hyperactivity and aggression. Aggressive conduct disorders represent an especially important target for investigation, because of their frequency, persistent stability in longitudinal studies, and association with serious adolescent and adult psychopathology (Achenbach, 1982; Olweus, 1978, 1979; Schwartzman & Moskowitz, 1985).

Although conduct disorders have been widely studied, very little is yet known about the disorder's onset and natural history. Two major conceptual trends have been explored in previous research, linking the syndrome (a) to emotional and familial conflicts, and (b) to cognitive processing deficiencies.

Patterson, Reid, Jones and Conger (1975) contended that aggressive behavior reflects flaws in the socialization process. Aggressive children often evidence immature behavior, and they lack the necessary social skills for initiating and maintaining positive social relationships. Patterson et al. (1975) suggested that these children tend to come from families where high levels of aggression between family members are often demonstrated. Children observe other family members displaying aggressive behavior and imitate it. Consequently, the children learn to use aversive demands in order to get their needs fulfilled.

More recently, depression was found to be consistently related to aggression (Stewart, DeBlois, Meardon, & Cummings, 1980). One possible explanation for this relationship may be

that the parents' rejection of the child causes the behavior disorder. The child's grief over being abandoned links the rejection with the conduct disorder, thus relating the poor rearing practices of the parents to their child's depression, and thereby treating the conduct disorder as its reaction. Another explanation of this relationship views the tendency toward depression among children with conduct disorders as a natural consequence of the fact that these children are forever in trouble with adults and rejected by their peers. Several studies (Shaw, 1977; Thomas & Chess, 1977, 1980; Thomas, Chess & Birch, 1968) have highlighted a cycle of pathological interactions between the child and family as a result of the contribution of temperament to the children's maladjusted behavior, and at the same time, of the parents' inadequacy to attend to these difficult children.

Within a cognitive-behavioral framework, conduct disorders have been related to cognitive processing deficits. The children have been described as having concentration dificulties (Lewis, 1954), tending to behave in an impulsive and over-reactive manner. Camp (1977) focused interest on their limited and inefficient private speech as related to their impulsive behavior. These children spend very little time thinking about behavioral alternatives. In terms of consequential thinking (Spivak & Shure, 1974), such children rarely appear to anticipate any but the most immediate consequences.

Milich and Dodge (1984), in a recent series of studies, emphasized the social-information processing model. According to the model, when presented with social cues, aggressive children demonstrate deficiencies in their perception and encoding of the cues (step 1). These deficiencies cause them to make biased attributions about their peers' intentions and to expect peers to be hostile toward them in the near future (step 2). Such a bias leads them to generate and adopt inappropriately aggressive responses to problem situations, particularly when a provocation is involved (step 3). The aggressive behavior by these boys prompts their peers to reject them. The rejection, in turn, serves to reinforce and perpetuate the aggressive boys' deficient and biased processing. This model is one of reciprocal influence among information processing, aggressive behavior and others' rejection. In a survey of studies (Lochman, Burch, Curry & Lampron, 1984), conduct disorders have been conceptualized as behavioral reactions due in part to distorted and inadequate cognitive processing of perceived provocations and frustrations.

Several studies have demonstrated that experimental enhancement of cognitive skills involving different forms of social competence has resulted in a significant decrease in aggressive behavior (Feshbach & Feshbach, 1982; Feshbach & Price, 1984; Pitkanen-Pulkkinen, 1979). A clear relationship between academic difficulties and aggressive behavior was noted. Other studies have indicated that those children whose academic

performance is relatively poor, demonstrate more aggression than those children who perform well at school (Kohn, 1968; Robins, 1966). However, it remains ambiguous as to whether it is a lower general cognitive competence, specific learning disability, or study and performance style that is implicated in these relationships. The direction of the relationship elicits special interest: Does aggressive behavior lead to difficulties in academic and social performance, or do difficulties in academic and social performance foster aggression, or does a reciprocal influence mediate the relationships?

The aim of the present study was to investigate conduct disorders from a developmental approach to psychopathology. The role of a developmental approach is to help us understand maladjusted behavior in light of the developmental tasks and processes that characterize human growth (Achenbach, 1982). Slow maturation may contribute to behavioral disorders merely because it creates a gap between the child's abilities and those expected from the child according to the child's age. School expands children's activities, but it also imposes demands for conformity to its routines and to an age-graded sequence of academic achievement. Slow maturation may delay the child's readiness to sustain attention to unstimulating tasks, and may bring about a failure to acquire age-appropriate social and academic skills.

The purposes of the study necessitated a conceptual framework for understanding each child as a whole, integrated,

living organism. Erikson's (1963) relevent outline of psychosocial development highlighted the qualitatively different tasks and methods of coping that children display at different ages. Behavior that seems abnormal to the uninformed observer may be quite typical of children wrestling with developmental tasks at the interface between societal norms and their own unfolding desires and abilities. Step-by-step mastery of developmental tasks plays an essential part in children's long-term well being. These tasks include the maintenance of a sense of competence and a sense of pleasure in constructively advancing those developmental tasks such as mastery of academic skills and social skills (e.g., establishing friendships, dealing with strong emotions, and carrying out cooperative efforts).

Schaefer (1981, Schaefer, Edgerton & Hunter, 1983, 1985) proposed a spherical model of academic competence and social adjustment that promotes an understanding of children's behavior in school. His conceptual model integrated the traditional concepts of cognition, motivation and social-emotional behavior (affect). Interest was focused on three major areas: (a) Academic Competence, (b) Social Adjustment, and (c) Extraversion/Introversion. Schaefer's model was selected for the present investigation because of its potential for facilitating a distinction between the aggressive and non-aggressive boys in different age groups. The adaptational features of these children's behavior were expected to highlight the boys'

difficulties from the developmental perspective.

The aim of the present study was to investigate adaptation and competence in the behavior of conduct disordered boys at different age groups as related to the developmental tasks characteristic of each age group. We hypothesized that a clear distinction between conduct disordered boys and the control group would emerge even at the first stages of schooling, reflecting immaturity and maladjustment. The schools' increased demands for achievements and mastery of developmental tasks were expected to result in a decrease on adjustment measures. In order to introduce the developmental perspective, boys with conduct disorders at the beginning of formal schooling and at an intermediate stage of their schooling were compared on developmental measures to their normal peers.

## Method

### Sample

The sample consisted of three age groups of boys: (a) 126 male students in 46 first through third grade classrooms in the Tel Aviv area, with an age range of 6.2 to 9.3 years, M = 7.88, SD = 0.78, b) 150 male students in 47 fourth through sixth grade classrooms in the same area, with an age range of 8.9 to 12.6 years, M = 10.82, SD = 0.99, and c) 162 male students in 45 seventh through ninth grade classrooms with an age range of 12.9 to 16.0 years, M = 13.88, SD = 1.12. The girls from the original

sample were not included in the present study because of their small proportions in each age group.

For each of the age groups, two subgroups were matched by grade, age and parental education level and were evaluated by the same teachers.

Instruments

Conners Abbreviated Symptom Questionnaire (ASQ). The Hebrew adaptation of the ASQ was utilized to obtain an overall index of hyperactivity (Margalit, 1981). The scale has been frequently used for identifying hyperactive children and has proven to be one of the most valid and reliable instruments available (Sprague & Sleator, 1977). The interrater reliability and the validity were high for the Hebrew adaptation ($r = .85$), as was the internal consistency score (alpha = .95). The scale consists of 10 items, each rated on a 0 to 3 severity index; scores range from 0 to 30. A score of 15, which is two standard deviations above the mean for normal children, has been suggested (Sprague & Sleator, 1977) as the cut-off score for the presence of hyperactive behavior.

The Aggressive Behavior Scale. This scale provided an overall index of aggression. It consists of 10 items, each rated on a 0 to 3 severity index. The items were selected from two lists of aggressive acts (Prinz, Connor & Wilson, 1981; Stewart, DeBlois, Meardon & Cummings, 1980; Stewart & Leone, 1978) and

composed the most appropriate description for the Israeli educational system, as judged by teachers and as reported elsewhere (Margalit, in press). The coefficient alpha of internal consistency was .96.

Classroom Behavior Inventory (CBI) (Schaefer & Edgerton, 1978). The Hebrew adaptation of the CBI consisted of 42 items which describe typically observed child behavior in classrooms. Teachers rate each behavior on a four-point scale from "not at all" (1) to "very much" (4) like the child in question. The instrument yields scores on ten scales:

1. Considerateness (e.g.,"Is agreeable and easy to get along with.")

2. Task Orientation (e.g., "Works carefully and does his best.")

3. Independence (e.g., "Tries to figure things out for himself before he asks questions.")

4. Verbal Intelligence (e.g., "Has a good fund of information for a child of his/her age.")

5. Creativity / Curiosity (e.g., "Thinks up interesting things to do.")

6. Extraversion (e.g.,"Does not wait for others to approach him, but seeks others out.")

7. Hostility (e.g., "Gets angry quickly when others do not agree with him.")

8. Distractibility (e.g., "Is quickly distr ed by events

in or outside the classroom.")

9. Dependence (e.g., "Asks for help when it is not really needed.")

10. Introversion (e.g., "Tends to withdraw and isolate himself when he is supposed to be working in a group.")

Internal consistency reliabilities above .90 have been achieved for the Hebrew adaptation, similarly to the original version (McKinney & Forman, 1982), but reliabilities vary from scale to scale with higher reliabilities for the rating of Verbal Intelligence (.96) and lower ones for Introversion (.67). Schaefer reported internal reliabilities from moderate (.40) to high (.70) for the various scales across several studies.

Factor analysis of the scales of the Hebrew adaptation replicated the factor structure reported by Schaefer, validating the spherical model of the three main factors: Social Adjustment (Considerateness versus Hostility; Alpha = .95), Academic Competence (Verbal Intelligence, Creativity/Curiosity; Alpha = .96), and Extraversion versus Introversion (Alpha = .80). Two additional subscales show high loading on some of the three factors: Task Orientation versus Distractibility (Alpha = .94) and Independence versus Dependence (Alpha = .86).

Teacher Adjustment Ratings. This instrument provided three global ratings on a 5-step Likert-type scale highlighted Academic Achievement (from a low achiever to an excellent student), Social Status (very low status to very high status) and Conformity to

school (disruptive and disobedient to behaves as expected). These three measures were based on the suggestions of ten teachers, who stressed the necessity for treating the ratings as separate measures of adjustment.

## Procedure

Teachers were asked to name (using only first names to protect confidentiality) up to two children in each class who had demonstrated pronounced conduct disorders at school for at least six months. For each child, they were asked to match by age, sex, and parental education another child in the same class. This child was defined as not having conduct disorders. Students from the special education program of Tel Aviv University interviewed the teachers individually at their schools.

## Results

A two-way multivariate analysis of variance (MANOVA) was performed in order to compare the six groups of boys. Significant differences were found for the self management measures (ASQ and Aggression Scale), $F(2,432) = 5.42$, $p<.001$; and the Teacher Adjustment Ratings, $F(2,423) = 2.21$, $p<.05$, and for the Classroom Behavior Inventory, $F(2,432) = 2.30$, $p<.01$. The differences were accounted for by the differences between age groups and by the types of behaviors. (For self management and adjustment ratings: by ages, $F(2,423) = 2.31$; and by subgroups,

$F(1,423) = 294.85$, $p<.001$. For the Teacher Adjustment Ratings: by ages, $F(2,432) = 5.21$, $p<.001$, and by subgroups, $F(1,432) = 468$, $p<.001$. For the CBI: by ages, $F(2,432) = 2.63$, $p<.001$, and by subgroups, $F(1,432) = 105.21$ $p<.001$.)

In order to further investigate conduct disorders at different ages, each of the age groups was investigated separately.

The younger group (grades 1-3)

1. Self management measures. In order to validate the subgroups' definitions, a MANOVA was performed as a profile on the two measures of self management: the ASQ and the Aggression Scale. A significant difference was found between the conduct disordered (CD) and the non-conduct disordered (NCD) groups, $F(1,124) = 90.36$, $p<.001$. Means and standard deviations of the measures are presented on Table 1.

---

Insert Table 1 about here

---

The two measures contributed to the significant differences. The CD group was rated as demonstrating higher levels of hyperactive and aggressive behavior (hyperactive: $F(1,124) = 179.58$, $p<.001$; aggressive: $F(1,124) = 104.00$, $p<.001$).

2. Teacher Adjustment Ratings. A MANOVA was carried out on the three global adjustment ratings as a profile: Academic

Achievement, Social Status and Conformity to school. Means and standard deviations are presented on Table 1. A significant difference was found between the CD and the NCD groups, $F(1,124) = 77.49$, $p<.001$. The difference was accounted for by the following measures: Conformity to school, $F(1,124) = 227.71$, $p<.001$, and Social Status, $F(1,124) = 4.67$, $p<.05$, but not by the measure of Academic Achievement. The CD boys demonstrated lower Conformity to their classes and had a lower Social Status. Their Academic Achievements were lower, but did not reach the level of significance.

3. Classroom Behavior Inventory. A MANOVA was performed on the CBI measures as a profile. A significant difference was found between the two groups, $F(1,124) = 26.24$, $p<.001$. The means, standard deviations and F scores are presented on Table 1. The CD boys demonstrated higher levels of Extraversion, Distractibility, Hostility and Dependence, and lower levels of Introversion, Task Orientation, Considerateness and Independence, as can be seen on Table 1. No significant differences were found on Verbal Intelligence and Creativity/Curiosity scores.

The middle group (grades 4-6)

1. Self management measures. In order to validate the subgroups' definitions, a multivariate analysis of variance (MANOVA) was performed as a profile on the two measures of self management. A significant difference was found between the two

groups of boys, $F(1,148) = 201.88$, $p<.001$. Means, standard deviations and F scores are presented on Table 2.

---

Insert Table 2 about here

---

The two measures contributed to the significant difference. The CD group was rated as demonstrating higher levels of hyperactivity, $F(1,146) = 391.27$, $p<.001$, and aggression, $F(1,148) = 248$, $p<.001$.

2. Teacher Adjustment Ratings. A significant difference was found between the CD boys and the NCD boys, using the three global Adjustment Ratings as a profile, $F(2,147) = 152.24$, $p<.001$. Two out of the three measures contributed to the significant difference. Means, standard deviations and F scores of the ratings are presented on Table 2. For this older group, the CD boys demonstrated lower Academic Achievement and showed less Conformity to classroom rules. However, the difference between the social status of the two groups was not significant.

3. Personality and behavior measures (CBI). A significant difference was found between the two groups of boys on the CBI variables as a profile, $F(1,148) = 54.18$, $p<.001$. In this age group all ten variables contributed to the difference. Means, standard deviations and F scores of the CBI scales are presented on Table 2. The CD boys were described as being more Extraverted, Hostile, Distractable and Dependent. They reflected

lower levels of Introversion, Task Orientation, Considerateness and Independence. Even their Verbal Intelligence and Creativity/Curiosity were evaluated as lower than their controls in the older group.

The adolescent group (grades 7-9)

1. Self management measures: A significant difference was found between the two groups of boys, using MANOVA, $F(1,160) = 186.80$, $p<.001$. Means, standard deviations amd F scores are presented in Table 3.

---

Insert Table 3 about here

---

2. Teacher Adjustment Ratings: A significant difference was found between the two groups of boys, using MANOVA, $F(1,160) = 87.79$, $p<.001$. Means, standard deviations and F scores are also presented in Table 3. In this group all three measures accounted for the significant difference. CD adolescents were evaluated as showing less Conformity, lower Academic Achievement, and lower Social Status than did their NCD peers.

3. Personality and Behavior Measures (CBI). A significant difference was found between the two groups of boys on the CBI variables as a profile, $F(1,160) = 31.79$, $p<.001$. Means, standard deviations and F scores are presented in Table 3. Aggressive adolescents exhibited lower levels of Verbal

Intelligence, Creativity/Curiosity, Task Orientation, and a higher level of Distractibility. They were also judged to be more Hostile and less Considerate and to exhibit more Dependent behavior. However, on the measure of Extraversion-Introversion, the CD adolescents did not differ from their controls. This finding reflects a change that probably occurs in this domain among all adolescents, regardless of their aggression level.

Developmental perspective

The developmental perspective was further investigated by comparing the three age groups within the NCD-CD groups. Significant differences were found between the younger and middle NCD boys for the self management ratings, $F(1,134) = 2.95$, $p<.01$, and for the CBI scores, $F(1,136) = 4.67$, $p<.01$. Differences were notable in all CBI measures, with the exception of Extraversion, Introversion and Hostility. The older children demonstrated clear growth in impulse control skills, as expressed by their decreased levels of aggression and hyperactivity and by their increased competence and adjustment. No significant differences were found on the self management and CBI measures between the younger and middle groups of CD boys, demonstrating a developmental arrest, especially as compared to the developmental course of their peers.

Significant differences were also found between the middle and adolescent CD groups. The adolescent CD group exhibited

higher levels of aggressive behavior. On the CBI scales two measures contributed to the difference: CD adolescents exhibited a lower level of Extraversion, $F(1,154) = 8.91$, $p<.01$, and a lower level of Independence, $F(1,154) = 4.74$, $p<.05$.

As for the NCD adolescents, no significant differences were found in the self management measures, but an additional MANOVA on the CBI scales yielded significant differences, $F(1,154) = 2.89$, $p<.05$. The NCD adolescents exhibited lower levels of Considerateness, $F(1,154) = 9.21$, $p<.01$, and a higher level of Dependence, $F(1,154) = 9.72$, $p<.01$.

Thus, the results revealed the existence of developmental changes between the three groups, as can be seen in Figure 1. However, this change takes a different course among CD boys, as compared to NCD boys.

---

Insert Figure 1 about here

---

## Discussion

The results of this study demonstrated that the boys with conduct disorders comprised a group distinctive from their control peers, through three age groups. The CD boys in the first through third grades were described as being more extraverted, hostile and dependent children. In their learning style, they tended to demonstrate distractibility and hyperactivity. Their teachers viewed them as less conforming to

classroom rules, and as less accepted by their peers, who at that age level are very attentive to adults' norms and demands for conformity (Mussen, Conger & Kagan, 1979). However, the CD boys' academic competence, creativity and academic curiosity, and their academic achievements were not hampered at the first stages of schooling. At this age, the aggression cannot be conceptualized as a reaction to academic frustration and failure as suggested by previous studies (Feshbach & Price, 1984; Kohn, 1968; Robins, 1966).

The CD children may be regarded as less mature than their peers, with respect to school expectations and norms. Their behavior and learning styles resemble, to a large extent, those of much younger children.

In the second age group (fourth through sixth grades), the difference between the boys with and without conduct disorders became more pronounced. The NCD group evidenced higher levels of verbal intelligence, creativity and academic curiosity, and the group was rated as demonstrating an higher level of academic achievement.

Analysis of the results revealed that a significant maturational change had occurred in the well-adjusted NCD group, contributing to the widened gap between these two groups. The second group of NCD boys showed lower levels of hyperactivity and aggression, revealing an increased ability for self management. Their maturation was also evident in their academic performance

and school adjustment, as measured by most of the CBI scales.

The continuity of the difference between CD and NCD boys into adolescence age group, reflects the stable nature of the aggressive behavior, and the danger of its negative impact on the different aspects of adjustment and competence. Although the CD and NCD groups did not differ on the extraversion-introversion measures, the CD boys were evaluated as less independent. An examination of the social competence domain suggests the existence of developmental processes that characterize general trends in adolescence. Both groups of adolescents seemed to be occupied with the dilemma of their relations with others. At this age, earlier relationships appear to be re-evaluated and resolved in an attempt to meet the main developmental task of adolescence: emancipation from family ties and independent establishment of new identity and intimate relationships.

Moreover, the adolescent is typified by a growing need to attain the capacity for "making things happen" (Spruiell, 1975). Toward this goal, the adolescent must cope with the urge to assert power and to control others. Ego strength is required in order to handle domineering impulses (Offer, 1969). CD adolescents, who lack self control capacities due to developmental arrest, are unable to sublimate these self-assertion urges, which are transformed into higher levels of overt aggression.

These findings can be incorporated into the broader

framework of processes taking place in latency and adolescence. Overall, the developmental changes can be conceptualized as the growing ability for controlling and inhibiting behavior, in which the component of verbal self-regulation is of essential importance.

In this study, the changes that took place in the NCD group reflected this same growing ability for controlling behavior, which is probably mediated by verbal abilities. The developmental arrest of inhibitory mechanisms in the CD group may be the main contribution to the boys' prolonged difficulties. It is important to note that the impulses of the well-adjusted groups did not become weaker with age; their level of hostility in the CBI scale did not change. It is their growing self-regulation processes that enable these groups to control their hostility.

These findings highlight the trends in intervention methods for conduct behavior at school (Meichenbaum & Goodman, 1971) that have emphasized the need for developing self-regulation mechanisms in aggressive children. Special attention should be devoted to identifying different subgroups of CD boys, such as CD with and without hyperactivity, in order adapt the intervention programs to meet the specific developmental needs of these children. Further studies are also needed for investigating the long-range outcomes of this developmental arrest.

The planning of intervention programs should not ignore the

family perspective. Studies have delineated the importance of the family in serving as a model of aggressive or non-aggressive behavior of its children. Recently, the interrelations between family interactions and developmental processes have been noted (Minuchin, 1985). Family theories and research (Reiss, 1981; Shulman & Klein, 1983) have stressed the important role of the family in the development of the perceptual processes of its children. Further research should attempt to investigate the role of the family in developing or halting processes that contribute to the attainment of self-control skills which are crucial in preventing conduct disorders.

## References

Achenbach, T. M. (1982). Developmental psychopathology. New York: John Wiley and Sons.

Achenbach, T. M., & Edelbrock, C. S. (1978). The classification of child psychopathology: A review and analysis of empirical efforts. Psychological Bulletin, 85, 1275 - 1301.

Camp, B. (1977). Verbal mediation in young aggressive boys. Journal of Abnormal Psychology, 86, 145-153.

Erikson, E. H. (1963). Childhood and society. (2nd ed.). New York: Norton.

Feshbach, N., & Fesbach, S. (1982). Empathy training and the regulation of aggression: Potentialities and limitations. Academic Psychology Bulletin, 4, 399-413.

Feshbach, S., & Price, J. (1984). Cognitive competencies and aggressive behavior: A developmental study. Aggressive Behavior, 10, 185-200.

Kohn, M. (1968). Competence and symptom factors in the preschool child. New York: William Alanson White Institute.

Konstantareas, M. M., & Homatidis, S. (1984). Aggressive and prosocial behaviors before and after treatment in conduct disordered children and in matched controls. Journal of Child Psychology and Psychiatry, 25, 607-620.

Lewis, H. (1954). Deprived children. London: Oxford University.

Lochman, J. E., Burch, P. R., Curry, J. F., & Lampron, L. B. (1984). Treatment and generalization effects of cognitive behavioral and goal setting interventions with aggressive boys. Journal of Consulting and Clinical Psychology, 52 (9), 915-916.

Margalit, M. (1981). Cultural differences in the hyperactive syndrome rated in the Conners Abbreviated Scale. Journal of Learning Disabilities, 14, 330-331.

Margalit, M. (in press). Perceptions of parents' behavior, familial satisfaction and sense of coherence in hyperactive children. Journal of School Psychology.

McKinney, J. D., & Forman, S. G. (1982). Classroom behavior patterns of EMH, LD and EH students. Journal of School Psychology, 20 (4), 271-279.

Meichenbaum, D., & Goodman, J. (1971). Training impulsive children to talk to themselves: A means of developing self control. Journal of Abnormal Psychology, 77, 115-126.

Milich, R., & Dodge, K. A.(1984). Social information processing in child psychiatric populations. Journal of Abnormal Child Psychology, 12(3), 471-490.

Minuchin, P. (1985). Families and the individual development: Provocations from the field of family therapy. Child Development, 56, 298-302.

Mussen, P. H., Conger, J. J., & Kagan, J. (1979). Child development and personality (5th ed.). New York: Harper & Row.

Offer, D.(1969). The psychological world of the teen-ager. New York: Basic Books.

Olweus, D. (1978). Aggression in the schools. New York: Wiley.

Olweus, D. (1979). Stability of aggressive behavior patterns in males: A review. Psychological Bulletin, 86, 852-875.

Patterson, O. R., Reid, J. B., Jones, R. R. & Conger, R. E. (1975). A social learning approach to family intervention: Vol. 1. Families with aggressive children. Eugene, Oregon: Castalia Publishing.

Pitkanen-Pulkkinen, L. (1979). Self - control as a prerequisite for constructive behavior. In S. Feshbach & A. Fraizek (Eds.), Aggression and behavior change: Biological and social processes (pp.250-270). New York: Praeger.

Prinz, R., Connor, P., & Wilson, C. (1981). Hyperactive and aggressive behavior in childhood: Intertwined dimensions. Journal of Abnormal Child Psychology, 9, 191 - 202.

Quay, H. C. (1983). A dimensional approach to behavior disorder: The revised behavior problem checklist. School Psychological Review, 12, 244-249.

Quay, H. C., & Werry, J. S. (1979). Psychopathological disorders of childhood (2nd ed.): New York: Wiley.

Reiss, D. (1981). The family construction of reality. Cambridge: Harvard University.

Robins, L. (1966). Deviant children grown up: A sociological and

psychiatric study of the sociopathic personality. Baltimore: Williams and Wilkins.

Schaefer, E. S. (1981). Development of adaptive behavior: Conceptual models and family correlates. In M.J. Begad, H.C. Haywood, & H.L. Barber (Eds.), Psychosocial influences in retarded performance: Vol.1. Issues and theories in development (pp. 155-178). Baltimore: University Press.

Schaefer, E. S., & Edgerton, M. (1978). Classroom behavior inventory. Unpublished manuscript, University of North Carolina at Chapel Hill.

Schaefer, E. S., Edgerton, M., & Hunter, W. M. (1983, August). Unified model for academic competence, social adjustment and psychopathology. Paper presented at the American Psychological Annual Meeting, Anaheim, CA.

Schaefer, E. S., Edgerton, M., & Hunter, W. M. (1985, April). Spherical model integrating academic competence with social adjustment and psychopathology. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Toronto, Canada.

Schwartzman, A. E. & Moskowitz, D. S. (1985, July). The

predictive validity of peer evaluation of behavior problems in childhood. Paper presented at the Biennial meeting of the International Society for the Study of Behavioral Development, Tours, France.

Shaw, C. (1977). A comparison of the patterns of mother-baby interactions for a group of crying, irritable babies and a group of more amenable babies. Child Care, Health and Development, 3, 1-12.

Shulman, S., & Klein, M. M. (1983). Psychological differentiation, self concept and object relations of adolescents as a function of family consensual types. Journal of Nervous and Mental Disease, 172, 734-741.

Spivak, L., & Shure, M. S. (1974). Social adjustment of young children: A cognitive approach to solving real-life problems. San Francisco: Jossey-Bass.

Sprague, R. L., & Sleator, E.K. (1977). Methylphenidate in hyperkinetic children: Differences in dose effects on learning and social behavior. Science, 198, 1274-1276.

Spruiell, V. (1975). Narcissistic transformation in adolescence. Journal of Psychoanalytic Psychotherapy, 4, 518-526.

Stewart, M. A., DeBlois, C. S., Meardon, J., & Cummings, C. (1980). Aggressive conduct disorders of children. Journal of Nervous and Mental Disease, 168 (10), 604-610.

Stewart, M. A., & Leone, L. (1978). A family study of unsocialized aggressive boys. Biological Psychiatry, 13, 107-117.

Thomas, A., & Chess, S. (1977). Temperament and development. New York: Brunner/Mazel.

Thomas, A., & Chess, S. (1980). The dynamic of psychological development. New York: Brunner/Mazel.

Thomas, A., Chess, S., & Birch, H. G. (1968). Temperament and behavior disorders in children. New York: New York University.

Table 1

First Through Third-Grade CD Boys and Their NCD Peers: Means, Standard Deviations and F Scores of Self Management, Adjustment Ratings and CBI Scales for the Younger Group

| Category | NCD | | CD | | F |
|---|---|---|---|---|---|
| | M | SD | M | SD | (1,124) |
| **Self management** | | | | | |
| Hyperactivity (ASQ) | 5.00 | 5.90 | 19.25 | 5.70 | 179.58** |
| Aggression | 2.70 | 5.21 | 13.78 | 6.87 | 104.00** |
| **Adjustment ratings** | | | | | |
| Academic Achievement | 3.44 | 1.18 | 3.07 | 1.09 | 3.50 |
| Social Status | 3.47 | 1.13 | 3.05 | 1.18 | 4.62** |
| Conformity | 4.57 | 0.92 | 2.03 | 0.93 | 227.71** |
| **CBI scales** | | | | | |
| Considerateness | 3.92 | 0.83 | 2.10 | 0.71 | 169.94** |
| Task Orientation | 3.15 | 0.79 | 2.44 | 0.66 | 30.63** |
| Independence | 3.43 | 1.03 | 2.64 | 0.90 | 20.01** |
| Verbal Intelligence | 2.87 | 1.09 | 2.83 | 1.01 | 0.04 |
| Creativity/Curiosity | 2.79 | 1.14 | 2.61 | 0.89 | 0.64 |
| Extraversion | 3.30 | 0.89 | 3.56 | 0.71 | 4.30* |
| Hostility | 1.91 | 0.89 | 3.90 | 0.74 | 192.17** |
| Distractibility | 2.44 | 0.96 | 3.75 | 0.77 | 75.99** |
| Dependence | 2.51 | 0.80 | 2.84 | 0.96 | 4.75** |
| Introversion | 2.76 | 0.99 | 2.27 | 0.88 | 8.51** |

*p<.01

Table 2

Fourth Through Sixth-Grade CD Boys and Their NCD Peers: Means, Standard Deviations and F Scores of Self Management, Adjustment Ratings and CBI Scales for the Middle Group

| Category | NCD | | CD | | F |
|---|---|---|---|---|---|
| | M | SD | M | SD | (1.148) |
| **Self management** | | | | | |
| Hyperactivity (ASQ) | 2.21 | 2.91 | 19.52 | 6.84 | 391.28** |
| Aggression (ABS) | 0.68 | 1.21 | 14.96 | 7.75 | 248.78** |
| **Adjustment ratings** | | | | | |
| Academic Achievement | 3.69 | 1.29 | 2.56 | 1.20 | 30.58** |
| Social Status | 3.50 | 1.24 | 3.16 | 0.95 | 3.54 |
| Conformity | 4.84 | 0.44 | 2.36 | 0.93 | 443.42** |
| **CBI scales** | | | | | |
| Considerateness | 4.32 | 0.60 | 2.23 | 0.58 | 454.96** |
| Task Orientation | 3.47 | 0.82 | 2.25 | 0.70 | 94.14** |
| Independence | 3.89 | 0.97 | 2.78 | 0.85 | 51.51** |
| Verbal Intelligence | 3.58 | 1.31 | 2.60 | 1.11 | 23.43** |
| Creativity/Curiosity | 3.23 | 1.30 | 2.48 | 0.89 | 16.31** |
| Extraversion | 3.27 | 0.77 | 3.58 | 0.75 | 6.61** |
| Hostility | 1.73 | 0.84 | 3.73 | 0.86 | 256.23** |
| Distractibility | 2.01 | 0.94 | 3.94 | 0.84 | 171.52** |
| Dependence | 1.75 | 0.75 | 2.58 | 0.94 | 32.68** |
| Introversion | 2.58 | 1.05 | 2.26 | 0.88 | 4.23** |

**p<.01

Table 3

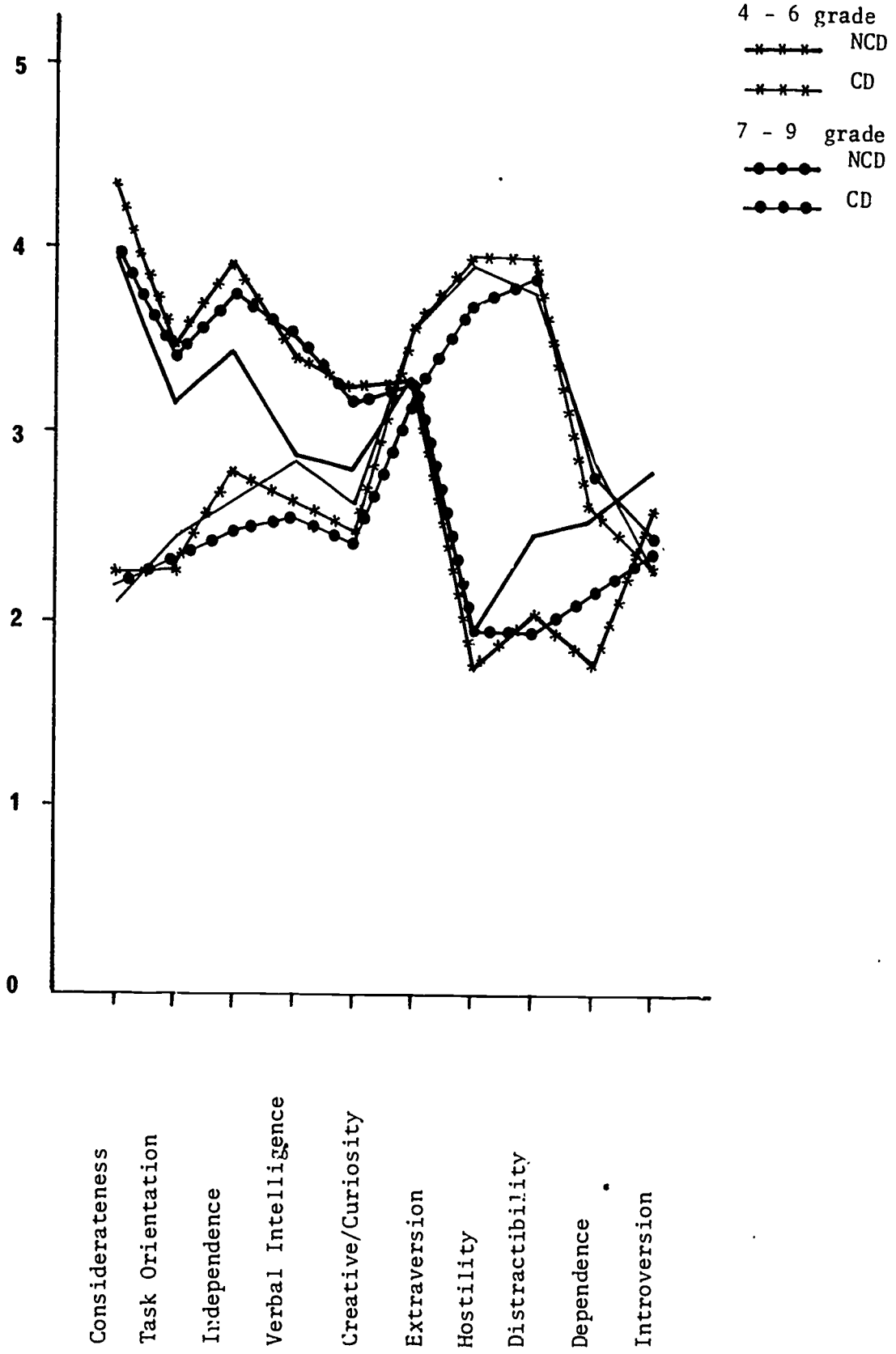
Seventh Through Ninth-Grade CD Boys and Their NCD Peers: Means, Standard Deviations and F scores of the Self Management, Adjustment Ratings and CBI Scales For the Adolescent group

| Category | NCD | | CD | | F |
|---|---|---|---|---|---|
| | M | SD | M | SD | (1,160) |
| **Self Management** | | | | | |
| Hyperactivity(ASQ) | 2.83 | 4.36 | 20.95 | 7.19 | 374.95** |
| Aggression (ABS) | 1.38 | 3.34 | 18.85 | 8.80 | 278.70** |
| **Adjustment Ratings** | | | | | |
| Academic Achievement | 3.60 | 1.14 | 2.56 | 1.25 | 29.83** |
| Social Status | 3.44 | 0.94 | 2.80 | 1.05 | 15.99** |
| Conformity | 4.54 | 0.83 | 2.19 | 0.99 | 240.77** |
| **CBI Scales** | | | | | |
| Considerateness | 3.96 | 0.76 | 2.17 | 0.75 | 223.48** |
| Task Orientation | 3.40 | 0.75 | 2.31 | 0.65 | 97.46** |
| Independence | 3.73 | 0.88 | 2.47 | 0.89 | 82.22** |
| Verbal Intelligence | 3.50 | 1.07 | 2.53 | 1.01 | 34.39** |
| Creativity/Curiosity | 3.15 | 1.07 | 2.31 | 0.84 | 30.84** |
| Extraversion | 3.32 | 0.80 | 3.22 | 0.73 | 0.73 |
| Hostility | 1.92 | 0.69 | 3.68 | 0.92 | 187.15** |
| Distractibility | 1.92 | 0.81 | 13.83 | 1.00 | 175.43** |
| Dependence | 2.14 | 0.70 | 2.79 | 0.85 | 28.22** |
| Introversion | 2.37 | 0.88 | 2.43 | 0.80 | 0.26 |

**p<.01

Figure 1.

Competence and Behavior Ratings (CBI) of CD Boys and Their NCD Peers



Paper presented at the Annual Convention

of the

Council for Exceptional Children

(64th, New Orleans, LA, March 31-April 4, 1986)

BEST COPY AVAILABLE