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A STUDY OF THE RELATIONSHIP BETWEEN CONTEMPORARY CLASSROOM AND FAMILY ENVIRONMENTAL CONDITIONS AND THE SCHOOL ADJUSTMENT OF CHILDREN FOLLOWING DISCHARGE FROM RESIDENTIAL PSYCHIATRIC TREATMENT

by
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CHAPTER I

REVIEW OF ISSUES INVOLVED IN FOLLOW-UP RESEARCH

Theoretical Orientation

A major theoretical question in follow-up studies is the relative importance of situational factors versus historical determinants for subsequent behavior or adjustment. Many studies of children who have been in a high intensity residential treatment program have focused on the concept of "outcome" or "effectiveness." This may place an exaggerated degree of importance on the historical, that is, the treatment program, in explaining or attempting to predict the outcome. Studies reported in the literature, especially during the 1950's and 1960's, examined just these historical connections including the association between admission characteristics and outcome, between modes of treatment and outcome, and between progress during treatment and outcome (Durkin and Durkin, 1975). A major problem inherent in such studies is that the emphasis on primarily historical factors ignores the impact of contemporary environmental circumstances.

The current acceptance of the community mental health model of service delivery has directed attention to environmental factors as determinants of subsequent adjustment. Because this approach does not rest on a sharp distinction between problems in the child's environment and problems within the child's personality, it can accommodate a focus which includes the total ecological picture of the child's life, that is, the self, the family, the school, and the

larger community. Follow-up studies reflecting the influence of the community mental health model seek to identify environmental circumstances which enhance the coping skills and ego development of children (Kohlberg et al., 1972).

In this study attention is turned to the adaptive capacities of the child reflected in public school functioning. The major focus of the study is on the association between specific attributes of the contemporary family and classroom environment and current school performance.

Need for Studies

There has been growing criticism of the service delivery system in residential treatment of emotionally impaired children. The Joint Commission on Mental Health of Children (1969) questioned the adequacy of existing programs and called for a critical appraisal of both assumptions and procedures in the field. Maluccio and Marlow (1972) conclude that the system of residential treatment is characterized by inadequate theoretical development, serious fragmentation of services, limited substantive research, and considerable discrepancy between the reality and practice of the ideal of a carefully designed, individualized treatment plan for each child. Durkin and Durkin (1976) are critical of the high cost of residential treatment, its capacity to reach only a small percentage of the population, the shortage of trained personnel, and overloaded facilities.

It has been suggested that the development of community psychiatry and increasing use of short-term general hospital care, specialized foster homes, and day care centers may be rendering

institutional treatment obsolete (Maluccio and Marlow, 1972). The alternative ecological or community mental health model, is oriented toward the creation of environmental conditions which facilitate the cognitive skills, coping skills, and ego development of all children. It is unlikely that residential treatment will be abandoned in the near future. Although large numbers of children will continue to require residential treatment, the impact of the community mental health approach can be observed in modifications of the classic inpatient model. Mora et al. (1969) describe a children's facility which redirected its focus on in-house residential treatment to a more community-oriented model which includes preadmission planning with families, intensive follow-up with families, and attempts to mobilize community resources for the children. Maluccio (1974) discusses several ways to de-institutionalize the institution. These include the use of community volunteers such as Big Brother-Big Sister programs, student volunteer programs, and foster grandparent programs. Hospitals may encourage the maintenance of community contacts through more liberal visitation and leave policies. Family involvement has been considerably increased by many institutions through the development of treatment contracts, preadmission planning for aftercare, and family therapy. Maluccio and Marlow (1972) suggest that, under certain circumstances, children from an inpatient setting may attend public schools prior to discharge.

Further modifications of the classic residential treatment model may be suggested by the results of this study. Information regarding specific aspects of family functioning which facilitate adjustment in the school may serve to direct areas of family treatment and aftercare

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placement decisions. Findings regarding the association between specific classroom dimensions and school adjustment may serve as a basis for program changes within the residential school program and suggest recommendations for postdischarge educational planning.

Review of the Literature

Although this study is concerned specifically with public school functioning, most follow-up studies reported in the literature give little attention to school adjustment dimensions. In the literature review the results of educationally oriented studies are reported. However, the review is focused on two important areas: 1) methodological problems common to all follow-up studies and 2) the substantive issue regarding the relative importance of situational factors versus historical determinants for subsequent adjustment.

Methodological Issues

The contradictory results frequently reported in the literature may result, in part, from methodological problems unique to follow-up research. Among the more difficult issues confronting the researcher are the following: 1) research design problems; 2) choice of variables and measurement problems; and 3) data collection problems.

Research design problems

A typical follow-up study is developed in response to two questions; "Is the treatment program a success?" and "What are the factors associated with good and poor patient outcome?" Nunally and Wilson (1975) discuss two research designs capable of addressing

these questions. The ideal design requires the random assignment of emotionally impaired children to treatment and nontreatment conditions (or to several treatment conditions). The overall success of a particular treatment condition could then be measured by contrasting long-term postdischarge outcome for treatment and nontreatment groups. This approach would assist in the evaluation of the effect of such nontreatment factors as maturation and spontaneous recovery. However, the "ideal" design is not possible since it involves refusing to provide available treatment to children clearly in need of intervention. Also, when the selection of appropriate postdischarge environmental conditions is considered part of the "treatment," the number of experimental conditions to be contrasted may become too large for practical consideration (Taylor and Alpert, 1972).

A second design would be to match treated and untreated children on basic individual, family, and environmental variables to assess the effects of treatment within a matched patient population (Nunally and Wilson, 1975). Although control groups generally serve to make follow-up data more interpretable and generalizable, it is impractical to match subjects when the number of relevant individual, family, and environmental variables is large or undetermined. Given these limitations, it would appear that all follow-up studies must fall short of the ideal design. Nevertheless, it is possible to accumulate important, relevant knowledge about the relationships among measurable patient, family, treatment, and environmental variables and long-term outcomes. Consistent findings across studies serve to provide corroboratory evidence for the meaningfulness of results (Lewis et al., 1975).

In the current study the design calls for measurement of a sample at admission, discharge, and follow-up. Although sample characteristics at admission and discharge are included for comparative purposes, the study is primarily concerned with the exploration of the relationships among measurable environmental conditions at follow-up and indices of subsequent school functioning. A control group is not employed. However, where relevant information is available, comparisons are made between the research sample and the children studied by Heuchert (1969) and Lewis (1970). These studies were focused on the follow-up school adjustment of former patients in a residential treatment program and are, therefore, appropriate for comparison. In addition, comparisons are made between the research sample and the normative population in those instances in which comparative data is provided for the instrument employed. The measures are described in Chapter II.

Choice of variables

One important factor influencing variable selection is the relative availability of the desired data. Lewis et al. (1975) conclude that while multiple sources of data relative to a subject's functioning at follow-up may be desirable theoretically, it is often impractical and/or disruptive to seek information from family members, employers, schools, and various community representatives. Also, while theories of psychopathology frequently focus heavily on early childhood experiences, such developmental data are often unavailable, or are so distorted as to become virtually useless.

Another concern influencing variable selection is the availability of valid and reliable measures. Nunally (1975) recommends the use of those measures about which principles of psychometric theory are known. Lewis et al. (1975) conclude that traditional psychiatric research has often erred by using subjective, nonquantifiable observations, especially in regard to assessment of the process of psychotherapy and subtle changes in personality structure. Robins and O'Neal (1958) suggest using items that identify behavior, rather than diagnostic or impressionistic summaries. This facilitates measurement and the researcher is less likely to become entrenched in historical conceptual schemes.

The primary factor which guides the selection of variables is the prevailing concept of mental health and illness. For example, studies based on a psychoanalytic model frequently focus on early childhood experiences as predictors of success and indices of internal personality reorganization as criteria for subsequent adjustment (Garber, 1972). The findings and implications of any follow-up study are best understood in the context of the author's theoretical orientation.

Bower (1969) takes the position that mental health is comprised of the kinds of competence and reality-testing which allow a child to function effectively in the humanizing institutions where he is asked to participate. These include the home, the peer group, and the school. Emotional impairment, then, is the absence of such competence. In an earlier publication Bower and Lambert (1961) describe the emotionally impaired child as characterized by one or

more of five patterns of behavior:

1. An inability to learn that cannot be adequately explained by intellectual, sensory, neurophysiological, or general health factors

2. An inability to build or maintain satisfactory interpersonal relations with peers and teachers

3. Inappropriate or immature types of behavior or feelings under normal conditions

4. A general pervasive mood of unhappiness or depression

5. A tendency to develop physical symptoms, such as speech problems, pains, or fears, associated with personal or school problems

(Bower and Lambert, 1961; pp. 28-29)

With few exceptions the children in the current study were referred for a variety of problems included in Bower's description cited above. The adjustment criteria represent areas of school functioning considered by teachers from the inpatient school to be important for effective adaptation to the public school setting. The criteria include level of academic functioning, self-concept, peer and adult relations, and level of anxiety associated with school performance. The variables from which successful follow-up adjustment may be predicted represent specific dimensions of the classroom and family environments as measured by the Moos' (1975) social environment scales. These dimensions and measures are described in detail in Chapter II.

Data collection problems

Nunally and Wilson (1975) report that potential subjects often cannot be located or refuse to give permission for their inclusion in a follow-up study. In addition, parents, schools, and other

agencies may be reluctant to offer full or partial cooperation in completing a follow-up assessment. The result may be a reduction in sample size or a reduction in the number of variables for which complete data are available.

Information employed in follow-up studies is frequently obtained from case records. The numerous problems with records as a data source are summarized by Weiss (1975). She reports that records are often incomplete, out of date, contain time gaps for which there is no accounting, may be inaccurate, and typically are not organized in a fashion which lends itself well to compilation and statistical analysis.

The researcher encountered each of the data base problems described above in the current study. The extent to which missing data limits the generalizability of conclusions is fully described in Chapter II. Especially impressive was the lack of suitability of available case record reports for translation into readily interpretable dimensions. In order to most effectively use the available case data, advice was sought from the York Woods Center special education teachers with regard to the key dimensions typically included in their reports and how to best interpret their written reports. The measures are detailed in Chapter II.

The decision regarding what and how to measure leaves unanswered the question of when to collect follow-up data. The time interval between discharge and follow-up ranges between six months and ten years for the studies reported in the literature. Allerhand et al. (1966) employed a time interval of two years between discharge and follow-up. Heuchert's (1969) study followed children discharged

from 2 to 38 months while Lewis' (1970) sample ranged from a single month to more than five years. The time interval was not significantly related to follow-up adjustment in any of these three studies. In a review of thirteen studies reported in the child psychiatric literature, Gossett et al. (1973) found that no relationship was reported between treatment outcome and time since discharge. It would seem that the time interval selected is most important to determining the likelihood that the population being followed will be engaged in school or job related activities at the time of follow-up. In the current study the sample was selected by setting age and discharge year requirements such that the children included for study would be of school age at time of follow-up.

Review of Outcome Studies

Most follow-up studies reported in the literature have attempted to isolate those variables which are associated with positive and negative outcomes. In large part these studies have focused on historical predictor variables, that is, items measurable at admission (age, sex, I.Q., diagnosis, socio-economic status of the family, etc.), or discharge (age, progress during treatment, length of stay, response to therapy, prognosis, etc.). A few studies have explored the association between postdischarge environmental circumstances and ultimate outcome.

Previous literature reviews

Several authors have completed extensive reviews of the literature. Davids et al. (1968) reviewed earlier studies of Brown (1960),

Eaten and Menalascino (1967), Rutter (1965), and Eisenberg (1956). The authors report the general finding that treatment variables, especially participation in psychotherapy, seem to bear little relationship to subsequent adjustment. In several of these investigations the best predictors of later adjustment were the initial presenting symptoms at the onset of treatment. Gossett et al. (1973) reviewed thirteen follow-up studies from the child psychiatric literature. Because of demographic, and diagnostic differences and variation in the criteria for measurement of outcome, the thirteen studies are not strictly comparable. However, some significant generality of findings was reported. The authors found that long-term outcome was more likely to be positive for patients classified as neurotic (83%) than for those labled as character disordered (53%) or psychotic (45%). Other indices of positive adjustment were high I.Q., less severe family pathology, reactive onset of illness, completion of treatment, and continuation of psychotherapy following discharge. Several variables were found to have contradictory relationships to long-term outcome across studies: age at admission, length of stay, time between discharge and follow-up, birth order, sex, socio-economic status, prognosis, parents involved in therapy, and improvement during hospitalization. Durkin and Durkin (1975) reviewed studies by Davids et al. (1968), Kane and Chambers (1961), Allerhand et al. (1966), Lerman (1968) and several others. The authors conclude that measures of "in-house" adjustment are generally unrelated to postprogram adjustment. They suggest that the apparent success of treatment may be due to the removal of the child from stressful situations and that the effects of residential treatment

may be undone or supported and augmented, depending on the influence of post-treatment factors.

Previous follow-up studies

Davids et al. (1968) assessed the follow-up adjustment made by 33 children discharged from a psychiatric hospital during a ten year period ending in 1965. The children were rated as making good, fair, or poor adjustment on the basis of the parents' response to a written questionnaire assessing the child's academic level, behavior in school, and overall adjustment to home and the community. Members of the "good adjustment" group were found to have been more stubborn, easily upset, and phobic than the "poor" group at admission. The authors failed to demonstrate a significant relationship between measures of adjustment and I.Q., amount of psychotherapy, ratings of in-hospital adjustment, or prognosis.

Allerhand et al. (1966) followed the progress of fifty boys and studied their adaptation to the community two years after discharge. Follow-up data consisted of transcripts of approximately one to one and one-half hour interviews with the boy, his parents, and his therapist. The data were rated independently by a dozen trained judges. An overall adaptability measure, called Intrapsychic Balance Index, was derived from ratings on 24 scales in the areas of self-concept, conduct, and identity. Similar indices were developed to reflect the level of adaptation at time of admission and discharge. Adaptability at admission was the only adjustment index for which a relationship to follow-up adjustment was demonstrated. Chi-square analysis indicated that those placed in the minimally adjusted group

at admission were most likely to be judged as successfully adjusted at follow-up. No relationship was demonstrated for measures of change during treatment or discharge ratings of adaptability. When the postdischarge environment was rated as stressful or supportive, this index alone was a better predictor of follow-up adjustment than any other research measure. Sixty-eight percent of the boys were judged to be in situations that were at least partly supportive and these subjects were more likely to be found in the adequately adjusted group.

Levey (1969) employed telephone interviews by trained clinicians to assign children to categories of successful or unsuccessful adjustment. The subjects were 100 children hospitalized at Menninger Clinic between 1945 and 1960. The author reports that low I.Q. was related to poor outcome rating. Also, successful adjustment was made by 85% of those who completed treatment while only 58% of those subjects whose parents removed them prematurely from the program were considered to be successfully adjusted.

Garber (1972) followed 115 children who had been in the residential treatment program of Michael Reese Hospital in Chicago between 1958 and 1968. Following an interview with a trained clinician, each child was rated on a five-point scale in the areas of social activities, scholastic activities, family relations, general interpersonal relations, drug use, and employment activities. Ratings in all areas of functioning were combined in order to create groups whose overall adjustment was rated as high (45), moderate (46), and low (24). In general, the high adjustment group was characterized as more often attending school and doing average or above average

work. In a final stage of the research, two-by-two Chi-square analysis was employed to assess the relationship between predictor variables and outcome. At the 10% level of significance, high adjustment was related to length of stay, a nonpsychotic diagnosis, an improved rating at discharge, a lack of medication in the hospital, and high peer involvement during treatment.

Davids and Salvatore (1976) sent a written questionnaire to the parents of 79 former inpatients. The areas assessed included school adjustment, problems with authorities, current symptoms, and overall emotional adjustment. The researchers placed subjects into good (29), fair (22), and poor (20) adjustment groups. Chi-square analysis demonstrated significant differences among groups on several predictor variables. The good adjustment group was found to have been less argumentative, less likely to lie, and less likely to have shown peculiar behavior or thinking at admission. There were no significant differences demonstrated for presenting symptoms of "acting-out" or "aggressive toward peers or adults." The adjustment groups did not differ according to age at admission, length of stay, or prognosis.

Kane and Chambers (1961) followed up 24 children for seven years after discharge. Employing a "qualitative change in the ability to cope" as their criteria, the authors focus on such factors as parental attitudes toward the child, satisfaction with post-treatment arrangements, and dynamics of family relationships, that is, environmental influences and their effect on outcome. In an impressionistic summary the authors conclude that improvement was determined by environmental conditions and was unrelated to diagnostic category.

Taylor et al. (1973) employed the Roen-Burns Community Adaptation Scale to examine the child's behavior and self-perceptions of functioning in the areas of school (or work), family, social, and general participation in the community. The sample of seventy-five children was divided into three groups indicating overall level of functioning. The high and low groups were found to differ significantly on the dimension of family support and family continuity. Children with high continuity and high support were much more likely to be found in the high adjustment group. There were no significant relationships observed between adaptation level and diagnosis, I.Q., ordinal position, sex, race, behavior at admission, or grade level at admission. Postdischarge adaptation was also found to be unrelated to change in functioning as rated at discharge and length of stay.

School adjustment studies

Heuchert (1969) examined the change in reading and arithmetic achievement levels from admission to follow-up for fifty-three children. He found that children who were younger at admission and at follow-up made greater gains in arithmetic than did older children. The finding was not supported for reading measures. Other predictors which failed to show significant differences included I.Q., length of stay, time since discharge, sex, ordinal position, and diagnosis.

Lewis (1970) examined five adjustment variables at three points in time; admission, discharge, and follow-up. Adjustment variables included grade placement, school attitude, perceived school problem, peer relations, and adult relations. Children who showed positive

change differed significantly from no change children on sex and age variables; boys and older children made fewer positive changes.

Johnson and Rubin (1964) found that teachers perceived children discharged from a psychiatric institution as demonstrating more behavioral and academic adjustment problems than their peers. It was also found that children diagnosed as organic or psychotic were more likely to have trouble with public school adjustment. The authors conclude that without an increase in community support for the families and school support for the unique needs of the child, the possibility of successful postdischarge adjustment is greatly decreased. They found teachers to be somewhat inflexible and unrealistic in planning the school program for these children.

Huber (1964) studied the achievement patterns of institutionalized children. He concluded that measured achievement gains are lowest for psychotic and personality disordered children.

Weinstein (1969) described an in-process follow-up study of Project Re-Ed which offers a short-term residential program designed for school age preadolescent children too disturbing to be maintained in school or at home. The unique feature of this program is its emphasis upon the ecological context of the child's behavioral difficulties. The data gathered to help evaluate the program's effectiveness is obtained from the child, his parents, teachers, and peers - those in his natural environment. Measures were employed prior to the Re-Ed experience, during Re-Ed, and, at several points in time thereafter. In general, there were consistent findings that three-fourths of the children seemed improved on a number of behavioral, attitudinal, and academic measures. Still,

following the Re-Ed experience even improved students did not catch up with their peers on achievement measures.

Summary

Although differences in methodology and criteria selection make strict comparison across studies difficult, the literature review supports two general conclusions; 1) historical variables which characterize the child and his experiences prior to and during treatment do not consistently predict subsequent adjustment and 2) the best predictors of subsequent adjustment are measures of the postdischarge environment of the child. Among the historical predictors found to show contradictory or undetermined relationships to long-term outcome are: age at admission, sex, ordinal position, I.Q., diagnosis, referral problems, age at discharge, length of stay, and prognosis. Measures of postdischarge environmental conditions which have been demonstrated to relate to subsequent adjustment include gross indices of family support, community support and family continuity.

There are few studies which focus on the long-term school adjustment of children following hospitalization and none which examine the relationship between environmental conditions and subsequent school adjustment. Criteria considered important as indices of school adjustment include achievement level, peer relations, adult relations, attitude toward school, self-concept, and behavior.

Statement of the Problem

A major theoretical question is the relative importance of situational versus historical determinants for subsequent behavior or adjustment. Most follow-up research has focused on historical variables while ignoring the impact of contemporary environmental circumstances. Although historical variables have been shown, at times, to predict some aspects of follow-up adjustment, the findings are frequently inconsistent. A few studies have demonstrated a relationship between gross measures of environmental support and subsequent outcome.

It is apparent that further research is necessary in order to identify specific aspects of the contemporary environment which relate to adjustment at follow-up.

Purpose

The purpose of the study is twofold: 1) to identify specific dimensions of the family and classroom environments which relate to follow-up school adjustment, and 2) to compare the predictive efficiency of environmental measures with more traditionally investigated demographic and treatment variables. The focus is on follow-up school adjustment. Areas of concern to the researcher include academic performance, self-concept, school anxiety, peer relations, and adult relations.

CHAPTER II

DESIGN AND METHODOLOGY OF THE STUDY

The focus of this study is on children who have been discharged from a psychiatric residential treatment program and returned to a public school setting.

York Woods Center Program Description

The research sample was selected from the former inpatient population of York Woods Center, the children's division of Ypsilanti State Hospital, located near Ypsilanti, Michigan. York Woods Center accepted its first patient on February 15, 1965. Its primary purpose has been, and continues to be, the residential treatment of emotionally impaired children. York Woods Center is presently composed of three major divisions: Community Services; Residential Services; and Training and Education. The Residential Treatment Service provides inpatient care for fifty-five boys and girls (the approximate ratio of bed space is three boys to one girl), ages six through sixteen. The primary goal is to treat emotionally impaired youngsters and to return them to the community in an average of twelve months' time.

The Residential Treatment Service at York Woods Center consists of four units maintained as follows: 1) fifteen beds for boys aged eight to twelve; 2) fifteen beds for boys thirteen to sixteen; 3) twelve beds for girls ten to sixteen: and 4) thirteen beds for

extremely disturbed (autistic and schizophrenic) children aged six to twelve. The design of treatment includes an average of three psychotherapy sessions per week per child and weekly meetings between parents and social workers. Each child participates in an individually planned school program in which class size does not exceed six pupils. In addition, each youngster is involved in occupational therapy, recreational therapy, and milieu therapy. Speech and Reading therapy are available as required.

Subjects

The subjects for this investigation were 48 respondents from an initial pool of 101 former inpatients at York Woods Center. The potential subjects had been discharged from the hospital within the five years preceding the starting date of the study, January 1, 1975, and met the following selection criteria: 1) admitted for more than a six-week diagnostic study; 2) discharged to the community; and 3) would be within the school-age range as of April 1, 1975. Of the 53 children not included in the sample, 9 had permission given by their parents but were unavailable because of placement in another institution or jail. Another 8 had parents who refused permission while 20 made no response to 3 letters and 14 letters were returned with no known forwarding address. Two children were diagnosed as autistic and, because of their unique limitations, were excluded from participation in the study.

So that there might be no question as to the generalizability of findings, it was necessary to judge whether the sample was representative of the complete subject pool. The available and

unavailable subjects were compared on several descriptive measures found in the hospital records. Using the t-test procedure no significant differences were demonstrated between the available and unavailable subjects on measures of reading and arithmetic achievement at admission and discharge, age at admission, length of stay, and age at discharge. Chi-square analysis showed the two groups to be similar in distribution on categorical indices of diagnosis and prognosis. The available subjects were considered, therefore, to be representative of the larger group comprising the total potential subject pool.

Research Design

The primary purpose of this study is to examine the relationship between measures of contemporary environmental circumstances and subsequent school adjustment. Also, for comparative purposes, the relationship between historical predictor variables and school adjustment is explored.

Predictor Variables

The predictor variables employed in this study may be conveniently classified as historical or environmental. Historical variables are those which describe the child and/or his experiences when measured at admission and discharge. The environmental predictor variables are those which describe certain aspects of the contemporary school classroom situation and the family living situation at time of follow-up. The variables and corresponding measures are described in the order of their impact on the child, that is, historical variables followed by contemporary environmental variables.

Historical predictor variables

The data, both at the time of admission and at discharge from the hospital, were secured by the researcher from each child's hospital record. The variables selected were identified in the literature as potential predictors of follow-up adjustment. The historical predictors measured at admission are:

1) Age at admission
2) Sex
3) Ordinal position in the family
4) I.Q.
5) Diagnosis (transient situational disturbance, neurosis, character disorder, psychosis)
6) Initial referral problems

At discharge the following variables were measured:

1) Age at discharge
2) Length of stay
3) Prognosis (good, fair, poor)
4) Family therapy involvement

Also included among the historical predictor variables are the age at follow-up and length of time between discharge and follow-up.

Environmental predictor variables

Studies reported in the literature have indicated that gross measures of support and stress in the post-treatment life space of the child are related to subsequent adjustment (Allerhand et al., 1966 and Taylor et al., 1973). The choice of environmental dimensions to be examined in the current study evolves from the

social ecology model discussed by Moos (1974). According to this conceptualization, social environments exert patterns of press which tend to organize and shape the behavior and attitudes of their inhabitants. Social environments can be characterized as exerting press in three distinct areas: 1) interpersonal relations; 2) personal growth or values; and 3) system maintenance. For each environmental setting studied, key dimensions in each of the three areas have been identified and incorporated into an environmental measurement scale (Moos, 1974, 1975). Because the current study is concerned with school adjustment, the Classroom Environment Scale (Moos and Trickett, 1974) was selected as one environmental measurg. The Family Environment Scale (Moos, 1975) was also employed to examine the effect of the family support system on school adjustment.

The Classroom Environment Scale assesses the social climates of junior high and senior high school classrooms. It focuses on the measurement and description of teacher-student, student-student relationships, and on the type of organizational structure of a classroom. The basic assumption is that the consensus of individuals when characterizing their environment constitutes a measure of environmental climate. The CES is a ninety-item, true-false instrument with internal consistency ratings for nine sub-scales ranging from .67 to .86 and test-retest reliabilities ranging from .72 to .90 (Moos and Trickett, 1975). The CES sub-scale dimensions are:

1)	Involvement	measures the extent to which students have attentive interest in class activities and participate in discussions. The extent to which students do additional work on their own and enjoy the class is considered
2)	Affiliation	assesses the level of friendship students feel for each other, i.e., the extent to which they help each other with homework, get to know each other easily, and enjoy working together
3)	Teacher Support	measures the amount of help, concern, and friendship the teacher directs towards the students. The extent to which the teacher talks openly with students, trusts them, and is interested in their ideals is considered
4)	Task Orientation	measures the extent to which it is important to complete the activities that have been planned. The emphasis the teacher places on staying on the subject matter is assessed
5)	Competition	assesses the emphasis placed on students competing with each other for grades and recognition. An assessment of the difficulty of achieving good grades is included
6)	Order and Organization	assesses the emphasis on students behaving in an orderly and polite manner and on the overall organization of assignments and classroom activities. The degree to which students tend to remain calm and quiet is considered
7)	Rule Clarity	assesses the emphasis on establishing and following a clear set of rules, and on students knowing what the consequences will be if they do not follow them. An important focus of this subscale is the extent to which the teacher is consistent in dealing with students who break rules
8)	Teacher Control	measures how strict the teacher is in enforcing the rules, and the severity of the punishment for rule infractions. The number of rules and the ease of students getting in trouble is considered

9) Innovation — measures how much students contribute to planning classroom activities, and the amount of unusual and varying activities and assignments planned by the teacher. The extent to which the teacher attempts to use new techniques and encourages creative thinking in the students is considered

The Family Environment Scale (Moos, 1974) is a ninety-item true-false instrument with internal consistency ratings for ten sub-scales ranging from .64 to .78 and test-retest reliabilities after eight weeks ranging from .68 to .86. The FES sub-scale dimensions are:

1) Cohesion — the extent to which family members are concerned and committed to the family and the degree to which family members are helpful and supportive of each other

2) Expressiveness — the extent to which family members are allowed and encouraged to act openly and to express their feelings directly

3) Conflict — the extent to which the open expression of anger and aggression and generally conflictual interactions are characteristic of the family

4) Independence — the extent to which family members are encouraged to be assertive, self-sufficient, to make their own decisions and to think things out for themselves

5) Achievement Orientation — the extent to which different types of activities (i.e., school and work) are cast into an achievement oriented or competitive framework

6) Intellectual-Cultural Orientation — the extent to which the family is concerned about political, social, intellectual and cultural activities

7) Active Recreational Orientation — the extent to which the family participates actively in various kinds of recreational and sporting activities

8) Moral-Religious Emphasis — the extent to which the family actively discusses and emphasizes ethical and religious issues and values

9)	Organization	measures how important order and organization is in the family in terms of structuring the family activities, financial planning, and explicitness and clarity in regard to family rules and responsibilities
10)	Control	assesses the extent to which the family is organized in a hierarchical manner, the rigidity of family rules and procedures and the extent to which family members order each other around

Criteria Variables

The York Woods Center teaching staff were consulted regarding the variables to serve as indices of follow-up school adjustment. The variables selected were: 1) achievement growth between discharge and follow-up; 2) self-concept; 3) school anxiety; 4) peer relations; and 5) adult relations.

Achievement growth

Patterns of achievement gains have been the focus of several follow-up studies reported in the literature (Heuchert, 1969; Lewis, 1970; and Huber, 1964). The arithmetic and reading portions of the California Achievement Test were used to measure current level of achievement. Comparative scores obtained at admission and discharge were available in the case record. The CAT has a coefficient of reliability of .95 (California Achievement Manual, 1963).

Self-concept

The Coopersmith Self-Esteem Inventory (Coopersmith, 1967) was employed to measure the child's self-concept. The Coopersmith is a fifty-eight item standardized test with four sub-scales: 1) total

self-measure; 2) social measure; 3) home measure; and 4) school measure. The test-retest reliability after five weeks is .88. In addition, the public school teacher was asked to judge whether the child's self-concept, in the area of school performance, was mostly positive or mostly negative.

School anxiety

This variable was measured by the school anxiety dimension of the School Attitude Survey which is a forty-item, standardized self-report inventory developed at the Midwest Regional Center for Pupil Personnel Services at The University of Michigan. The five sub-areas measured include: 1) School Anxiety: a measure of anxiety and fear of failure in school; 2) Academic Success and Morale: a measure of how well the student likes school and how important he finds it; 3) Self-Perceived Trouble-Maker: a measure of the degree to which the pupil views himself as having difficulty getting along; 4) General Negative Interpersonal Relationships: a measure of the degree to which the pupil does not get along with others; and 5) Peer Relationships: a measure of the degree to which the pupil gets along well with others. In addition, the public school teacher characterized the child as: 1) realistically concerned regarding school performance; 2) overtly anxious concerning school performance; or 3) overtly indifferent concerning school performance.

Peer relations

The peer relations dimension of the School Attitude Survey, described above, was employed as a criteria measure. Also, the

public school teacher was asked to rate the child's peer relations as mostly: 1) positive; 2) aggressive-hostile; or 3) withdrawn.

Adult relations

The interpersonal relations dimension of the School Attitude Survey was the criteria measure employed. In addition, the public school teacher rated the child according to the conceptual scheme outlined above for peer relations.

Overview of the Design

Figure 1 schematically represents the hypothesized relationships among preditor variables and criteria measures described above. The primary focus is on the association between contemporary environmental conditions and school adjustment. The association between historical predictors and school adjustment is of interest in order to compare the results of this study with others reported in the literature.

Data Collection Procedure

The research focused on the child's adjustment at follow-up. Information was obtained from the public school in which the child was currently enrolled, from the child, and from the child's parents. The casebook served as the source of information for admission and discharge data. Data collection procedures were begun in December, 1974, when the school files were used to identify potential subjects. April, 1975, was designated as the follow-up date and information regarding follow-up adjustment was determined by this date.

FIGURE 1

Schematic Representation of Research Design

Predictor Classification	Historical Predictors		Environmental Predictors
Time:	Admission	Discharge	Follow-Up
Predictors:	Age at admission	Age at discharge	Classroom Environment Scale Dimensions
	Sex	Length of stay	
	Ordinal position	Prognosis	Family Environment Scale dimensions
	I.Q.	Family therapy involvement	
	Diagnosis		
	Referral problems		
Time:			Follow-Up
Adjustment Criteria and Measures			1) Achievement growth discharge to follow-up a) California Achievement Test scores 2) Self-Concept a) Coopersmith b) teacher ratings 3) School Anxiety a) School Attitude Survev b) teacher ratings 4) Peer Relations a) School Attitude Survey b) teacher ratings 5) Adult Relations a) School Attitude Survey b) teacher ratings

Letters were sent to parents, guardians, or foster parents of the children identified as being appropriate for the study (see Appendix A). Included with the letter was a form requesting permission for the child to become a subject of the research population and for the name and address of the school the child was attending. Also included was a self-addressed, stamped envelope for the return of the form to York Woods Center.

When permission forms were received, the researcher contacted the principal of the child's school to explain the purpose of the research project and to ask for cooperation. In all cases, school personnel were willing to participate in the research. Following a telephone conversation, a letter was sent to the principal which recalled the telephone conversation and described the enclosed forms to be completed by the teacher, the subject, and the subject's classmates.

Each teacher was given a Student Information Sheet (see Appendix B) which asks the teacher to rate the child on a number of items pertaining to the adjustment areas described in the preceding section. The teacher was also asked to complete a copy of the Classroom Environment Scale (see Appendix C) and the Pupil Behavior Inventory. The Pupil Behavior Inventory (see Appendix B) is a standardized test developed by Vinter, Sarri, Vorwaller, and Schafer (1966) on which the teacher rates the child on the following five dimensions: 1) classroom conduct; 2) academic motivation; 3) socio-emotional state; 4) teacher dependence; and 5) personal behavior. The PBI norms are available in the test manual. Instrument reliability is inferred from a high consistency of item factor loadings.

The student portion of the research instrument was given to him by either his teacher, counselor, or school social worker. Included in the student packet were the Classroom Environment Scale, the Coopersmith, and the School Attitude Survey (see Appendix E). In instances where recent academic testing was not available, the researcher provided appropriate levels of the California Achievement Test. In addition, teachers were requested to ask four peers of the subject to complete a copy of the Classroom Environment Scale.

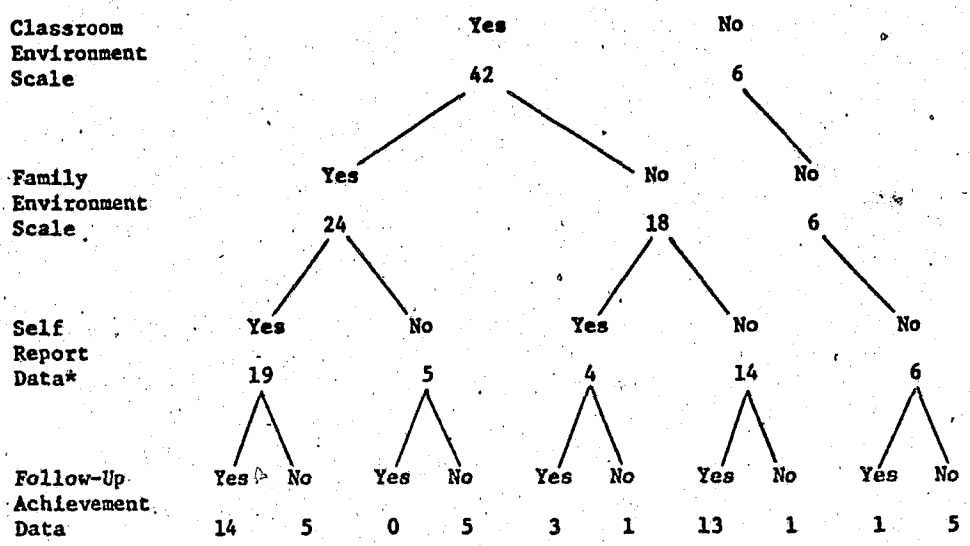
Each member of the family in which the subject was residing was asked to complete and return a copy of the Family Environment Scale (see Appendix C).

Missing Data

A serious problem was posed by missing data within the research sample. Although giving permission for information to be obtained from the classroom teacher, school counselor, or school social worker, several parents requested that their child not be interviewed or asked to take written tests. As a result the standardized measures employed at follow-up were available on only a portion of the population. Figure 2 summarizes the missing data problem. It is apparent that significant gaps in the data base exist. The most serious loss occurs with twenty-four subjects for whom no Family Environment Scale measure is available. The loss of a single measure for any one subject is magnified by the diversity of loss patterns which results in only fourteen cases having complete data for both predictor and criteria variables.

FIGURE 2

Number of Subjects with Data Available
on Four Follow-Up Measures (N=48)



*School Attitude Survey and Coopersmith Self-Esteem Inventory

The missing data problem raises the question of the representativeness of the data-available sub-groups. The thirty subjects with achievement scores available at follow-up were compared with the remaining eighteen. The t-test analysis failed to demonstrate significant differences between groups on measures of I.Q., length of stay, admission reading achievement score, admission arithmetic achievement score, the Coopersmith Self-Esteem Inventory, or the School Attitude Survey dimensions.

Twenty-nine subjects with available Coopersmith and School Attitude Survey scores were compared with the remaining nineteen subjects. The data-available group were shown to have a significantly lower mean Full Scale I.Q. score (74 to 91). No other significant differences were found.

Finally, there were no significant differences demonstrated between groups of subjects for whom the Family Environment Scale was available or missing.

Data Analysis Procedure

The initial plan was to employ Cohen's (1975) multiple regression technique as a general variance accounting procedure. This method allows for the determination of the degree to which variance in a dependent measure (in this study the follow-up criteria measures) could be accounted for as either a unique or joint function of each of a number of mutually correlated independent-variables (admission, discharge and environmental measures). This approach calls for measures of the criteria dimensions to result in a continuous distribution rather than cetegorical assignment. Accordingly, academic performance was measured by the California Achievement Test, self-concept by the Coopersmith Self-Esteem Inventory, and school anxiety, peer and adult relations by the appropriate dimensions of the School Attitude Survey.

However, due to partial subject response, the data base was incomplete (see Figure 2). Because the MRC model employs only the number of subjects for whom complete data is available, it was not possible to use the regression technique as the number of predictor variables became larger than the number of subjects. Cohen's (1975) suggested method for using estimates to replace missing data was not appropriate because measures were incomplete for both predictor variables and criteria variables. As a result, the most useful feature of MRC, the ability to ascribe the unique predictive power of each independent variable with others factored out, was not

available to the researcher.

At the expense of a nonintegrative analysis, the selected alternative for data analysis was to employ the more traditional techniques of analysis of variance and Chi-square. By employing teachers' ratings instead of standardized measures for the criteria variables, it was possible to make use of all available information on forty-eight subjects. Children were placed into categories reflecting their position on each adjustment dimension. These groups were then analyzed for their relationship to continuous predictor variables by analysis of variance while Chi-square was employed when the predictor variable was also categorical.

Summary

The research sample included forty-eight children who had returned to the community following inpatient treatment at York Woods Center. The sample is representative of the larger population of York Woods patients with respect to several demographic and treatment variables.

Two sets of predictor variables are described; historical and environmental. Historical variables include: age at admission, sex, ordinal position in the family, I.Q., diagnosis, initial referral problems, age at discharge, length of stay, prognosis, family therapy involvement, age at follow-up, and length of time between discharge and follow-up. The environmental predictor variables employed in the study were nine Classroom Environment Scale dimensions and ten Family Environment Scale dimensions.

The study is designed to explore the relationship among the

sets of predictor variables and five criteria variables: achievement growth between discharge and follow-up, self-concept, school anxiety, peer relations, and adult relations measured at follow-up.

Because of the size of the missing data problem, the multiple-regression correlation technique of data analysis cannot effectively be employed. The selected alternative is to use standard analysis of variance and Chi-square methods.

CHAPTER III

SAMPLE DESCRIPTION AT ADMISSION AND DISCHARGE

While the primary focus of the study is on the association among predictor variables and criteria variables at follow-up, this chapter describes the research sample at admission and discharge. The characteristics of all forty-eight subjects are presented and where relevant information is available, comparisons are made between the research sample and those of educationally oriented follow-up studies reported in the literature.

The Sample at Admission

Age Levels

The chronological age data for the thirty-six males and twelve females comprising the research sample are presented in Table 1.

TABLE 1

Chronological Age at Time of Admission to York Woods Center (N=48)

	N	Mean		SD		Range	
		Years	Months	Years	Months	Years	Months
Males	36	11.0	131.5	3.0	36.2	6.2-15.0	74-180
Females	12	14.0	163.7	2.5	29.6	7.2-15.6	86-187
Total Sample	48	11.3	135.7	2.8	33.9	6.2-15.6	74-187

The research subjects' age range approximates that of the entire York Woods Center population, which is six to sixteen years.

TABLE 2

Chronological Age Distributions at Time of Admission to York Woods Center (N=48)

Age			
Months	Years	N	%
74-104	6.2-8.7	11	23
105-127	8.8-10.6	10	21
128-150	10.7-12.5	10	21
151-187	12.6-15.6	17	35

The age distribution of the sample is illustrated in Table 2. The distribution is concentrated around the later elementary and junior high school age level. The age range and average age of the sample are essentially similar to those reported in follow-up studies by Heuchert (1969) and Lewis (1970).

Intelligence Quotients

Full-scale intelligence quotients were available for forty-one subjects; however, not all had Verbal and Performance scores recorded (see Table 3). Most of the intelligence tests were administered during the early months of the patient's hospitalization. However, in a few instances test data from a referral source, completed within three months of admission, was accepted. It is

apparent that the research population functions substantially below the average intelligence level of 100. Although actual potential may be somewhat depressed due to the impact of emotional problems, the twenty point disparity is large enough to indicate that there are significant deficits in the cognitive abilities of the York Woods population.

TABLE 3

Intelligence Quotients (N=41)

Dimension	N	Mean	SD	Range
Verbal	33	79	13.9	51-106
Performance	33	83	16.1	46-116
Full Scale	41	80.5	16.9	50-118

Both Heuchert (1969) and Lewis (1970) found their samples' measured intelligence levels to fall within the average range. There are significant differences in the intelligence makeup between the York Woods sample and the populations sampled by the other two studies.

Family Stability

The stability found within the living situation is considered to significantly effect the academic performance and socio-emotional adjustment of children (Heuchert, 1969; Gossett et al., 1973; and Taylor et al., 1973). It is interesting to note in

Tables 4 and 5 respectively, that only 40% of the research sample were living with their natural parents and that 21% were from divorced parents at the time of admission. In addition, although not divorced, 25% of the parents were living apart at the time of their child's admission to York Woods Center. These results contrast sharply with the findings of Heuchert (1969) and Lewis (1970) who report that 70% and 60% of their respective samples were residing with their natural parents at time of admission. The York Woods research sample have encountered considerable environmental instability prior to admission.

TABLE 4

Parental Constellation at Time of Admission to York Woods Center (N=48)

Parental Constellation	N	%
Natural Parents	19	40
Single Parent	11	23
A Natural Parent and a Step-Parent	8	17
Adoptive Parents	1	2
Guardian	2	4
Foster Home	2	4
Relative	4	8
Other	1	2
Total	48	100

TABLE 5

Parents' Marital Status at Time of Admission to York Woods Center (N=48)

Parents' Marital Status	N	%
Married	19	40
Divorced	10	21
Unwed Mother	4	8
Mother Deceased	2	4
Not Together	13	27
Total	48	100

Family Income

Family income is one significant indicator of socio-economic level. Table 6 shows that the research sample is concentrated in the lower income levels with 73% of the families earning less than $10,000 per year. These findings are discrepant from those of Heuchert (1969) and Lewis (1970). Both these researchers report samples in which the middle-class is more prominently represented.

Ordinal Position

Seventy-three percent of the research sample were first or second born (see Table 7) as contrasted with the findings of Heuchert (10%) and Lewis (72%).

TABLE 6

Family Income (N=48)

Level	N	%
0 - 4,999	19	40
5 - 9,999	16	33
10 - 14,999	9	19
Above 15,000	4	8
Total	48	100

TABLE 7

Ordinal Position (N=48)

Position	N	%
Oldest	19	40
Second Child	16	33
Third Child	5	10
Fourth Child	2	4
Fifth or Later Child	6	13
Total	48	100

Referral Problems

"Acting-out in the home" and "problems with peers" are reported most frequently as reasons for referral to York Woods Center (see Table 8). It is evident that these are multiple problem children as 201 problems are reported for the sample of 48. Heuchert (1969) reported that two-thirds of the children had learning problems in contrast to half of the York Woods sample. Also, the research sample were referred more frequently for behavior problems both at home and in school than were those in the Heuchert study.

TABLE 8

Referral Problems at Time of Admission to York Woods Center (N=48)

Category	Frequency	% of Sample
Learning Difficulty	27	54
Unmotivated to Learn	22	44
Acting Out School	37	74
Acting Out Home	42	84
Withdrawn in School	17	34
Withdrawn at Home	15	30
Peer Problems	41	82

Diagnosis

Table 9 presents the diagnostic categories to which the children were assigned at the time of admission. The category transient situational disturbance is predominant while psychosis is the next most frequently used diagnosis. Both the Heuchert (1969) and Lewis (1970) studies reported that nearly 70% of their research samples fell into the category of psychoneurosis. It should be noted that "transient situational disturbance" is frequently employed as an initial diagnosis subject to change during the course of treatment. It is a rather empirical label and, as employed at York Woods Center, indicates uncertainty with respect to the degree of disturbance present in the child. Some of these children may belong in the psychoneurotic classification.

TABLE 9

Psychiatric Diagnosis at Time of Admission to York Woods Center (N=48)

Diagnostic Category	N	%
Neuroses	3	6
Transient Situational Disturbance	20	42
Personality Disorder	9	19
Psychosis	16	33
Total	48	100

Achievement Measures

As part of the preadmission screening process at York Woods Center each child is administered the reading and arithmetic portions of the California Achievement Test. Grade placement and educational programs are determined by this process. As a result the child's level of academic functioning is reported according to the results of standardized testing.

Reading achievement

Table 10 shows the mean total reading grade score to be 3.1 as contrasted with 5.5 in the Heuchert (1969) study. Because the age distributions are substantially the same in both studies, the differences in earned achievement level reflect a real difference in relative performance level. The mean total reading standard score is 33.3 as contrasted with the normative population mean of 50. The deficiency in reading achievement demonstrated for the research sample is consistent with the finding, reported in Table 3, that the mean I.Q. score falls 20 points below the norm.

Arithmetic achievement

Table 10 shows the mean total arithmetic grade score to be 3.3 which is two months more than the corresponding mean reading level.

TABLE 10

Results of California Achievement Test
at Time of Admission to York Woods Center (N=48)

Dimension	N	Mean Raw Score	SD	Mean Standard	SD
Reading Recognition	48	3.3	2.9	33.5	11.0
Reading Comprehension	48	2.8	2.7	32.1	8.9
Total Reading	48	3.1	3.0	33.2	9.3
Total Arithmetic	48	3.3	2.9	33.5	11.0

Age-grade discrepancy

An expected grade placement was determined for each subject based on his or her chronological age at admission. Table 11 shows the mean total reading discrepancy for the research sample to be 2.5 grades at admission. The mean arithmetic discrepancy score is 2.3. Although Lewis (1970) does not report a comparable statistic for achievement data, he does indicate that only 12% of the population are functioning at two or more years below expected grade level. Heuchert (1969) reports that 40% of his sample were functioning below grade level at admission and the mean reading level was 1.0 grades below that expected by age alone.

TABLE 11

Expected Age-Grade and Discrepancy at Time of Admission (N=48)

Dimension	N	Mean Expected Grade	Mean Actual Grade	Discrepancy
Reading Recognition	48	5.6	3.3	2.3
Reading Comprehension	48	5.6	2.8	2.8
Reading Total	48	5.6	3.1	2.5
Arithmetic Total	48	5.6	3.3	2.3

Socio-Emotional Measures

Included in the initial diagnostic report written by the York Woods Center teaching staff are assessments of the child's functioning in the areas of self-concept, school anxiety, peer relationships and adult relationships. These aspects of social and emotional functioning serve as the criteria variables for follow-up adjustment and are the focus of the data analysis in Chapter IV.

Self-concept

The self-concept rating is a gross method of differentiating between those children who appear to be happy with their student role and those who do not. Table 12 presents the admission ratings

of the research sample. Only 17% felt positively about their functioning in a student role.

TABLE 12

Self-Concept at Time of Admission to York Woods Center (N=48)

Rating	N	%
Positive	8	17
Negative	40	83

School anxiety

The school anxiety rating differentiates subjects who show realistic concern over their school performance from those who are overtly anxious and those who appear to be indifferent regarding their school performance. Table 13 indicates that 56% showed signs of anxiety, 15% demonstrated realistic concern, while 29% appeared indifferent to their school performance at admission.

Peer relationships

The peer relationship dimension attempts to characterize the child's primary mode of relating to peers as either positive, aggressive-hostile, or withdrawn. Results of the initial teacher ratings are found in Table 14. Only 10% of the research population were characterized as having positive peer relationships at admission while 48% were considered withdrawn and 42% aggressive-hostile.

TABLE 13

School Anxiety Distribution at Time of Admission to York Woods Center (N=48)

Category	N	%
Realistic Concern	7	15
Overtly Anxious	27	56
Overtly Indifferent	14	29

TABLE 14

Peer Relationships at Time of Admission to York Woods Center (N=48)

Category	N	%
Positive	5	10
Withdrawn	23	48
Aggressive-Hostile	20	42

Adult relationships

The same three groupings used to categorize peer relationships are employed for assessing the child's primary mode of relating to adults. Table 15 shows that 21% of the research sample were placed in the positive category while 48% were considered withdrawn, and 31% were viewed as aggressive-hostile. It should be noted that the latter group included several subjects characterized as dependent-demanding by their teachers.

TABLE 15

Adult Relationships at Time of Admission to York Woods Center (N=48)

Category	N	%
Positive	10	21
Withdrawn	23	48
Aggressive-Hostile	15	31

Summary of Admission Characteristics

There is clearly some variation within the research sample at admission. The ages range from 6 to 15 years; intelligence quotients range from 50 to 118; and achieved grade levels range from prefirst to grade 12. The children come from a variety of family backgrounds with income levels varying from $4,999 to above $15,000 and family constellations from completely intact to both natural parents absent. The research sample appears to be multiply-handicapped with problem areas reported in seven separate adjustment categories.

Subjects are mostly from lower class families, are concentrated in the late elementary and junior high school age range, and are an average 2.5 grades retarded in academic functioning at time of admission. Academic functioning level is commensurate with ability level as indicated by a mean measured intelligence quotient of 81.5. Fewer than 50% of the subjects are living with both natural parents and nearly half the sample are classified as suffering from a

transient situational disturbance. Eighty-four percent of the children are described as acting-out in the home while 82% have problems with their peers. Fewer than 20% are rated as having a positive self-concept at admission, more than 50% are overtly anxious regarding their school performance, only 10% have positive relationships with peers, and 21% with adults.

By comparison with the Heuchert (1969) and Lewis (1970) studies, the York Woods Center research sample appears to have been exposed to greater potential pathogenic influence represented by the instability of family living situations and a concentration at the poverty end of the family income range (see Figure 3).

FIGURE 3

Summary Comparison of Heuchert, Lewis, and Current Sample Characteristics at Admission

Characteristic	Heuchert	Lewis	Current Study	Comparability
Mean Age, Years	11.5	10.8	11.3	Same
Mean I.Q.	102.0	100.0	80.5	Different
Percent from Intact Families	70.0	60.0	40.0	Different
Percent from Middle Income Families	75.0	-	19.0	Different
Percent Diagnosed Neurotic	68.0	77.0	6.0	Different
Mean Reading Achievement Grade	5.5	5.0	3.1	Different
Mean Age-Grade Discrepancy	1.0	.6	2.7	Different

The Sample at Discharge

Length of Stay

The length of treatment at York Woods Center varied with each case. The data are presented in Tables 16 and 17.

TABLE 16

Months of Stay at York Woods Center (N=48)

N	M	SD	Range
48	15.7	7.0	3-32

TABLE 17

Distribution of Subjects' Length of Stay in Months (N=48)

Months	N	%
3-6	4	9
7-12	11	23
13-18	17	35
Over 18	16	33

Only one-third of the population were discharged within a year's time and one-third remained hospitalized for a period exceeding eighteen months. The York Woods population requires longer inpatient treatment than either the Heuchert (1969) or Lewis (1970) samples whose mean length of stay was 8.9 and 5.5 months, respectively.

Chronological Age

Comparing the discharge and admission data regarding the subjects' chronological age, the mean age increased by 1.3 years (see Table 18). Heuchert's (1969) sample gained 9 months and Lewis' (1970) 5 months between admission and discharge reflecting a shorter length of stay. The age distribution presented in Table 19 indicates that 50% are found in the upper elementary and junior high school level while 30% are in the lower high school age range. Both Heuchert and Lewis report fewer children at the high school level than were found in the current study.

TABLE 18

Chronological Age at Admission and Discharge (N=48)

Time	Mean		SD		Range	
	Months	Years	Months	Years	Months	Years
Admission	132.6	11.1	34.6	2.9	74-187	6.2-15.9
Discharge	148.8	12.4	34.0	2.8	86-211	7.2-17.5

TABLE 19

Chronological Age Distribution at Discharge (N=48)

Age		N	%
Months	Years		
74-115	6.2-9.6	9	19
116-138	9.7-11.5	10	21
139-161	11.6-13.4	9	19
162-187	13.5-15.6	13	27
188-211	15.7-17.5	7	14

Parental Involvement in Therapy

The York Woods Center treatment program embraces the philosophy that children should not be returned to the same set of environmental circumstances which existed prior to admission. One method of environmental modification is to exert influence on the parents of children in the program. Parents are routinely requested to meet on a weekly basis with a social worker in order to better understand the child's problems. Table 20 shows the number of families for whom one or more parents were involved in treatment. Nearly 80% of the parents came to regularly scheduled appointments.

TABLE 20

Parental Involvement in Therapy (N=48)

Involvement	N	%
Yes	38	79
No	10	21

Placement at Discharge

In some cases a modification in the child's environmental condition was accomplished by a change in living arrangements. Table 21 compares the placement situation of the research sample at admission and discharge. The number of patients living in foster homes increased by 14 between admission and discharge. A total of 21 patients had experienced a major change in the family living circumstances during the course of hospitalization.

TABLE 21

Placement at Admission and Discharge (N=48)

Placement	N		%	
	Admission	Discharge	Admission	Discharge
Natural Parents	19	16	40	33
Single Parent	11	5	23	11
A Natural Parent and a Step-Parent	8	7	17	15
Adoptive Parents	1	2	2	4
Guardian	2	0	4	0
Foster Home	2	16	4	33
Relative	4	1	8	2
Other	1	1	2	2
Total	48	48	100	100

Achievement Measures

Each child was retested with the California Achievement Test prior to discharge from the hospital.

Reading achievement

The data presented in Table 22 indicate a mean total reading grade score of 4.1 which contrasts with 3.1 at admission. Although this is an average gain of one full year, the subjects fell slightly further behind their expected grade level (see Table 23). Heuchert (1969) reports the same finding, that is, the mean age-grade discrepancy score increased from 1.0 to 1.3 between admission and follow-up in spite of a 9 month gain in overall reading level during an average stay of 11 months.

TABLE 22

Achievement Scores at Discharge (N=48)

Dimension	N	Mean Raw Score	SD	Mean Standard Score	SD
Reading Recognition	48	4.4	3.3	35.6	9.7
Reading Comprehension	48	3.9	2.7	32.9	8.4
Reading Total	48	4.1	3.0	34.0	8.6
Arithmetic Total	48	4.5	2.7	34.6	10.6

TABLE 23

Expected Age-Grade and Discrepancy at Admission and Discharge (N=48)

Time	N	Mean Expected Grade	Mean Total Reading	Reading Discrepancy	Mean Total Arithmetic	Arithmetic Discrepancy
Admission	48	5.8	3.1	2.7	3.3	2.5
Discharge	48	6.9	4.1	2.8	4.5	2.6

Because no control group was employed in the study it is not possible to make definitive statements regarding the progress that would be expected had the children not been hospitalized. However, a drop of a single month in age-grade discrepancy appears to be a rather mild loss for a 15 months length of stay. It is likely that an acceleration in negative growth rate would have ensued in the absence of psychiatric and special educational interventions.

Arithmetic achievement

Inspection of Tables 22 and 23 shows that the arithmetic findings

are very similar to those observed for reading. The average gain from admission to discharge was 1.2 years which results in an age-grade discrepancy of 2.6 as contrasted with 2.5 at admission.

Socio-Emotional Measures

Self-concept

Table 24 compares the teacher's assessment of the child's self-concept at admission and discharge. Fifteen children, representing 31% of the research sample, were judged to have made a positive change in their self-concept. There were no reported negative changes. In spite of the York Woods Center program which views positive self-concept as a treatment goal for all children, nearly 60% maintained negative self-attitudes at time of discharge.

TABLE 24

Comparison of Status of Self-Concept at Admission and Discharge (N=48)

Category	Admission N	Admission %	Discharge N	Discharge %
Positive	5	10	20	42
Negative	43	90	28	58

School anxiety

Eleven children, 23%, became more realistic with regard to their concern over school performance (see Table 25). Of this total, 9 had been overtly anxious at admission and 5 had been rated indifferent.

TABLE 25

Comparison of Status of School Anxiety (N=48)

Category	Admission N	Admission %	Discharge N	Discharge %
Realistic Concern	7	15	18	37
Overtly Anxious	27	56	21	44
Overtly Indifferent	14	14	9	19

Peer relations

The peer relationship style of the research sample is presented in Table 26. Of 13 children who became positive toward peers at time of discharge, 9 had been withdrawn at admission while 4 had been rated aggressive-hostile by their teacher.

TABLE 26

Comparison of Status of Peer Relations at Admission and Discharge (N=48)

Relationship Style	Admission N	Admission %	Discharge N	Discharge %
Positive	5	10	18	38
Withdrawn	23	48	14	29
Aggressive-Hostile	20	42	16	33

Adult relations

Inspection of Table 27 reveals that 13 subjects, 27%, changed to a positive rating at discharge. Of that group, 9 had been judged aggressive-hostile at admission and 4 were seen as withdrawn.

TABLE 27

Comparison of Status of Adult Relations at Admission and Discharge (N=48)

Relationship Style	Admission N	Admission %	Discharge N	Discharge %
Positive	10	21	23	48
Withdrawn	12	25	13	27
Aggressive-Hostile	26	54	12	25

Prognosis

At the time of discharge a prognosis was determined for each child by the therapist in consultation with the unit psychiatrist. Table 28 summarizes the data. Ninety percent of the group were considered to be risk or high risk cases in terms of likelihood of making satisfactory post-treatment adjustment. This figure suggests that the vast majority of discharged patients would be vulnerable to renewed exposure to pathogenic environmental conditions and are in need of further support in order to solidify any gains made during the course of treatment.

TABLE 28

Prognosis Determined at Discharge (N=48)

Prognosis	N	%
Good	5	10
Guarded	39	78
Poor	6	12

Summary of Discharge Characteristics

The research sample was hospitalized for an average of 15 months and showed a mean age of 12 years at time of discharge. Although 79% of the parental figures were involved in therapy, 43% of the children were placed in a different family situation at the time of discharge. The research sample maintained an achievement level of approximately two and one-half years below grade level by an average achievement gain of slightly more than one year. Forty-one percent were judged to have a positive self-concept at time of discharge and 38% were characterized as having positive peer relationships. Adult relationships were judged to be positive for 48% of the sample. Thirty-seven percent of the children displayed realistic concern for their school performance at the time of discharge. A full 90% of the research sample were judged by clinicians to be in risk or high risk categories when they left the York Woods Center program.

In summary, the research sample, displaying multiple problems at admission, could be characterized as having made marginal adjustment, at best, at the time of discharge. They were clearly a

vulnerable group in need of continued support following departure from the hospital.

Figure 4 compares the research sample with those obtained by Heuchert (1969) and Lewis (1970) on discharge characteristics.

FIGURE 4

Summary Comparison of Heuchert, Lewis, and Current Sample Characteristics at Discharge

Characteristic	Heuchert	Lewis	Current Study	Comparability
Mean Months of Stay	8.9	5.5	15.7	Different
Mean Age, Years	12.2	11.2	12.4	Different
Percent Parents Involved in Therapy	71.0	-	79.0	Same
Mean Reading Achievement Grade	5.4	-	4.1	Different
Mean Reading Achievement Gain, Admission to Discharge	.3	-	1.2	Different
Mean Age-Grade Discrepancy	1.3	-	2.8	Different

CHAPTER IV

THE SAMPLE AT FOLLOW-UP AND DATA ANALYSIS

This chapter includes a description of the research sample at follow-up and a concentrated analysis of the association between historical and environmental predictor variables and the school adjustment criteria dimension.

The Sample at Follow-Up

Time Since Discharge

The time interval between discharge and follow-up ranged from 3 months to 5 years with a mean of 25 months and a standard deviation of 18. Heuchert's (1969) sample were contacted after a mean of 17 months while the Lewis (1970) group averaged 23 months out of the hospital.

Chronological Age

The mean age of the research sample was 14.5 years as compared to 13.7 found by Heuchert and Lewis. The children aged an average of 2.1 years between discharge and follow-up which compares with the admission to discharge change of 1.3. The age distribution is illustrated in Table 29.

TABLE 29

Chronological Age Distribution at Follow-Up (N=48)

Months	Years	N	%
103-134	8.6-11.2	7	14
135-165	11.3-13.8	10	21
166-196	13.9-16.3	18	38
197-227	16.4-18.9	13	27

Family Stability

Eight of the children in the research sample had experienced a single major change in the family living unit at time of follow-up. Seventy-seven percent (37) were living in the same family situation which existed at discharge and 3 subjects had been through more than one change.

Achievement Measures

California Achievement Test scores were available for thirty subjects at follow-up. A summary of the data is presented below, while a more detailed analysis of sub-group functioning follows in a later section.

Reading achievement

The data are presented in Table 30. The mean total reading grade for the sample is 4.9, an increase of one full grade beyond

the level achieved at discharge. However, as a result of the slow rate of growth, the children are functioning 3.8 grades below age-grade expectancy as contrasted with 3.1 grades below at discharge.

Heuchert (1969) found the child's growth between discharge and follow-up to be large enough to decrease the discrepancy score by two months. However, the mean reading score was still 1.1 grades below expected grade level. Other studies in the literature report the same phenomenon (McKinnon, 1969; and Weinstein, 1969). Although intervention programs promote increased learning and achievement, the disturbed children are not able to make up for their academic deficits enough to prepare them to cope with grade level work. In the current study, the initial deficit level was nearly maintained between admission and discharge, but the growth rate was not sustained following discharge.

TABLE 30

Change in Age-Grade Discrepancy
Admission to Follow-Up (N=30)

Time	Mean Expected Grade	Mean Total Reading	Reading Discrepancy	Mean Total Arithmetic	Arithmetic Discrepancy
Admission	5.7	2.8	2.9	3.2	2.5
Discharge	7.0	3.9	3.1	4.5	2.5
Follow-Up	8.7	4.9	3.8	5.2	3.5

Arithmetic achievement

Table 30 shows that arithmetic achievement patterns are similar to those described for the reading measure. However, arithmetic levels are slightly higher than reading levels at all three points

in time.

Socio-Emotional Measures

Data regarding the teachers' ratings in the areas of self-concept, school anxiety, peer and adult relations are presented and examined extensively later in the chapter. However, the results of standardized measures of school attitude and self-esteem which were administered to 29 children at follow-up are presented below.

School attitude

The School Attitude Survey (see Appendix B) is designed to measure five aspects of the child's attitude toward school. The instrument measures the areas of school anxiety, academic success and morale, self-perceived trouble-maker, negative interpersonal relations, and negative peer relations. The instrument allows for scoring between 1 and 4 and is arranged so that a high score indicates the positive side of the attribute. Table 31 displays the results for the research sample, the standardized norms, and the Heuchert (1969) study.

The distribution of scores is very similar to that of the normative population and to the results obtained by Heuchert (1969). The children indicate that their greatest worry is in the area of school anxiety, a measure of the child's concern over possible failure. However, somewhat paradoxically, the child appears to be quite comfortable regarding his current academic performance. It is possible that the ambivalent attitudes expressed by this

group of children reflect their view that they are working up to their potential which is, however, quite limited. Lending credence to this interpretation is the finding that the 29 children to whom the SAS was administered had significantly lower IQ scores and arithmetic and reading achievement scores at admission than the remainder of the research sample.

TABLE 31

School Attitude Survey Scores (N=29)

Variable	York Woods Study		Standardized Norms		Heuchart Study	
	M	SD	M	SD	M	SD
School Anxiety	2.4	.8	2.5	.7	2.5	.7
Academic Success	3.0	.6	3.2	.6	3.1	.6
Self as Trouble-Maker	2.7	.7	2.8	.6	2.9	.6
Negative Interpersonal	2.6	.6	2.8	.6	2.7	.6
Peer Relations	2.7	.6	2.7	.4	2.7	.6

Self-esteem

The Coopersmith Self-Esteem Inventory (see Appendix B) provides measures of the child's general self, social self, and school self-esteem. The instrument is standardized with a mean of 100. Table 32 compares the findings of the current study with those obtained by Heuchert (1969).

TABLE 32

Coopersmith Self-Esteem Inventory Scores (N=29)

Variable	York Woods Study M	York Woods Study SD	Heuchert Study M	Heuchert Study SD
Self	90	19	96	23
Social	89	24	92	25
School	99	22	97	22

The research sample falls 10 points below the normative population mean on the general self dimension and 11 points below on the social self dimension. There are no substantial differences between these results and those obtained by Heuchert (1969). As a group these children feel less positively about themselves as social objects than in any other area.

Pupil behavior

The Pupil Behavior Inventory (see Appendix B), completed at follow-up by the classroom teacher or counselor, assesses the child's classroom conduct, academic motivation, socio-emotional state, teacher dependence, and general personal behavior. Each dimension is scored from one to five with the higher score connoting positive behavior. The results are shown in Table 33. The research sample is judged to be weakest in motivation to perform academic tasks and does best in personal behavior. By comparison to available norms, the research group falls substantially below the normal population in all areas. However, classroom conduct and personal

behavior are considerably better than the corresponding scores obtained by a group of problem children in the public schools. Still, teachers rate the research sample as less well psychologically adjusted (socio-emotional state) than the corresponding group of school problem children.

TABLE 33

Pupil Behavior Inventory Ratings at Follow-Up (N=48)

Variable	York Woods M	York Woods SD	Norm Groups: Junior High Males, Spring Normal M	Norm Groups: Junior High Males, Spring Malperforming M
Classroom Conduct	3.07	.76	3.61	2.87
Academic Motivation	2.49	.88	2.81	2.27
Socio-Emotional State	2.81	.90	3.63	3.41
Teacher Dependence	2.83	1.21	3.99	3.77
Personal Behavior	3.96	.80	4.23	3.74

Summary of Follow-Up Characteristics

The research sample had been discharged for a mean of 25 months at the time of follow-up and averaged 14.5 years of age. The group experienced substantially fewer major changes in family living circumstances following discharge than before. In the achievement area, the research sample was found to be functioning further below expected grade level than at either admission or discharge. On standardized measures of school attitudes, self-esteem, and behavior problems, scores were found to be similar to available norms and

to those obtained by Heuchert (1969). The teachers expressed greatest concern with the child's lack of academic motivation while the children appeared equally concerned with poor academic performance and social relationships.

Environmental Characteristics

One of the primary goals of this research is to examine the association between important dimensions of the family and classroom environments and the criteria measures of follow-up school adjustment. Classroom Environment Scale scores were obtained for 42 subjects while only 24 Family Environment Scale scores were available. The environmental data are summarized in Tables 34 and 35.

Classroom Environment Data

The classrooms attended by the research sample were characterized by high "involvement", "teacher support", and "rule clarity" and little emphasis on "competition." Trickett and Moos (1974) found this score pattern to be associated with greater student satisfaction but less content learning. Although the students experience a clearly established set of rules (rule clarity), the "teacher control" dimension is not unusually high. Apparently teachers are able to instill a clear set of expectations without resorting to strict and severe rule enforcement.

The sub-scale intercorrelations are presented in Appendix D.

TABLE 34

Classroom Environment Scale Dimension
Standard Scores (N=42)

Dimension	York Woods M	York Woods SD	Standardized Norms M
Involvement	59	11	50
Affiliation	49	15	50
Teacher Support	58	6	50
Task Orientation	47	11	50
Competition	42	16	50
Order and Organization	52	10	50
Rule Clarity	65	7	50
Teacher Control	56	11	50
Innovation	57	9	50

Family Environment Data

Although the size of the deviations from the standard score mean appear small, the research sample is characterized by lower emphasis on "active-recreational orientation", "intellectual-cultural orientation", and "independence." These findings are consistent with those of Moos, Insel, and Humphrey (1974) who report that a similar pattern of scores distinguished 42 clinic families from 42 matched "normals." The research sample shows high scores for the "moral-religious emphasis" and "organization" dimensions of the FES.

TABLE 35

Family Environment Scale Dimension
Standard Scores (N=24)

Dimension	York Woods M	York Woods SD	Standardized Norms M
Cohesion	51	10	50
Expressiveness	49	11	50
Conflict	46	10	50
Independence	45	12	50
Achievement Orientation	51	7	50
Intellectual-Cultural Orientation	44	12	50
Active-Recreational Orientation	43	12	50
Moral-Religious Emphasis	56	7	50
Organization	55	8	50
Control	54	7	50

Data Analysis

The primary purpose of the research is to explore the association between follow-up adjustment status on five selected criteria measures and 1) historical predictor variables (admission and discharge characteristics); and 2) contemporary environmental predictor variables. The variables are summarized in Figure 1 (page 29).

The five criteria variables are: 1) achievement change between discharge and follow-up; 2) self-concept; 3) school anxiety; 4) peer relations; 5) adult relations. Groups were identified according to the subjects' follow-up adjustment status on each measure. Each

variable is analyzed separately and adjustment groups are compared on the selected historical and environmental predictor measures.

In analysis of variance tables presented in the text, the significance level of t or F refers to the probability of the sample results being less than or equal to Alpha. The Alpha selected in this study is .05.

Achievement Change

Achievement change sub-groups were identified according to the amount of change which took place between discharge and follow-up as measured by achievement test scores. Scores were available for thirty subjects whose raw change scores were ranked and grouped accordingly into low change, middle change, and high change groups. Because rank and resulting group membership did not markedly differ between reading total and arithmetic total scores (Rho = .49, significant at .05) separate analyses were not completed. The group membership status determined by reading score results was used for the remaining analyses.

There are problems of unreliability associated with the use of raw change scores to measure growth. Change scores are typically highly correlated with initial achievement levels giving the impression that poor initial achievers respond best to intervening treatment. Ellsworth (1968) and Nunally (1975) recommend the substitution of base-free residual scores for the less reliable change score. However, the residual score, a statistically created method of representing change after factoring out expected or predicted change, is not as directly interpretable as is the raw change score.

In the current study ranks based on residuals and raw change scores were determined for the research population. The rankings

were compared by the Spearman Rank correlation coefficient. Rho was found to be .45, significant at the .05 level. The rankings resulting from the alternative methods of measuring change were shown to be similar. Because of the similarity of obtained rankings and the greater ease of interpretation, the raw change score method was used for determining achievement change groupings employed for the balance of the data analyses.

Table 36 presents the achievement characteristics for the change groups. The remainder of this section examines the relationship between historical and environmental predictors and achievement group membership.

TABLE 36

Achievement Change Groupings at Follow-Up (N=30)

Variable	Low Change M	Middle Change M	High Change M
Reading Achievement Grade at Follow-Up	3.1	5.0	7.1
Achievement Change Discharge to Follow-Up	-.3	.7	2.7

Historical predictors and achievement status

The three groups were compared with each other on major quantitative predictor variables by the use of analysis of variance, and on major categorical variables with the Chi-square statistical procedure.

Age and time data

No significant differences were demonstrated among groups on age variables at admission, discharge, and follow-up, or on the length of stay measure. However, on the variable time since discharge, the high change group was found to have been in the community for a mean of 2.8 years as compared to 1.5 and .9 years, respectively, for the middle and low change groups (see Table 37). The results are significant and an Eta of .60 indicates that a relatively strong degree of association exists between the variables.

TABLE 37

Comparison of Achievement Change Sub-Groups on Time Since Discharge (N=48)

Variable	Low Change M	Middle Change M	High Change M	Significance Level, F	Eta	Significance Level, t L/M	L/H	M/H
Years since Discharge	1.0	1.5	2.8	.05	.60	NS	.05	.05

Cognitive measures

Achievement group membership at follow-up was not shown to be related to IQ, achievement level at discharge, or to amount of achievement gain between admission and discharge. However, the low change group had the lowest mean IQ score followed by the middle and high change groups, respectively (see Table 38). Also, the high change group at follow-up had made greater gains between

admission and discharge than either the middle or low achievement groups, although the differences are not statistically significant.

TABLE 38

Comparison of Achievement Change Sub-Groups on Cognitive Measures (N=31)

Variable	Low Change M	Middle Change M	High Change M	Significance Level, F	Eta	Significance Level, t L/M	L/H	M/H
Intelligence Level	75.6	78.0	85.7	NS	.27	NS	NS	NS
Reading Achievement Grade at Discharge	3.4	4.3	4.4	NS	.20	NS	NS	NS
Admission to Discharge Reading Change Score	.8	1.1	1.4	NS	.29	NS	NS	NS

Descriptive measures

Chi-square analysis failed to demonstrate significant differences among achievement change groups on the variables sex, ordinal position, diagnosis, prognosis, and family therapy involvement. In addition, the groups were not shown to differ with regard to the frequencies reported for referral problems: acting-out in school, withdrawn in school, learning difficulty, unmotivated to learn, and peer problem. Learning difficulties were reported for five subjects in each of the three achievement groups.

Environmental predictors and achievement status

The three groups were compared on nine Classroom Environment Scale dimensions and ten Family Environment Scale dimensions with the analysis of variance procedure.

Classroom environment data

The classroom environment data is presented in Table 39. Although no significant differences were demonstrated, the high change group tend to be in classrooms characterized by high involvement, affiliation, teacher support, and rule clarity, and innovation. The low change group are found in classrooms which have extremely low scores on competition and relatively lower order and organization scores in comparison to the high change group.

TABLE 39

Comparison of Achievement Change Sub-Groups on Nine CES Dimensions (N=30)

Variable	Low Change M	Middle Change M	High Change M	Significance Level, F	Eta	Significance Level, t L/M	L/H	M/H
Involvement	56	59	63	NS	.29	NS	NS	NS
Affiliation	46	52	58	NS	.36	NS	NS	NS
Teacher Support	58	59	61	NS	.32	NS	NS	NS
Task Orientation	45	46	42	NS	.16	NS	NS	NS
Competition	34	46	43	NS	.33	NS	NS	NS
Order and Organization	47	49	56	NS	.38	NS	NS	NS
Rule Clarity	64	65	63	NS	.16	NS	NS	NS
Teacher Control	55	56	50	NS	.26	NS	NS	NS
Innovation	56	56	61	NS	.24	NS	NS	NS

Family environment data

Because of missing data the middle change sub-group had only two subjects while four were available in the high change sub-group. Data analysis was not attempted due to the limited sample size.

Summary and discussion of achievement change findings

The only statistically significant difference demonstrated among achievement change groups was on the time since discharge measure. The high change group had been out of the hospital longest, followed by the middle and low change groups. Heuchert's (1969) high change group had also been in the community longer than either the low or middle change groups. The finding is not surprising since the change score reflects the cumulative growth of each subject for the entire length of time he has been in the community.

Several other age and time variables were not related to achievement group membership. The length of hospitalization was nearly identical for all three groups, a result consistent with the findings of Heuchert (1969) and Gossett et al. (1972). The average age at admission, discharge, and follow-up did not differ among groups. Heuchert reports that children who were younger at admission made the greatest achievement change by follow-up.

Heuchert (1969) found no relationship between diagnostic category and amount of achievement change. Huber (1964), however, reports that psychotic and personality disordered children made smaller achievement gains than did neurotic children during hospitalization. In the current study, achievement gains were independent of diagnostic category.

Other variables for which no relationship was demonstrated with achievement gain include sex, ordinal position, prognosis, initial referral problems, and whether or not the family was involved in therapy. Heuchert (1969) obtained essentially similar

results while Lewis (1970) found that boys made fewer positive changes than girls with regard to grade level functioning.

Although measured intelligence did not significantly differ among groups, the high achievement group had a mean IQ score ten points higher than the low achievement group (86 to 76). Heuchert (1969) reports a similar direction of difference although IQ levels were higher for his entire sample.

The high change group at follow-up were found to have made larger gains between admission and discharge than either the middle or low change groups. It is unusual that the three groups should continue to grow even further apart in both earned achievement level and rate of growth (see Tables 36 and 38). The phenomenon of *regression to the mean would predict greater growth from the low* functioning group and a slowing in growth rate for the high group.

None of the classroom environment dimensions were found to significantly differentiate among achievement groups. However, the high change group were attending classrooms in which involvement, affiliation, teacher support, rule clarity, and innovation are emphasized. Although the studies are not directly comparable, Trickett and Moos (1974) found that more learning was judged to take place in classrooms characterized by high involvement, teacher support, rule clarity, competition, and order and organization. While the high achievement group in the current study fell below the normative population mean, they were nine points higher than the low achievement group on the competition dimension.

The failure of any Classroom Environment Scale dimension to significantly differentiate achievement group membership is,

perhaps, to be expected. Bloom (1964) concluded that factors other than intelligence which contribute to school achievement (skill, interest, and attention) are to a considerable extent set in the first three grades. The CES measures aspects of the classroom in which the child is currently functioning. Even if the CES could accurately reflect all the classroom experiences the child has been exposed to since discharge, it is unclear whether achievement performance could be successfully predicted. Classroom environment is likely to have greater impact on less cognitively based attributes to be examined next.

Analysis of family environment data was not carried out because of the limitations imposed by missing data.

Self-Concept

The teacher rated the child as maintaining a generally positive or negative concept of himself as a student. Seventeen subjects were rated as positive while thirty-one were viewed as negative by their teacher at follow-up.

Twenty-nine subjects completed the Coopersmith Self-Esteem Inventory. Ten of these children were rated by their teacher as positive and seventeen fell in the negative category. An F-test for differences between the two means failed to reach significance, although the positive group averaged eleven points higher than the negative group on the student self-dimension (see Figure 5). This finding suggests that there is some agreement between teachers' ratings of self-concept and the child's own self-report.

FIGURE 5

Comparison of Self-Concept Sub-Groups
and the Coopersmith School Self Dimension (N=29)

Variable	Positive Self M	Negative Self M
Coopersmith School Self Dimension	99	88

Historical predictors and self-concept

Age and time data

The average length of stay and time between discharge and follow-up was nearly identical for both groups. However, the positive group were found to be significantly older at all three points in time (see Table 40).

TABLE 40

Comparison of Self-Concept Sub-Group Differences
on Age Measures in Years (N=48)

Variable	Positive Group M	Negative Group M	Eta	Significance Level, F
Age at Admission	12.3	10.6	.29	.05
Age at Discharge	13.6	12.0	.29	.05
Age at Follow-Up	15.6	14.0	.30	.05

Descriptive data

Chi-square analysis failed to demonstrate significant differences between self-concept groups on the variables sex, ordinal position, diagnosis, prognosis, and family therapy involvement. However, 81 percent of those diagnosed as psychotic were rated as having a negative self-concept (see Table 41). The positive and negative groups did not differ with respect to the frequencies of reported referral problems: acting-out in school, withdrawn in school, learning difficulty, unmotivated to learn, and peer problem.

TABLE 41

Comparison of Self-Concept Sub-Groups on Diagnosis (N=48)

Diagnosis	Self-Concept		Chi-Square
	Positive	Negative	
Neurosis	1	2	
Transient Situational Disturbance	8	12	3.728*
Personality Disorder	5	4	
Psychosis	3	13	

*Not significant, Lambda = .07

Admission and discharge ratings

Teachers' reports at admission and discharge were used to determine a positive or negative rating. Chi-square analysis failed to show a significant relationship between either admission or discharge ratings and the follow-up rating of self-concept. Ninety percent of the subjects were viewed as having a negative

self-concept at admission.

Environmental predictors and self-concept

The positive and negative groups were compared on the nine Classroom Environment Scale dimensions and ten Family Environment Scale dimensions by the analysis of variance procedure.

Classroom environment data

The positive and negative groups were not found to differ significantly on any of the CES dimensions (see Table 42). Both groups were substantially above the normative population mean on the involvement, teacher support, and rule clarity dimensions. Both groups were below the norm on the competition dimension with the negative group falling farthest below.

TABLE 42

Comparison of Self-Concept Sub-Groups on Nine CES Dimensions (N=42)

Variable	Positive (N=16) M	Negative (N=26) M	Eta	Significance Level, F
Involvement	59	61	.13	NS
Affiliation	49	50	.07	NS
Teacher Support	57	60	.24	NS
Task Orientation	48	46	.09	NS
Competition	47	41	.21	NS
Order and Organization	53	53	.01	NS
Rule Clarity	66	65	.11	NS
Teacher Control	57	57	.01	NS
Innovation	56	59	.16	NS

Family environment data

Although no significant differences were demonstrated between groups for any of the ten FES dimensions, there was a tendency for the positive group to be found in families with greater emphasis on independence.

TABLE 43

Comparison of Self-Concept Sub-Groups on Nine FES Dimensions (N=24)

Variable	Positive (N=9) M	Negative (N=15) M	Eta	Significance Level, F
Cohesion	50	49	.01	NS
Expressiveness	48	49	.08	NS
Conflict	47	48	.04	NS
Independence	48	41	.25	NS
Achievement Orientation	50	52	.11	NS
Intellectual-Cultural	46	44	.07	NS
Active-Recreational	44	44	.02	NS
Moral-Religious	55	57	.11	NS
Organization	54	55	.06	NS
Control	54	55	.01	NS

Summary and discussion of self-concept findings

Children viewed as having a negative self-concept at follow-up were found to have been significantly younger at admission, discharge, and follow-up. A possible explanation for this finding is that children hospitalized at an earlier age are more severely impaired, resulting in a poorer self-evaluation. Partial support for this

interpretation is suggested by the finding that 81 percent of those diagnosed as psychotic were judged to have a negative self-concept at follow-up.

The positive group obtained a mean score of 99 on the Coopersmith school self-measure. The negative group mean was 88 suggesting that to some degree the teacher's gross rating of a child's self-concept as positive or negative reflects the child's true self-evaluation. However, the difference was not statistically significant.

Group membership was unrelated to length of hospitalization, time since discharge, initial referral problems, sex, ordinal position, prognosis, and family therapy involvement. Self-concept ratings at admission and discharge were also unrelated to follow-up ratings.

Neither the CES or FES dimensions significantly differentiated the positive from the negative group. However, there was a tendency for the positive group to reside in families where greater emphasis was placed on independence. It may be that family encouragement for children to be independent (assertive and self-sufficient) allows for opportunities to test abilities and enhance self-confidence. In a study of the impact of ward atmosphere on patient functioning Moos (1974) found that an emphasis on autonomy was related to assertive behavior and an enhanced sense of self-esteem.

The lack of differentiation between groups is evidence for the difficulty involved in attempting to accurately measure self-concept by use of a two category rating scale.

School Anxiety

Three sub-groups were identified for the school anxiety dimension. Teachers rated 9 children as realistically concerned, 25 as overtly anxious, and 13 as indifferent regarding their school performance.

Of twenty-nine subjects who completed the School Attitude Survey, 9 were rated as realistically concerned, 15 as overtly anxious, and 5 as indifferent. The researcher wanted to know if the sub-groups differed in their own perception of their concern with school performance. The groups were compared on the school anxiety dimension of the School Attitude Survey (see Table 44). Although the F-ratio did not quite reach significance, inspection of the differences between means of the realistic and overtly anxious groups show a t-ratio significant at the .05 level. Children rated as overtly anxious do report experiencing greater anxiety than do children rated as realistically concerned.

TABLE 44

Comparison of School Anxiety Sub-Groups on the School Attitude Survey School Anxiety Dimension (N=29)

Variable	Realistic N=9 M	Overt N=15 M	Indifferent N=5 M	Eta	Significance Level, F	Significance Level, t R/O	R/I	O/I
SAS School Anxiety	2.9	2.1	2.4	.38	NS	.05	NS	NS

The Pupil Behavior Inventory, academic motivation and performance dimension described in Chapter II, was employed to assess actual school performance. This dimension has been found to

correlate with course grades (Vinter et al., 1966). The school anxiety sub-groups were found to differ on the PBI motivation and performance dimension (see Table 45). Children rated in the realistic group were performing current school work significantly better than either the anxious or indifferent groups. The overtly anxious group had gained 1.2 years in reading achievement between discharge and follow-up. The realistic group gained 1 year, and the indifferent group .7 years. The differences were not significant.

TABLE 45

Comparison of School Anxiety Sub-Groups on the PBI Motivation and Performance Dimension (N=47)

Variable	Realistic N=9 M	Overt N=25 M	Indifferent N=13 M	Eta	Significance Level, F	Significance Level, t R/O	R/I	O/I
PBI Motivation and Performance	3.3	2.5	2.0	.46	.05	.05	.05	.05

Historical predictors and school anxiety

Age and time data

The mean length of stay, and age at admission, discharge, and follow-up were not significantly different among the three groups. However, the overtly anxious group had been out of the hospital for a significantly greater length of time than had the realistic concern group, 2.6 years to 1.2 years (see Table 46). The indifferent group had been discharged for a mean of 1.7 years at the time of follow-up.

TABLE 46

Comparison of School Anxiety Sub-Groups
Differences on Years Since Discharge (N=47)

Variable	Realistic M	Overt M	Indifferent M	Eta	Significance Level, F	Significance Level, t R/O	R/I	O/I
Time Since Discharge	1.2	2.6	1.7	.05	.05	.05	NS	NS

Descriptive data

Chi-square analysis failed to demonstrate a significant relationship between group membership and sex, ordinal position, diagnosis, prognosis, family therapy participation, or initial referral problems. However, within the diagnostic category, psychosis, 11 of 15 subjects were rated as overtly anxious (see Table 47).

TABLE 47

Comparison of School Anxiety Sub-Groups
on Diagnosis (N=47)

Diagnosis	School Anxiety Group Realistic	Overt	Indifferent	Chi-Square
Neurosis	2	1	0	
Transient Situational Disturbance	4	10	6	.174*
Personality Disorder	2	3	4	
Psychosis	1	11	3	

*Not significant, Lambda = .09

Admission and discharge ratings

Teachers' ratings of school anxiety status at admission and discharge were unrelated to ratings made at follow-up.

Environmental predictors and school anxiety

The school anxiety groups were compared on the nine Classroom Environment Scale dimensions and ten Family Environment Scale dimensions.

Classroom environment data

Table 48 summarizes the results of the data analysis. The school anxiety groups did not differ significantly on the nine CES dimensions. However, there is a tendency for the overtly anxious children to be found in classrooms where competition is emphasized more than in the classrooms of the indifferent and realistic groups. Also, the task orientation dimension of the realistic group is higher than for either of the other two.

By comparison with the normative population, the realistic group shows high involvement, teacher support, rule clarity and teacher control. The overtly anxious group is characterized by high rule clarity and teacher control while task orientation is low. The withdrawn group classes are high on involvement, rule clarity, innovation, and teacher support while competition is extremely low.

TABLE 48

Comparison of School Anxiety Sub-Groups on Nine CES Dimensions (N=41)

Variable	Realistic (N=9) M	Overt (N=20) M	Indifferent (N=12) M	Eta	Significance Level, F	Significance Level, t R/O	R/I	O/I
Involvement	60	57	64	.29	NS	NS	NS	NS
Affiliation	51	47	51	.15	NS	NS	NS	NS
Teacher Support	59	57	61	.23	NS	NS	NS	NS
Task Orientation	53	44	46	.29	NS	NS	NS	NS
Competition	45	47	36	.28	NS	NS	NS	NS
Order and Organization	54	53	53	.05	NS	NS	NS	NS
Rule Clarity	66	63	67	.19	NS	NS	NS	NS
Teacher Control	60	58	56	.11	NS	NS	NS	NS
Innovation	56	57	60	.15	NS	NS	NS	NS

Family environment data

Analysis of variance was employed to compare sub-groups on the FES dimensions. Inspection of Table 49 indicates that significant F-ratios were obtained for sub-group differences on the independence, achievement orientation and moral-religious emphasis dimensions of the FES. Those children from families placing the greatest emphasis on independence were rated in the indifferent category while the realistic group fell 19 points lower. The overtly anxious group fell in between. On achievement orientation the realistic group was significantly below the overt group with the indifferent group falling in between. Finally, the realistic group was significantly lower than both the overt and indifferent groups with regard to the mean moral-religious emphasis given by the family.

By comparison with the normative population, the realistic group families are high on conflict and low on independence and achievement orientation. The overtly anxious group are high on moral-religious emphasis and achievement orientation and are above average on organization and control. Those families are low on the personal growth dimensions of independence, active-recreational orientation and intellectual-cultural orientation. The indifferent group families are characterized by high moral-religious emphasis, organization and expressiveness. They are low on the conflict dimension.

TABLE 49

Comparison of School Anxiety Sub-Groups on Ten FES Dimensions (N=24)

Variable	Realistic (N=5) M	Overt (N=14) M	Indifferent (N=5) M	Eta	Significance Level, F	Significance Level, t R/O	R/I	O/I
Cohesion	44	50	53	.29	NS	NS	NS	NS
Expressiveness	50	45	57	.44	NS	NS	NS	.05
Conflict	57	46	43	.40	NS	NS	.05	NS
Independence	33	43	52	.51	.05	NS	.01	NS
Achievement Orientation	45	57	51	.50	.05	.05	NS	NS
Active-Recreational	49	43	44	.22	NS	NS	NS	NS
Intellectual-Cultural	50	44	45	.17	NS	NS	NS	NS
Moral-Religious	48	57	61	.49	.05	.05	.05	NS
Organization	50	55	58	.34	NS	NS	NS	NS
Control	53	55	52	.18	NS	NS	NS	NS

Summary and discussion of school anxiety findings

Nine children were rated realistically concerned, 25 overtly anxious, and 13 indifferent at follow-up. Of those completing the

School Attitude Survey, the overtly anxious group reported experiencing greater anxiety about school than the realistic group. Although the groups were not shown to differ significantly on length of stay, and age at admission, discharge, or follow-up, the overtly anxious group had been discharged for significantly longer (2.6 years) than had the realistic group (1.2 years). The indifferent group had been out of the hospital for an average of 1.7 years. Follow-up groupings were unrelated to admission or discharge ratings of school anxiety.

One interpretation of these findings is that a child recently returned to the community is less anxious regarding his school performance because of recent success experiences in the individualized York Woods school program. In the section analyzing achievement change data, the research sample, as a group, were found to have fallen further behind grade norms at follow-up, reflecting a growth curve flatter than the norm. To the extent that school anxiety accumulates as a reaction to failure experience, the relative decrease in rate of growth over time may be viewed as a failure experience triggering an increase in overt anxiety. Support for this interpretation is available from two measures of achievement performance. First, the overtly anxious group had measured achievement gains of 1.2 grades in 2.6 years while the realistic group gained 1.0 grades in 1.2 years. The rate of growth was faster for the realistic group. Also, the teachers' ratings of current academic performance (the PBI academic motivation and performance dimension) showed the overtly anxious group to be functioning less well than the realistic group.

Although the nine Classroom Environment Scale dimensions failed to significantly discriminate among groups, two patterns are of interest. The overtly anxious group were found more frequently in classes placing greater emphasis on competition than was the case for the realistic and indifferent groups. This finding suggests that a sense of competition fostered in the classroom may be one component of school anxiety. Also, the realistic group had higher task orientation scores than the other two groups. The attention to task completion and subject matter may account for the higher rating given by teachers to the realistic group on the measure of current academic performance. The indifferent group are in classrooms characterized by extremely low emphasis on competition and relatively little on task orientation. The highest dimension score obtained by the indifferent group was for rule clarity indicating more concern with establishing a clear set of rules than with achievement related dimensions.

Several Family Environment Scale dimensions were found to significantly differentiate among groups; expressiveness, conflict, independence, achievement orientation, and moral-religious emphasis. Group differences are most easily summarized through a profile analysis of each group.

The realistic group families are characterized by high conflict when compared to the overt and indifferent groups and to the normative population. These families do not encourage independence and have a relatively low achievement orientation. Moral-religious emphasis is about average compared to the normative population but the realistic group is significantly lower than either the overt or

indifferent groups on this dimension. Active-recreational and intellectual-cultural orientation scores are average compared to the normative population and slightly higher than those obtained by the other two groups. This constellation of family traits, combined with a high task orientation in the classroom, is characteristic of a group of children who demonstrate realistic concern with school performance and, on an independent measure, show a faster rate of achievement growth.

The overtly anxious group are found in families with extremely high achievement orientation compared to the realistic group and to normative standards. These families are also high on moral-religious emphasis and are less willing to allow conflictual interactions and open expression of feelings. The mean independence score is low compared to the normative sample. The pattern, relating to overt anxiety and a slower rate of achievement growth than was evidenced by the realistic group, appears to be one of high expectations and constriction of self-expression.

The indifferent group are found in families where expression of feelings is encouraged and moral-religious emphasis is rather high. These families also encourage members to be assertive and self-sufficient (independence) and are near the normative sample mean on achievement orientation and cohesion. This group of children were judged to be indifferent with regard to their school achievement which was, in fact, found to be lower than that demonstrated by either the overt or realistic groups. It is of interest to note that three of the five subjects available in the indifferent category for the FES analysis, were in foster families

at the time of follow-up. The families were shown to be concerned more with personal values and self-direction than with intellectual pursuits and achievement.

It is somewhat difficult to directly compare the predictive efficiency of the environmental measures with that of the historical measures because only twenty-four subjects had Family Environment Scale scores. However, it should be observed that Eta, a measure of predictive association, was .37 for time since discharge, the only significant predictor among nonenvironmental variables. On the other hand, Eta for the three significant FES dimensions was .51 for independence, .50 for achievement orientation and .49 for moral-religious emphasis. In addition, it was observed that the school anxiety rating at discharge, the clinicians' best assessment of continued adjustment, did not significantly differentiate among school anxiety groups at follow-up.

In conclusion, environmental information appears to add significantly to the ability to predict school anxiety ratings at follow-up. Further study to more precisely determine causal relationships would seem justified.

Peer Relations

The peer relationships of the research sample were characterized by their teachers as mostly positive, withdrawn, or aggressive-hostile. There were 13 positive ratings, 18 withdrawn, and 17 aggressive-hostile.

The researcher wanted to know if the three sub-groups differed substantially in their own views regarding the quality of peer

relationships. Analysis of variance was employed to examine the differences among sub-groups on the peer relations dimension of the School Attitude Survey for 29 available subjects. Although significance levels of F and subsequent t were just short of .05, the positive group mean was higher than either the withdrawn or aggressive-hostile group in their self-report of peer relationships (see Table 50). The withdrawn and aggressive-hostile groups were almost identical in their rather negative assessment of peer relations. The positive group scored above the normative population mean of 2.7.

In order to assess the consistency of teachers' ratings, the sub-groups were compared on the socio-emotional state dimension of the Pupil Behavior Inventory, a measure with a high loading on peer relations. A significant F-ratio and subsequent t-values were obtained for differences between the positive and aggressive-hostile group and between the withdrawn and aggressive-hostile group. The positive group was rated as best adjusted followed by the aggressive-hostile group with the withdrawn group viewed as making a significantly poorer socio-emotional adjustment (see Table 50).

TABLE 50

Comparison of Peer Relations Sub-Groups on Validity and Reliability Dimensions (N=29)

Variable	Positive (N=9) M	Withdrawn (N=11) M	Aggressive Hostile (N=9) M	Eta	Significance Level, F	Significance Level, t P/W	P/A	W/A
SAS Peer Relations	3.0	2.4	2.5	.39	NS	NS	NS	NS
PBI Socio-Emotional State	3.3	2.4	2.9	.43	.05	.01	NS	.05

Achievement gains and peer relations

Table 51 shows the mean reading achievement grade gain made by the peer relations sub-groups between discharge and follow-up. Both the positive and withdrawn groups made significantly larger gains than did the aggressive-hostile group.

TABLE 51

Comparison of Peer Relations Sub-Groups on the Achievement Gain Dimension (N=30)

Variable	Positive (N=11) M	Withdrawn (N=10) M	Aggressive Hostile (N=9) M	Eta	Significance Level, F	Significance Level, t P/W	P/A	W/A
Achievement Gain Discharge to Follow-Up	1.6	1.2	.1	.44	NS	NS	.05	.05

Historical predictors and peer relations

Age and time data

No significant differences were demonstrated among groups on measures of length of stay, time since discharge, and age at admission, discharge, or follow-up.

Descriptive data

Chi-square analysis failed to demonstrate a significant relationship between group membership and sex, ordinal position, diagnosis, prognosis, or family involvement in therapy. However, a significant relationship was found between group membership and the referral problem, "withdrawn" in school (see Table 52).

TABLE 52

Comparison of Peer Relations Sub-Groups on Referral Problem Withdrawn in School (N=48)

Withdrawn in School	Peer Relations: Positive	Withdrawn	Aggressive-Hostile	Chi-Square
Yes	1	13	1	22.515*
No	12	5	16	

*Significant at .05, Lambda = .37

Admission and discharge ratings

Admission ratings were found to be significantly related to group membership at follow-up (see Table 53). On the average, knowing the admission rating reduces the probability of error in predicting the follow-up rating by .27. The discharge rating was also significantly related to group membership at follow-up (see Table 54).

TABLE 53

Comparison of Peer Relations Ratings at Admission and Follow-up (N=48)

Admission	Follow-Up: Positive	Withdrawn	Aggressive-Hostile	Chi-Square
Positive	2	1	2	
Withdrawn	4	14	5	10.47*
Aggressive-Hostile	7	3	10	

*Significant at .05, Lambda = .27

TABLE 54

Comparison of Peer Relations Ratings at Discharge and Follow-Up (N=48)

	Follow-Up			
Discharge	Positive	Withdrawn	Aggressive-Hostile	Chi-Square
Positive	8	4	6	
Withdrawn	3	9	2	11.13*
Aggressive-Hostile	2	5	9	

*Significant at .05, Lambda = .27

Environmental predictors and peer relations

Classroom environment data

The withdrawn group were functioning in classrooms characterized by significantly greater teacher support and lower competition than was reported for the positive group (see Table 55). By comparison with the normative population, the positive group classrooms reflected high peer involvement, rule clarity, and teacher control. The classrooms of the withdrawn group were characterized by high peer involvement, teacher support, rule clarity, and teacher control, and extremely low competition and task orientation. The classrooms of the aggressive-hostile group were high on involvement, teacher support, rule clarity, and teacher control, and low on competition.

TABLE 55

Comparison of Peer Relations Sub-Groups on Nine CES Dimensions (N=42)

Variable	Positive (N=12) M	Withdrawn (N=16) M	Aggressive-Hostile (N=14) M	Eta	Significance Level, F	Significance Level, t P/W	P/A	W/A
Involvement	62	60	59	.13	NS	NS	NS	NS
Affiliation	54	47	50	.19	NS	NS	NS	NS
Teacher Support	54	62	59	.42	.05	.05	NS	NS
Task Orientation	51	43	47	.29	NS	NS	NS	NS
Competition	51	39	41	.33	NS	.05	NS	NS
Order and Organization	57	52	51	.22	NS	NS	NS	NS
Rule Clarity	67	62	67	.30	NS	NS	NS	NS
Teacher Control	58	55	59	.12	NS	NS	NS	NS
Innovation	56	60	56	.24	NS	NS	NS	NS

Family environment data

The positive and withdrawn groups did not differ significantly from each other on any of the ten Family Environment Scale dimensions (see Table 56). However, both groups had significantly higher scores than the aggressive-hostile group on family dimensions of cohesion, active-recreational orientation, and intellectual-cultural orientation.

By comparison with the normative population, the positive group were characterized by high organization and moral-religious emphasis and low independence and conflict. The withdrawn group were high on moral-religious emphasis and low on independence and conflict. The aggressive-hostile group resided in families with extremely low scores on the intellectual-cultural orientation, active-recreational orientation, and cohesion dimensions. Independence

was also low while control was highly emphagized in these families.

TABLE 56

Comparison of Peer Relations Sub-Groups on Ten FES Dimensions (N=24)

Variable	Positive (N=7) M	Withdrawn (N=9) M	Aggressive-Hostile (N=8) M	Eta	Significance Level, F	Significance Level, t P/W	P/A	W/A
Cohesion	54	53	42	.51	.05	NS	.05	.05
Expressiveness	48	51	47	.21	NS	NS	NS	NS
Conflict	45	44	54	.42	NS	NS	NS	NS
Independence	44	44	43	.04	NS	NS	NS	NS
Achievement Orientation	51	50	52	.11	NS	NS	NS	NS
Active-Recreational	50	48	35	.55	.05	NS	.05	.05
Intellectual-Cultural	49	49	36	.46	NS	NS	.05	.05
Moral-Religious	57	57	55	.16	NS	NS	NS	NS
Organization	57	54	53	.19	NS	NS	NS	NS
Control	53	54	57	.23	NS	NS	NS	NS

Summary and discussion of peer relations findings

Thirteen children were characterized as positive, 18 as withdrawn, and 17 as aggressive-hostile in their relationships with peers at follow-up. A self-report measure substantiated the teachers' ratings; the positive group viewed themselves as having substantially better peer relations than the other two groups. Also, teachers assessed the positive group to be the best psychologically adjusted followed by the aggressive-hostile group. The withdrawn children were viewed as having more severe socio-emotional problems.

The positive and withdrawn groups made significantly larger reading achievement gains than did the aggressive-hostile group.

Group membership was not significantly related to length of stay, time since discharge or age at three points in time. No relationship was demonstrated between group membership and sex, ordinal position, diagnosis, prognosis, or family involvement in therapy. Of 15 children whose referral data described "withdrawn in school" as a problem, 13 were placed in the withdrawn group on peer relationships. Group membership was also related to admission and discharge ratings of peer relations.

None of the classroom environment dimensions significantly differentiated between the positive and aggressive-hostile groups. The withdrawn group was found to be in classrooms where much greater emphasis was placed on teacher support than was the case for the positive group. It may be that in classrooms where the teacher is viewed as the primary source of support there is less reliance on peers and less press to cultivate a more active style of relating to peers. An alternative explanation may be that the teacher support is given in response to a lack of relationship building skills on the part of class members. In support of this position, the "level of friendship" as measured by the affiliation dimension was lowest for the withdrawn group. The classrooms of the withdrawn group were also shown to exert significantly less press for competition than were those of the positive group.

Three family environment dimensions were found to significantly differentiate the aggressive-hostile group from the others. Family members of the aggressive-hostile group were found to be much less helpful and supportive of one another (cohesion). This finding suggests that one important element missing from the life space of

the aggressive-hostile group is a firm base of support and, subsequently, a model for positive interpersonal relationships. These families were also the least likely to participate in recreational activities. Finally, the aggressive-hostile children were residing in families who, on the average, were less concerned with political, social, intellectual, and cultural activities (intellectual-cultural dimension) than were those of the positive and withdrawn groups. The finding suggests that the aggressive-hostile children may be the product of families less concerned with, and much less committed to, the traditional institutions of society. This interpretation might be further explored in research examining the relationship between hostility and an index of alienation.

When the three peer relations groups were compared to the normative population on the FES the patterns were similar for the positive and withdrawn groups while the aggressive-hostile group showed a unique profile. The positive group families were high on organization and moral-religious emphasis and were above average on the cohesion dimension. They were low on independence and conflict. These families appear to provide a model of concern and support for individual family members. Such a model may be necessary for the development of interpersonal relationship skills.

The withdrawn group families also were high on moral-religious emphasis and low on the independence and conflict dimensions. However, these families placed less emphasis on structuring family activities and clarifying family rules and responsibilities (organization) than did the positive group.

UMI

The aggressive child is of great concern to the classroom teacher both in the institution and the public schools. Seventy-four percent of the research sample were referred because of acting-out in school (see Table 8). The aggressive-hostile group were also shown to have made very small achievement gains between discharge and follow-up. It is, therefore, particularly important to identify those unique environmental conditions associated with aggressive-hostile peer relations.

Families of the aggressive-hostile group were found to be low on intellectual-cultural orientation, active-recreational orientation, cohesion, and independence. Conflict and control were both above the normative population mean. This family profile suggests that aggressive-hostile group children do not receive encouragement for personal growth in the intellectual, cultural, or recreational areas and that family members are not particularly committed to helping and supporting one another. Instead, there is an inflexibility regarding family rules and family members tend to order each other around in a rather authoritarian manner. If positive peer relations require some sense of personal worth and a model for cooperation and support, the aggressive-hostile group may be considered deprived of these basic experiences in their family living unit.

Comparison of environmental with historical measures as predictors of peer relationship adjustment is difficult because of the smaller N available for the family environment measure. Non-environmental findings tend to be washed out when the N is reduced to 24. It is also apparent that measures of predictive association have a somewhat different meaning for analytic and categorical measures.

Nevertheless, it is of interest to note that the three significant historical predictors yield Lambda indices of .27 for admission ratings, .27 for discharge ratings, and .36 for the occurrance of withdrawn in school as a referral problem. The teacher support dimension of the classroom environment scale yielded an Eta index of .42 while FES measures were somewhat higher; cohesion, .51; active-recreational, .55; and intellectual-cultural, .46. Perhaps of even greater importance are the environmental profiles which were found to vary among groups.

In summary, there is some evidence that specific dimensions of current classroom and family environments are related to the child's peer relationship style at follow-up. Further research is indicated to identify causal relationships and inter-relationships among environmental dimensions for the peer relations criteria dimension.

Adult Relations

The adult relationships of the research sample were characterized by their teachers as mostly positive, withdrawn, or aggressive-hostile. There were 18 positive ratings, 19 withdrawn, and 11 aggressive-hostile.

In order to determine if the three groups differed substantially in their own view regarding the quality of adult relationships, analysis of variance was employed to examine the mean differences between groups on the interpersonal relations dimension of the School Attitude Survey. Table 57 shows an F-ratio significant at

the .05 level. Subsequent t-test analysis indicated that the positive group mean was significantly higher than that of the withdrawn group. The aggressive-hostile group fell in between. It appears that the positive group accurately assess their relationships with people as primarily positive. Both the withdrawn and aggressive-hostile groups recognize their interpersonal skill limitations.

TABLE 57

Comparison of Adult Relations Sub-Groups on the SAS Interpersonal Relations Dimensions (N=29)

Variable	Positive (N=15) M	Withdrawn (N=9) M	Aggressive-Hostile (N=5) M	Eta	Significance Level, F	Significance Level, t P/W	P/A	W/A
SAS Interpersonal Relations	2.9	2.1	2.4	.53	.05	.05	NS	NS

In order to assess the consistency of teachers' ratings, the sub-groups were compared on the socio-emotional state dimension of the Pupil Behavior Inventory, a measure with a high loading on interpersonal relations items. A significant F-ratio and subsequent t-values were obtained for the mean differences between the positive and aggressive-hostile groups and between the positive and withdrawn groups. In summary, the positive group was rated highest and was followed by the aggressive-hostile group. The withdrawn group was viewed as making the poorest socio-emotional adjustment (see Table 58).

TABLE 58

Comparison of Adult Relations Sub-Groups
on the PBI Socio-Emotional State Dimension (N=48)

Variable	Positive (N=18) M	Withdrawn (N=19) M	Aggressive-Hostile (N=11) M	Eta	Significance Level, F	Significance Level, t P/W	P/A	W/A
PBI Socio-Emotional State	3.5	2.3	2.6	.56	.05	.05	.05	NS

Achievement gains and adult relations

The adult relations groups did not differ significantly on the amount of reading achievement gain which took place between discharge and follow-up (see Table 59). The aggressive-hostile group made the smallest gain.

TABLE 59

Comparison of Adult Relations Sub-Groups
on Achievement Gain Between Discharge and Follow-Up (N=30)

Variable	Positive (N=13) M	Withdrawn (N=12) M	Aggressive-Hostile (N=5) M	Eta	Significance Level, F	Significance Level, t P/W	P/A	W/A
Reading Achievement Change Discharge to Follow-Up	.9	1.4	.5	.27	NS	NS	NS	NS

Historical predictors and adult relations

Age and time data

The groups did not differ on the length of hospitalization or time between discharge and follow-up. However, the positive group were found to be significantly older than the aggressive-hostile

group at admission, discharge, and follow-up (see Table 60).

TABLE 60

Comparison of Adult Relations Sub-Groups on Age Measures in Years (N=48)

Variable	Positive (N=18) M	Withdrawn (N=19) M	Aggressive-Hostile (N=11) M	Eta	Significance Level, F	Significance Level, t P/W	P/A	W/A
Age at Admission	12.0	11.6	9.8	.31	NS	NS	.05	NS
Age at Discharge	13.2	13.0	11.1	.32	NS	NS	.05	NS
Age at Follow-Up	15.4	14.5	13.1	.34	NS	NS	.05	NS

Descriptive data

Chi-square analysis failed to demonstrate a significant relationship between group membership and sex, ordinal position, diagnosis, prognosis, or family therapy involvement.

Admission and discharge ratings

Status on the adult relations dimension at admission was not significantly related to ratings made at follow-up. However, a significant Chi-square was obtained between group membership at discharge and follow-up (see Table 61).

Referral data

Children referred to York Woods as "withdrawn in school" were more likely to be in the withdrawn group at follow-up (see Table 62). No relationship was demonstrated between group membership and the referral problems: acting-out in school, learning difficulty,

unmotivated to learn, and peer problem.

TABLE 61

Comparison of Adult Relations Sub-Groups
on Discharge Ratings of Adult Relations (N=48)

	Follow-Up			
Discharge	Positive	Withdrawn	Aggressive-Hostile	Chi-Square
Positive	11	6	6	
Withdrawn	2	10	1	10.671*
Aggressive-Hostile	5	3	4	

*Significant at .05, Lambda = .24

TABLE 62

Comparison of Adult Relations Sub-Groups
on Referral Problem Withdrawn in School (N=48)

	Group			
Withdrawn in School	Positive	Withdrawn	Aggressive-Hostile	Chi-Square
Yes	4	10	1	7.239*
No	14	9	10	

*Significant at .05, Lambda = .17

Environmental predictors and adult relations

Classroom environment data

The results of the data analysis are shown in Table 63. The only significant finding was that the aggressive-hostile group were

functioning in classrooms where greater emphasis was placed on establishing and maintaining a set of rules (rule clarity) than was the case for either the positive or withdrawn groups.

By comparison with the normative population, the positive group were high on involvement, teacher support, rule clarity, teacher control, and innovation. The withdrawn group classrooms were also high on the same five dimensions and, in addition, were low on competition. The aggressive-hostile group classrooms showed a profile nearly identical to that of the withdrawn group.

TABLE 63

Comparison of Adult Relations Sub-Groups on Nine CES Dimensions (N=42)

Variable	Positive (N=16) M	Withdrawn (N=18) M	Aggressive-Hostile (N=8) M	Eta	Significance Level, F	Significance Level, t P/W	P/A	W/A
Involvement	58	61	65	.29	NS	NS	NS	NS
Affiliation	51	48	50	.09	NS	NS	NS	NS
Teacher Support	58	60	60	.20	NS	NS	NS	NS
Task Orientation	47	46	48	.09	NS	NS	NS	NS
Competition	47	42	38	.20	NS	NS	NS	NS
Order and Organization	51	53	54	.12	NS	NS	NS	NS
Rule Clarity	63	63	71	.39	.05	NS	.05	NS
Teacher Control	58	57	56	.06	NS	NS	NS	NS
Innovation	57	59	57	.09	NS	NS	NS	NS

Family environment data

Family Environment Scale scores were available for only 4 subjects in the aggressive-hostile group. Consequently, the validity of the data analysis may be questioned. For several dimensions the variance was extremely small for the aggressive-hostile

group resulting in a violation of the equal variance assumption required for analysis of variance.

Table 64 summarizes the data. There were no significant differences demonstrated among groups on any of the FES dimensions. In comparison to the normative population, the aggressive-hostile group families appeared high on moral-religious emphasis and low on the personal growth dimensions of independence, active-recreational orientation, and intellectual-cultural orientation. A similar pattern was observed for the withdrawn group while positive group families were nearer to the normative population mean of 50 on all ten dimensions.

TABLE 64

Comparison of Adult Relations Sub-Groups on Ten FES Dimensions (N=24)

Variable	Positive (N=14) M	Withdrawn (N=6) M	Aggressive-Hostile (N=4) M	Eta	Significance Level, F	Significance Level, t P/W	P/A	W/A
Cohesion	49	48	54	.23	NS	NS	NS	NS
Expressiveness	49	49	50	.07	NS	NS	NS	NS
Conflict	46	47	48	.08	NS	NS	NS	NS
Independence	45	41	42	.13	NS	NS	NS	NS
Achievement Orientation	52	48	55	.29	NS	NS	NS	NS
Active-Recreational	46	45	39	.20	NS	NS	NS	NS
Intellectual-Cultural	47	41	42	.22	NS	NS	NS	NS
Moral-Religious	55	57	61	.32	NS	NS	NS	NS
Organization	53	56	56	.14	NS	NS	NS	NS
Control	55	53	55	.12	NS	NS	NS	NS

Summary and discussion of adult relations findings

There was agreement between teachers' ratings and the students' self ratings with regard to the quality of adult relations.

The positive group reported satisfaction with interpersonal relationships while the withdrawn and aggressive-hostile groups expressed concern about their interpersonal skills.

The aggressive-hostile group made the smallest reading achievement gains between discharge and follow-up, although there were no significant differences among the groups. The aggressive-hostile group were significantly younger than the positive group at follow-up. The age difference findings may be interpreted in several ways. The aggressive-hostile group were concentrated in the early junior high age level. This time period is characterized by the developmental task of separating from family and identification with the peer group. For children of marginal adjustment status the separation from family may be particularly conflictual resulting in a generalized negative reaction to authority figures. The positive group, concentrated in the high school age range, may have already successfully negotiated the separation process.

Another factor influencing the age difference findings may be an uneven attrition rate favoring younger children for inclusion in the research sample. Of the nine potential subjects who were unavailable although parents gave permission, four were in jail and five in other institutions. In all instances the parents indicated that these children had become negative and unmanageable at home. The aggressive-hostile group may, therefore, be under-representing the older age range because older aggressive-hostile children have been excluded from public school settings.

No relationship was demonstrated between group membership and

sex, ordinal position, diagnosis, prognosis, or family therapy involvement. Discharge ratings of adult relations showed a low but significant relationship to group membership. Admission ratings were unrelated to follow-up status. The referral problem, "withdrawn in school" was significantly related to follow-up ratings; a result consistent with the peer relations findings.

The rule clarity dimension of the Classroom Environment Scale was found to be much higher for children in the aggressive-hostile group than either of the other two groups. This emphasis on establishing and maintaining a clear set of rules may serve to stimulate the aggressive-hostile reaction observed by the teachers of the aggressive-hostile group. No other CES dimensions were found to differentiate among groups.

The validity of the analysis of the Family Environment data was questioned because of the small number of subjects available in the aggressive-hostile group. There were no significant differences demonstrated between group membership and any of the FES dimensions.

CHAPTER V

SUMMARY AND IMPLICATIONS

Summary of the Sample at Admission, Discharge, and Follow-Up

The Sample at Admission

A total of 48 children, 36 males and 12 females, were included in the research sample. The mean chronological age was 11.3 years. The mean IQ score was 80.5; ranging from 50 to 118. Seventy-three percent of the children were from families whose income level was less than $10,000. Only 40% were residing in an intact, natural family prior to hospitalization. Forty percent of the children were first born and 33% were the second oldest child in their family.

Diagnostically, the children fell into one of four psychiatric categories: neurosis, transient situational disturbance, personality disorder, and psychosis. Forty-two percent were labeled transient situational disturbance. The most frequently noted referral problems were "acting-out in school" (74%) and "peer relations problem" (82%). A majority of the children were judged as having a negative self-concept, poor peer and adult relations, and were viewed as overtly anxious or indifferent about their school performance.

The mean achievement level of the group was 3.3 which was 2.3 years below expected grade level. Reading and arithmetic

distributions were almost identical for the research population.

The Sample at Discharge

The mean length of stay was nearly 15 months, with a range from 3 to 32 months. At discharge the research sample was concentrated in the upper elementary and lower junior high grades. At least one member of nearly 80% of the families had been involved in treatment. The parental constellation, however, changed from admission to discharge for 43% of the children reflecting continued family instability.

The research sample gained nearly one full grade in reading achievement between admission and discharge. However, during the same time period, the subjects fell slightly further behind their expected age grade, from 2.9 to 3.1 grades. The mean achievement grade scores were 4.1 and 4.5 for reading and arithmetic respectively.

The treatment staff judged that 32% of the children had made a positive change in self-concept from admission to discharge while 22% had become more realistically concerned with their school performance. In terms of peer relations, the most positive change was observed for those children who had been withdrawn at admission. The aggressive-hostile children were less likely to have made gains. Only 10% of the entire research sample were given an unqualified good prognosis.

The Sample at Follow-Up

The mean interval between discharge and follow-up was just over two years with a range from 3 months to 5 years. The research

sample fell predominantly in the junior high and senior high grade levels. Seventy-seven percent were living in the same family situation which existed at discharge. Eight children had experienced a single major change in the parental unit while 3 were involved in more than one change.

For the 30 children available for testing at follow-up the mean reading achievement score was 4.9, an increase of nearly one year between discharge and follow-up. They were functioning 3.8 grades below age-grade expectancy as contrasted with 3.1 at discharge. The same pattern was observed for arithmetic achievement.

Only 35% of the subjects were rated as having a positive self-concept at follow-up. Nineteen percent of the children were judged as realistically concerned with their school performance. A majority of the subjects were having difficulties in relationships with both peers and adults at follow-up.

The measures of school attitude as reflected by the School Attitude Survey indicated that the research sample scores closely approximated the norms given for all five factors and the results of the Heuchert (1969) study. Children indicated that school anxiety was of greatest concern in spite of their feeling that they were successful in school performance. On the Coopersmith Self-Esteem Inventory the results were similar to those obtained by Heuchert. Least positive self-concept was shown on the social self-dimension, an indication of concern with interpersonal relationships.

Teachers' ratings on the Pupil Behavior Inventory described the research sample as weakest on "academic motivation and

performance" and best on "personal behavior." The sample fell substantially below the normative population mean on all dimensions.

Contemporary Environmental Conditions

The Moos' (1974) scales were employed to assess the environmental press encountered by the research sample in the family and school classroom at follow-up. When compared with the normative population, the research sample classrooms were characterized by high "student involvement", "teacher support", and "rule clarity." There was relatively little press toward competition among students for grades and recognition. Students reported that the teacher was concerned, helpful, and consistent in dealing with rule infractions without being punitive.

The families of the research sample were high on "moral-religious emphasis" and "organization." Family members were concerned with the discussion and development of values and a code of ethics. The families were relatively clear with regard to individual members' rights and responsibilities. The sample families were characterized by relatively little emphasis on "active-recreational orientation", "intellectual-cultural orientation", and "independence."

Summary of School Adjustment Findings

Five variables were selected to serve as adjustment criteria. These were: 1) achievement change between discharge and follow-up; 2) self-concept; 3) school anxiety; 4) peer relations; and 5) adult relations. The primary purpose of the study was to examine the relationship between the environmental dimensions and adjustment

status on the five criteria measures.

Achievement Change

Three groups of 10 subjects each were created to identify those characteristics associated with high, middle, and low achievement change. Only reading scores were employed for the analysis. The high change group had been out of the hospital longest and the low change group the least amount of time at follow-up. In general, the high change group members were more intelligent and had higher reading scores at the time of discharge. There were no significant differences demonstrated among achievement change groups on any of the nine Classroom Environment Scale dimensions. Family Environment Scale analysis was not attempted because of missing data.

Self-Concept

Subjects were rated by their classroom teachers as maintaining primarily a positive or negative self-concept. Seventeen subjects were rated positive and 31 negative. The negative group was younger at time of admission and at follow-up. There was a tendency for the positive group to reside in families in which individual members were more often encouraged to be assertive, self-sufficient, and to make their own decisions (the "independence" dimension). The Classroom Environment Scale dimensions did not differentiate the two groups.

School Anxiety

Three groups were identified for the school anxiety dimension. Nine children were rated as realistically concerned with school work, 25 were rated as overtly anxious and 13 as indifferent. The realistic group members were characterized by their teachers as doing better in school work than other children. They had made the largest achievement gains but had been out of the hospital for a shorter length of time than had the other children. The realistic group were in classrooms where students sometimes competed with each other for grades and recognition ("competition") but where there was more emphasis on completion of activities and staying on the subject matter ("task orientation"). The realistic group families accepted the open expression of anger ("conflict") but did relatively little to encourage assertive, self-sufficient behavior ("independence"). The realistic group families did not cast school and work activities into a competitive framework ("achievement orientation").

The overtly anxious group had been discharged from the hospital longer than the others and demonstrated a relatively low rate of achievement gain. Competition for grades was stressed more in the classrooms of the overtly anxious group than in other classrooms. An emphasis on "achievement" was important along with a concern about ethics and religious values ("moral-religious emphasis") in the families of the overtly anxious group. These families were also characterized as emotionally constrictive with little tolerance for conflictual interactions ("conflict") or open expression of feelings

("expressiveness").

Subjects in the indifferent category did less well than the other children on achievement measures. They were found in classes where almost no emphasis was given to competition among students. The teachers of these children appeared to be more concerned with establishing a clear set of rules ("rule clarity") and maintaining the attention and interest of the class ("involvement"). The families were characterized by active discussion of ethical concerns and open expression of feelings. These families encouraged individual members to make their own decisions and to be self-sufficient ("independence").

Peer Relations

Thirteen children were rated as mostly positive, 18 as withdrawn, and 17 as aggressive-hostile in their peer relationships.

The positive group made the largest achievement gain between discharge and follow-up. More than half of these children had been rated as positive at the time of discharge from York Woods Center. Children characterized by positive peer relations did not appear to need as much teacher support as the others. Their classrooms placed a reasonable amount of stress on competition among students and class members maintained a high level of attention and interest in class activities ("involvement"). The families of the positive group were characterized by a great concern for ethical issues and individual members were helpful and supportive of each other ("cohesion").

The aggressive-hostile group made an extremely small achievement gain between discharge and follow-up. There was a clear set of rules established and the teacher was fairly strict in enforcing them ("teacher control") in the classrooms of aggressive-hostile children. The families of the aggressive-hostile group were characterized by relatively little family oriented activity ("active-recreational orientation"); family members were not particularly committed to the family and were not helpful to and supportive of one another ("cohesion").

The withdrawn group members made larger achievement gains between discharge and follow-up than the aggressive-hostile children. Eleven of 15 group members had been referred to York Woods as "withdrawn in school." The teachers of withdrawn children were extremely helpful and attentive to students ("teacher support"). The students in these classrooms were not especially close and friendly with each other ("affiliation") and did not report a sense of competition with one another for grades and recognition ("competition"). Families of the withdrawn group had environmental characteristics similar to those of the positive group with one exception. There was slightly less attention to the structuring of family activities and clarity with regard to family rules and responsibilities ("organization").

Adult Relations

Eighteen children were characterized as primarily positive, 19 as withdrawn, and 11 as aggressive-hostile in their relationships with adult authority figures.

The positive group achievement gain between discharge and follow-up was somewhat larger than that of the aggressive-hostile group. These children had also been significantly older at admission and at follow-up. The environmental measures failed to show a clearly interpretable profile for the positive group.

The aggressive-hostile group made the smallest achievement gain among the groups between discharge and follow-up and had been youngest at admission and follow-up. An emphasis on clarity of rules was characteristic of the classrooms of the aggressive-hostile children; a result consistent with the findings for peer relations group differences. There was very little sense of competition fostered among students. There was little family oriented activity ("active-recreational orientation") within the families of these children.

Children withdrawn in their adult relationships made reasonably good achievement gains between discharge and follow-up and were older than the aggressive-hostile children. The environmental profile was not clearly interpretable although families of the withdrawn children placed the least emphasis on development of assertiveness in individual members.

Historical Versus Environmental Predictors

A major problem engendered by the use of nonintegrative analysis techniques is the difficulty of making an accurate comparison between groups of variables with regard to their effectiveness in differentiating among adjustment groups. In general, with the exception of achievement change, the environmental measures attained a higher degree of association (Eta) than was found for historical

predictors. However, a number of important historical variables were categorical. The Chi-square procedure employed to analyze these variables does not yield a comparable statistic.

The Family Environment Scale dimensions more effectively differentiated among groups than did those of the Classroom Environment Scale. This finding may reflect the relatively greater impact of family conditions on the socio-emotional characteristics of the child. However, the limited number of subjects (24) for whom FES scores were available makes this a tentative conclusion. The differences found among groups might have been washed out had the data been available for the larger sample.

Because complete historical and environmental data were not available for analysis, it was not possible to examine the possible interaction effects which may be more important for determining follow-up adjustment status than the independent variable effects demonstrated in this study.

Comparison with Findings of Previous Follow-Up Research

The subjects' adjustment status at follow-up has been the concern of several predictive research studies. In most instances the focus was on the association between historical (pretreatment and treatment) variables and follow-up adjustment. The findings of Johnson and Rubin (1964), Huber (1964), Lewis (1970), and Garber (1972), suggested that children diagnosed in the more severely disturbed categories (organic, psychotic, personality disorder) would make less adequate post-treatment school adjustment. In this study diagnostic category was generally unrelated to

adjustment status at follow-up.

Eisenberg (1961) and Havelkova (1968) found that age at the time of intervention is a significant factor in predicting ultimate outcome. Lewis (1970) concluded that younger children were more likely to make positive adjustment in the area of interpersonal relations. This finding was not borne out in the present study. There was no relationship found between age at admission and peer relations at follow-up. Younger children were also more likely to be aggressive-hostile in relationships with adults.

Heuchert (1969) found that girls, children who were younger, and children who had been discharged longest made greater achievement gains between admission and follow-up. In the current study age and sex were unrelated to achievement gains between discharge and follow-up. The largest achievement gains were made by children who had been discharged the longest. There was no relation between achievement gain and length of hospitalization; a result also reported by Heuchert.

Neither Heuchert (1969) or Lewis (1970) found intelligence to be significantly related to achievement gain. This finding was borne out in the current study.

Lewis (1970) concluded that children who made the largest achievement gains were more positive in interpersonal relations at follow-up. The children rated as having positive peer and adult relations in this study made significantly better achievement gains.

Few studies have focused on the environmental conditions encountered by the child following discharge. Johnson and Rubin (1964) found public school teachers to be lacking in flexibility and unrealistic in their expectations for children returning from institutional treatment. They concluded that more support and flexibility would be necessary to insure positive adjustment. In general, the teacher support dimension of the Classroom Environment Scale did not distinguish among outcome groups in the current study. However, children in classrooms where a clear and inflexible set of rules were established were found to be hostile in their interpersonal relationships.

Taylor and Alpert (1973) and Allerhand et al. (1966) concluded that the child's ability to function adequately in social situations at follow-up was related to the amount of support available in the child's environment. In the current study, children characterized as having positive peer relations were living in families whose members were helpful and supportive of one another.

Moos (1974) reported that a hospital ward atmosphere emphasizing the autonomy of the patient was related to assertive behavior and an enhanced sense of self-esteem. These results are consistent with the finding in this study that children rated as having positive self-concepts at follow-up were residing in families which encouraged members to be assertive and self-sufficient.

Limitations of the Study

Although much cooperation was given the researcher by hospital and school personnel, several problems inherent to the conduct of

follow-up studies limit the clarity of findings.

The most significant problem was the amount of missing data. Only half of the subjects' families were willing to complete the family environmental measure and just over half agreed to have their child complete standardized personality measures. As a result, the data analysis was limited in the following ways:

1) less powerful categorical measures were substituted for continuous measures as indices of follow-up adjustment

2) the number of subjects with complete data available was reduced

3) because of the reduction in number of subjects, multiple correlation analysis could not be employed to examine the interaction patterns of several predictor variables

The 48 subjects who participated in the study were less than half the number potentially available for inclusion in the research sample. A more complete sample would serve to increase the validity and generalizability of findings. With the exception of achievement data, the relatively small sample size in the current study prevented examination of patient change characteristics. There were not enough subjects to fill the number of cells required by the use of a three-category by three-time (admission, discharge, and follow-up) design.

Financial and time constraints made environmental measurement at more than one point in time impossible. As a result, the findings relating environmental measures to follow-up functioning do not include an indication of the continuity of environmental experience and their cumulative impact on the functioning of the emotionally impaired child. To the extent that the criteria variables reflect dimensions that are situation specific, the single measure may

accurately reflect current environmental impact. However, it seems likely that for several of the dimensions employed, current adjustment is a joint function of contemporary press and cumulative experience over time. Classroom experiences were potentially the most variable. The classroom selected for junior high and high school subjects was only one of several in which the youngster was functioning at follow-up and was only one of many to which the child had been exposed since discharge. The family environment was more likely to have remained basically unchanged. Nearly 80% of the subjects were living in a family unit which had experienced no major changes in composition since discharge. However, admission and discharge ratings were unavailable.

To some degree the need for control group comparison was obviated by comparison with standardized norms and the results of other follow-up studies. However, the conclusions reached based on the findings of the current study are clearly limited by the lack of a control group.

Implications of the Study

The findings of the current study lend support to the view that environmental factors have a significant impact on effective adaptation and coping behavior in the public school setting. The results have implications for both the residential treatment program in general and for discharge planning and placement preparation in particular.

With respect to the residential treatment program, a sensitivity to the broad range of environmental conditions and their probable

effects on individuals may help to identify problem areas and allow for planned intervention. For example, employing the Family Environment Scale as a diagnostic instrument at admission may allow the clinical staff to focus family treatment efforts in those areas which appear potentially hazardous for the patient's remediation. The Classroom Environment Scale may be employed in the York Woods school to identify significant differences among classroom profiles. This would facilitate the placement of individuals in various classrooms by matching individual needs to measured classroom characteristics. The systematic employment of the CES would also allow for ongoing research into the impact of various classroom conditions on identified patient problem areas.

Discharge planning and placement decisions may be influenced by the use of environmental measures. Family changes in response to therapy may be reflected by repeated use of the FES. In cases where a foster home placement is deemed appropriate, a systematic assessment of environmental conditions could contribute to the selection process and point to potential trouble spots to which the clinicians, patient, and family members must attend. The use of environmental data will result in a more thorough and complete description of individual clinical cases. The patient's response to specific classroom profiles during residential treatment would be added to the typical summary of patient characteristics and level of functioning usually made available to the public school teacher at discharge. This information may allow for greater selectivity in placement of children in the most appropriate school program following residential treatment.

It is evident from this research that the majority of children returning to public school were functioning well below grade level. However, in spite of extremely low achievement levels, many of the children were able to maintain positive feelings about themselves and their school performance. It will be necessary to communicate to the public school teachers information regarding those conditions which serve to enhance a child's positive valuation of school experiences in the face of very limited achievement potential. This must also be the focus of further research as the mainstreaming process poses a serious question of emphasis (achievement orientation versus general self-enhancement) for the regular class public school teacher.

Finally, the researcher would propose that the information collected in the current study serve as the beginning of a larger data base. The systematic use of relevant environmental information will yield richer and more meaningful clinical case material and will allow for more precise assessment of the impact of specific treatment conditions on treatment and follow-up outcomes.

Problems in Follow-Up Research

Although much cooperation was given the researcher by hospital and school personnel, several problems inherent to the conduct of follow-up studies limit the clarity of findings. Of primary concern was the amount of missing data. When subjects are unavailable for direct interview or testing, the researcher is limited to data available in case records which, in turn, are often incomplete or written in a manner difficult to code for research purposes. In this

study missing data resulted in several limitations:

1) less powerful (more gross) categorical measures were substituted for standardized test measures as indices of follow-up adjustment

2) nonintegrative data analysis procedures (Chi-square and analysis of variance) were substituted for the more powerful multiple regression correlation technique which requires a larger sample size

3) considerable caution was required in interpretation of the findings

The chances of completing a data base might well be enhanced by building a follow-up agreement into the initial admission process. The expectation that follow-up data would be collected could be reiterated at discharge. In Michigan, state law provides for a formal educational planning and placement meeting when the child leaves the hospital for return to public school. This meeting, attended by parents and the responsible local school authorities, might serve as the vehicle for finalizing the details of the follow-up data collection procedure.

Another problem in follow-up research is the difficulty encountered in attempting to characterize and measure change and its correlates. Specifically, the reliability of a difference score is likely to be materially lower than that of the variables being differenced, and the low reliability sharply attenuates correlation with other variables. In addition, change scores are dependent on the initial score with the result that regression to the mean may lead to erroneous conclusions regarding the meaning ascribed to a given "degree" of change.

To some degree the problems encountered in using change scores may be handled through the use of analysis of partial variance

described by Cohen and Cohen (1975). APV is a general method for studying partialled (regression-adjusted, residualized) variables, in which a covariate set A is regressed from the dependent variable Y, and related to a set B of research factors of interest (from which set A is also partialled). The APV model, however, requires a large N and a nearly complete data base.

A problem for which no clear solution is in sight is the difficulty involved in attempting to describe the subtleties of human feelings and behavior in a scheme to which the more sophisticated data analytic methods can be applied. This difficulty suggests that a return to an N of 1 methodology may have some merit as individual case studies do not employ the sophisticated data analytic methods required of large group studies.

APPENDIX A

LETTERS TO PARENTS

STATE OF MICHIGAN
WILLIAM G. MILLIKEN, Governor

DEPARTMENT OF MENTAL HEALTH
E. G. Yudashkin, M.D., Director

An Agency of the Department of Mental Health

Ypsilanti State Hospital

3501 Willis Road, Ypsilanti, Michigan 48197
Telephone 313/434-3400

V. A. Stahman, M.D. Superintendent

Dear Parent:

It is part of our total responsibility as a treatment facility to periodically assess the effectiveness of our program in order to make necessary modifications in the treatment of children at York Woods Center.

Because of its importance for the future development of children, we are vitally interested in the social and academic progress of children who have been patients at this Center. We are currently working on a plan to follow-up the progress of children who have left our program.

In the near future a member of our staff, Mr. Craig Finger, will be in touch with you to explain what we are doing and to ask your permission to include your child in our study. Please be assured that all information obtained will be kept in strictest confidence. We shall appreciate your cooperation as the results of the study will be of great benefit to all children who may require treatment at York Woods Center.

Sincerely,

William E. Kirk

William E. Kirk, M.D.
Director
York Woods Center

Harvey Day

Harvey Day
Director of Residential Services
York Woods Center

WEK/HD/CF/pw

STATE OF MICHIGAN
WILLIAM G. MILLIKEN, Governor

DEPARTMENT OF MENTAL HEALTH
E. G. Yudashkin, M.D., Director

An Agency of the Department of Mental Health

Ypsilanti State Hospital

3501 Willis Road, Ypsilanti, Michigan 48197
Telephone 313/434-3400

V. A. Stehman, M.D. Superintendent

Dear Parent:

In a previous letter we described our attempt to follow-up children who previously attended the York Woods school. It is our hope to evaluate our York Woods school program and our ability to properly select and prepare the public school program to which the children return.

We plan to assess each child's academic and social functioning by sending a written questionnaire to the child, one to the parents, and one to the school teacher.

Because we did not hear from you following our last letter, I am writing again to ask your cooperation and permission to contact you, the school, and your child.

Let me assure you that we have no intention of bringing up unpleasant memories. In fact, we will be looking for the positive growth experiences which have taken place since your child left York Woods.

Should you grant us permission to contact your child and the school, I assure you that all information collected will be held in the strictest confidence. Once it is received it will be coded and the child's name will never appear on any written reports.

Enclosed is a permission form which we would like you to check, sign, and return to us in the self-addressed, stamped envelope, at your earliest convenience. If you have any further questions, or would like to discuss our project personally, please feel free to contact me.

Thank you for your cooperation in this matter. This will be of valuable assistance to us and to many children who may need the services of York Woods Center.

Sincerely,

Craig Finger

Craig Finger
Research Project Coordinator

Encl: (2)

CF/pw

APPENDIX B

TEACHER RATINGS

STUDENT INFORMATION SHEET
(To Be Completed By The Public School Personnel)

Student's Name_____ Age_____

School_____ Grade_____

Date_____

1. When did the student re-enter the school system from York Woods Center?
   Date:_____

2. Are you his first teacher since his return? Yes____ No____

3. Did he return to the same school he left at the time of admission to York Woods Center? Yes____ No____

We are interested in knowing about the student's initial return to the school after being discharged from York Woods Center. If you were not his teacher when he returned to the school system, perhaps the receiving teacher or the school principal could fill in the following information:

4. How was the child received by his peers upon his return?_____

5. How did you feel about the student's return to your classroom?_____

6. How do you feel the student felt about returning to the regular classroom?

7. Generally, the student's academic level of performance upon return to school was:
   a. below grade level ____
   b. at grade level ____
   c. above grade level ____

8. Were there any significant problems that you recall about the child's return?

DIRECTIONS: Circle the numbers of all items that apply. Don't underline.

9. Type of Special Services the Child is Now Receiving

1. Special class.
2. School Social Worker.
3. Psychological Clinic.
4. Out-patient Psychiatric Clinic.
5. Private Psychiatrist.
6. Home Teacher.
7. Speech Correction.
8. Private Tutor.
9. Social Agency.
10. No Information.

Directions for scoring reading and mathematics levels. It is hoped that by using standardized test scores, we would have a more uniformed response. Please use the latest test scores. If you plan to do testing in these areas in a few weeks, please retain this form so we can utilize the latest scores.

10. Reading

Name of test and form _____

Date administered _____

Scores: Reading vocabulary _____
Reading comprehension _____
Total reading _____

11. Mathematics

Name of test and form _____

Date administered _____

Scores: Arithmetic reasoning _____
Arithmetic fundamentals _____
Total arithmetic _____

Directions: Circle the number of description in each set that fits the child most aptly. Never circle more than one description, but always circle one.

12. English

1. Skills are at or above grade according to age.
2. Skills are less than one year below grade.
3. Skills are one to three years below grade.
4. Skills are more than three years below grade.

13. Handwriting

1. Skills are at or above grade according to age.
2. Skills are less than one year below grade.
3. Skills are one to three years below grade.
4. Skills are more than three years below grade.

14. Spelling

1. Skills are at or above grade according to age.
2. Skills are less than one year below grade.
3. Skills are one to three years below grade.
4. Skills are more than three years below grade.

15. Attendance

1. Excessively absent
2. Many absences
3. Infrequently absent
4. Never absent

16. School's Contact With Parents or Guardians.

1. Never
2. Seldom
3. Occasionally
4. Frequently

17. Reason for Contact With Parents or Guardians.

1. School meetings
2. Scheduled conferences
3. Child's behavioral problems
4. Child's academic problems
5. Child's behavioral and academic problems

18. Length of Time Child Has Been Enrolled in Your School

1. Less than one year
2. One year but less than two years
3. Two years but less than three years
4. Three years or more

19. Your opinion is requested regarding the following data. Please mark the items: (1) Yes; (2) No; (3) No data (if you do not know).

____ Visual Defect noted
____ Hearing Defect noted
____ Speech Defect noted
____ Neurological Dysfunction noted
____ Essentially healthy (no physical disability apparent)
____ Other physical disability noted. (please note)

20. Please indicate the student's status on the following items by marking:

1. None
2. Mildly present
3. Moderately present
4. Markedly present
5. Severely present
6. No data (if you do not know)

____ learning difficulties.
____ interpersonal relationship difficulties; or inability to build satisfactory interpersonal relationships with peers and/or teachers.
____ inappropriate behavior; or immature types of behavior or feelings under normal conditions.
____ unhappiness or depression, seldom smiles, lack of "joy of living."
____ repetitive symptoms of illness after stress; pains, or fears after or during stress.

21. Most frequently appearing behavior problems: Please indicate your opinion by marking the items:

1. Never
2. Mild frequency
3. Moderate frequency
4. Marked frequency
5. Severe frequency
6. No data (if you do not know)

_____lacks self-confidence
_____difficulty concentrating
_____needs prodding
_____feels inferior
_____poor self-control
_____hyperactive, excitable, impulsive
_____aggressive
_____dependent

22. Please indicate whether the following situational interventions improve the child's behavior. Mark the items: (1) Yes; (2) No; (3) No date (if you do not know).

_____the presence of the teacher near-by
_____opportunities to work independently by himself
_____being sent to the principal's office
_____distraction with a new task
_____successful school work
_____receiving recognition for special abilities
_____teacher-life-space interview

23. Peer Relations - How would you characterize this child's relationship with peers? Please check one.

1. Aggressive - Hostile _____
2. Manipulative _____
3. Withdrawn _____
4. No Problem _____
5. Other (specify) _____

24. Adult Relations - How would you characterize this child's relationship with adults? Please check one.

1. Hostile _____
2. Accepting (generally approachable) _____
3. Dependent _____
4. Withdrawn _____
5. No Problem _____
6. Other (specify) _____

25. Self-Concept - In general, we wish to know how the child feels about himself. In other words, regardless of how others may value his behavior and attitudes, is the child satisfied with the way he appears to be or does he indicate some desire for change? You are asked to rate the child's self-concept in each of three areas:

1. Very Satisfied
2. Satisfied
3. Unsatisfied
4. Very Unsatisfied
5. No Data

A. General Self-Concept _____
B. Self as Peer Group Member _____
C. Self as a Student _____

26. Existence of School Problem - Do you see any school problem for this child? A school problem is defined as any perceived problem which in your estimation, is serious enough to require some intervention beyond regular class placement.

1. Yes ____
2. No ____
3. No Data ____

27. General School Attitude - How would you characterize the child's attitude in the following areas?

A. School Anxiety: Please check one

1. Extremely anxious about failing ____
2. Somewhat anxious about failing ____
3. Realistically concerned over possible failure ____
4. Very little concern over performance ____
5. Indifferent ____
6. No Data ____

B. School Value: Please check one

1. Believes school is very important ____
2. Believes school is somewhat important ____
3. Appears indifferent to school experience ____
4. Believes school to be of very little importance ____
5. Actively shows disdain for school experience ____
6. No Data ____

C. School Enjoyment: Please check one

1. Enjoys school very much ____
2. Appears satisfied with school experience ____
3. Appears indifferent to school experience ____
4. Appears dissatisfied with school experience ____
5. School experience is unpleasant for this child ____

28. Class Standing - How does this child compare with other children in his class in each of the following areas? Please check one.

	Upper ⅓	Middle ½	Lower ⅓
Reading	____	____	____
Arithmetic	____	____	____
Behavioral Adjustment	____	____	____
Liked by Peers	____	____	____
Liked by Adults	____	____	____

PUPIL BEHAVIOR INVENTORY

Pupil Name_____ Teacher_____

Please write in for each item the letter(s) of the rating chosen for this pupil (see alternatives in box). It is not necessary to spend a great deal of time in assessing the pupil. Please answer all items, even if you are uncertain or have little information. If you cannot answer an item, please write in "don't know."

ALTERNATIVE RATINGS
VF--Very Frequently
F--Frequently
S--Sometimes
I--Infrequently
VI--Very Infrequently

		Leave Blank
_____	Shows initiative	2
_____	Blames others for trouble	1
_____	Resistant to teacher	1
_____	Alert and interested in school work	2
_____	Attempts to manipulate adults	1
_____	Appears depressed	3
_____	Learning retained well	2
_____	Absences or truancies	5
_____	Withdrawn and uncommunicative	3
_____	Completes assignments	2
_____	Influences others toward troublemaking	1
_____	Inappropriate personal appearance	5
_____	Seeks constant reassurance	4
_____	Motivated toward academic performance	2
_____	Impulsive	1
_____	Lying or cheating	5
_____	Positive concern for own education	2
_____	Requires continuous supervision	1
_____	Aggressive toward peers	1
_____	Disobedient	1
_____	Steals	5
_____	Friendly and well-received by other pupils	3
_____	Easily led into trouble	1
_____	Resentful of criticism or discipline	1
_____	Hesitant to try, or gives up easily	2
_____	Uninterested in subject matter	2
_____	Disrupts classroom procedures	1
_____	Swears or uses obscene words	5
_____	Appears generally happy	3
_____	Poor personal hygiene	5
_____	Possessive of teacher	4
_____	Teases or provokes students	1
_____	Isolated, few or no friends	3
_____	Shows positive leadership	2

APPENDIX C

ENVIRONMENTAL MEASURES

Questionnaire -
Classroom Environment Scale:

1. There is a clear set of rules for students to follow.
2. Students enjoy working together on projects in this class.
3. The teacher takes a personal interest in students.
4. Students in this class aren't very interested in getting to know other students.
5. Students have very little to say about how class time is spent.
6. The teacher thinks up unusual projects for students to do.
7. Almost all class time is spent on the lesson for the day.
8. The teacher makes a point of sticking to the rules he's made.
9. If a student breaks a rule in this class, he's sure to get in trouble.
10. Students don't always have to stick to the rules in this class.
11. Students are expected to stick to classwork in this class.
12. Students are expected to follow set rules in doing their work.
13. Some students always try to see who can answer questions first.
14. Students can choose where they sit.
15. Students enjoy helping each other with homework.
16. Very few students take part in class discussions or activities.
17. Students put a lot of energy into what they do here.
18. Sometimes the teacher embarrasses students for not knowing the right answer.
19. A student's grade is lowered if he gets homework in late.
20. Students don't have much of a chance to get to know each other in this class.
21. We often spend more time discussing outside student activities than class-related material.
22. A lot of students "doodle" or pass notes.
23. Students get in trouble if they're not in their seats when the class is supposed to start.
24. The teacher hardly ever has to tell students to get back in their seats.
25. There are very few rules to follow.
26. Rules in this class seem to change a lot.
27. Students don't do much work in this class.
28. Students do the same kind of homework almost every day.
29. This teacher "talks down" to students.
30. It takes a long time to get to know everybody by his first name in this class.
31. Grades are not very important in this class.
32. Students in this class get to know each other really well.
33. This teacher spends very little time just talking with students.
34. New ideas are always being tried out here.

Questionnaire -
Classroom Environment Scale:

35. We usually do as much as we set out to do.
36. The teacher explains what will happen if a student breaks a rule.
37. The teacher is not very strict.
38. The teacher often has to tell students to calm down.
39. Assignments are usually clear so everyone knows what to do.
40. This is a well-organized class.
41. Students are almost always quiet in this class.
42. It's easier to get in trouble here than in a lot of other classes.
43. Whether or not students can get away with something depends on how the teacher is feeling that day.
44. If a student misses class for a couple of days, it takes some effort to catch up.
45. What students do in class is very different on different days.
46. In this class, students are allowed to make up their own projects.
47. The teacher is more like a friend than an authority.
48. Students sometimes present something they've worked on to the class.
49. Students daydream a lot in this class.
50. This class hardly ever starts on time.
51. A lot of friendships have been made in this class.
52. There are set ways of working on things.
53. Students try hard to get the best grade.
54. The teacher explains what the rules are.
55. The teacher will put up with a good deal.
56. There are groups of students who don't get along in class.
57. Getting a certain amount of classwork done is very important in this class.
58. If students want to talk about something this teacher will find time to do it.
59. Some students in this class don't like each other.
60. Students have to work for a good grade in this class.
61. This teacher wants to know what students themselves want to learn about.
62. The teacher will kick a student out of class if he acts up.
63. Students don't feel pressured to compete here.
64. Activities in this class are clearly and carefully planned.
65. This teacher does not trust students.
66. Students fool around a lot in this class.
67. Students can get in trouble with the teacher for talking when they're not supposed to.
68. Students aren't always sure if something is against the rules or not.

Questionnaire -
Classroom Environment Scale:

69. This teacher often takes time out from the lesson plan to talk about other things.
70. New and different ways of teaching are not tried very often in this class.
71. Students here don't care about what grades the other students are getting.
72. The teacher goes out of his way to help students.
73. It's easy to get a group together for a project.
74. Sometimes the class breaks up into groups to compete with each other.
75. A lot of students seem to be only half awake during this class.
76. Students are often "clock-watching" in this class.
77. The teacher likes students to try unusual projects.
78. The teacher sticks to classwork and doesn't get side-tracked.
79. In the first few weeks the teacher explained the rules about what students could and could not do in this class.
80. Students usually pass even if they don't do much.
81. Students have to watch what they say in this class.
82. This class is often in an uproar.
83. Most students in this class really pay attention to what the teacher is saying.
84. Students don't compete with each other here.
85. The teacher is consistent in dealing with students who break the rules.
86. Students don't interrupt the teacher when he's talking.
87. When the teacher makes a rule, he means it.
88. Students sometimes do extra work on their own in the class.
89. Students really enjoy this class.
90. This class is more a social hour than a place to learn something.

Questionnaire -
Family Environment Scale:

1. Family members really help and support one another.
2. Family members often keep their feelings to themselves.
3. We fight a lot in our family.
4. We don't do things on our own very often in our family.
5. We feel it is important to be the best at whatever you do.
6. We often talk about political and social issues.
7. We spend most weekends and evenings at home.
8. Family members attend church, synagogue, or Sunday School fairly often.
9. Activities in our family are pretty carefully planned.
10. Family members are rarely ordered around.
11. We often seem to be killing time at home.
12. We say anything we want to around home.
13. Family members rarely become openly angry.
14. In our family, we are strongly encouraged to be independent.
15. Getting ahead in life is very important in our family.
16. We rarely go to lectures, plays or concerts.
17. Friends often come over for dinner or to visit.
18. We don't say prayers in our family.
19. We are generally very neat and orderly.
20. There are very few rules to follow in our family.
21. We put a lot of energy into what we do at home.
22. It's hard to "blow off steam" at home without upsetting somebody.
23. Family members sometimes get so angry they throw things.
24. We think things out for ourselves in our family.
25. How much money a person makes is not very important to us.
26. Intellectual curiosity is very important in our family.
27. Nobody in our family participates actively in sports, Little League, bowling, etc.
28. We often talk about the religious meaning of Christmas, Passover, or other holidays.
29. It's often hard to find things when you need them in our household.
30. There is one family member who makes most of the decisions.
31. There is a feeling of unity and cohesion in our family.
32. We tell each other about our personal problems.
33. Family members hardly ever lose their tempers.
34. We come and go as we want to in our family.
35. We believe in competition and "may the best man win."

Questionnaire -
Family Environment Scale:

36. We are relatively uninterested in cultural activities.
37. We often go to movies, sports events, camping, etc.
38. We don't believe in heaven or hell.
39. Being on time is very important in our family.
40. There are set ways of doing things at home.
41. We rarely volunteer when something has to be done at home.
42. If we feel like doing something on the spur of the moment we often just pick up and go.
43. Family members often criticize each other.
44. There is very little privacy in our family.
45. We always strive to do things just a little better the next time.
46. We rarely have intellectual discussions.
47. Everyone in our family has a hobby or two.
48. Family members have strict ideas about what is right and wrong.
49. People change their minds often in our family.
50. There is a strong emphasis on following rules in our family.
51. Family members really back each other up.
52. Someone usually gets upset if you complain in our family.
53. Family members sometimes hit each other.
54. Family members almost always rely on themselves when a problem comes up.
55. Family members rarely concern themselves about job promotions, school grades, etc.
56. Someone in our family plays a musical instrument.
57. Family members are not very involved in recreational activities outside work or school.
58. We believe there are some things you just have to take on faith.
59. Family members make sure their rooms are neat.
60. Everyone has an equal say in family decisions.
61. There is very little group spirit in our family.
62. Financial matters are openly discussed in our family.
63. If there's a disagreement in our family, we try hard to smooth things over and keep the peace.
64. Family members strongly encourage each other to stand up for their rights.
65. In our family, we don't try that hard to succeed.
66. Family members often go to the library.
67. Family members sometimes attend courses or take lessons for some hobby or interest (outside of school).

Questionnaire -
Family Environment Scale:

68. In our family each person has different values or standards of right and wrong.
69. Each person's responsibilities are clearly defined in our family.
70. We can do whatever we want to in our family.
71. We really get along well with each other.
72. We are usually careful about what we say to each other.
73. Family members often try to one-up or out-do each other.
74. It's hard to be by yourself without hurting someone's feelings in our household.
75. "Work before play" is the rule in our family.
76. Watching T.V. is more important than reading in our family.
77. Family members go out a lot.
78. The Bible is a very important book in our home.
79. Financial planning, budgeting and allowances are not handled very carefully in our family.
80. Rules are pretty inflexible in our household.
81. There is plenty of time and attention for everyone in our family.
82. There are a lot of spontaneous discussions in our family.
83. In our family, we believe you don't ever get anywhere by raising your voice.
84. We are not really encouraged to speak up for ourselves in our family.
85. Family members are often compared with others as to how well they are doing at work or school.
86. Family members really like music, art and literature.
87. The main form of entertainment in our family is watching T.V. or listening to the radio.
88. Family members believe that if you sin you will be punished.
89. Dishes are usually done immediately after eating.
90. You can't get away with much in our family.

APPENDIX D

INTERCORRELATIONS AMONG SUBSCALES OF THE CLASSROOM ENVIRONMENT SCALE AND THE FAMILY ENVIRONMENT SCALE

Classroom Environment Scale
Subscale Intercorrelations
Normative Population (N=465)
(Decimals Omitted)

	A	TS	TO	C	OO	RC	TC	Inn
Involvement	49	45	15	15	49	19	-15	44
Affiliation		34	14	17	30	12	-09	38
Teacher Support			-25	05	19	00	-48	51
Task Orientation				41	42	41	49	-21
Competition					19	26	32	-02
Order and Organization						37	09	19
Rule Clarity							44	-09
Teacher Control								-33

Family Environment Scale
Subscale Intercorrelations
Normative Population (N=814)
(Decimals Omitted)

	E	Con	Ind	AO	ICO	ARO	MRE	O	Cont
Cohesion	38	-46	34	07	46	28	25	31	-16
Expressiveness		-01	28	-04	32	17	10	-06	-27
Conflict			-17	06	-17	-06	-11	-32	14
Independence				-01	23	24	-05	09	-26
Achievement Orientation					02	17	25	29	38
Intellectual-Cultural Orientation						35	14	13	-05
Active-Recreational Orientation							04	11	-04
Moral-Religious Emphasis								22	32
Organization									31

APPENDIX E

SELF REPORT MEASURES OF THE STUDENT

SCHOOL ATTITUDE SURVEY

TO BE COMPLETED BY STUDENT

The following questions are concerned about how you feel about school and yourself. Fill in the blank next to the number of the question in the following manner:

M	if you feel this way most of the time.
S	if you feel this way sometimes
H	if you feel this way hardly ever.
N	if you never feel this way.

____ 1. I worry about school.
____ 2. My school studies are easy for me.
____ 3. My parents don't like the way I get along in school.
____ 4. The kids in the class try to boss me around too much.
____ 5. The kids in school are my very good friends.
____ 6. I like the things you do in school.
____ 7. I feel upset in school.
____ 8. I like to be called on in class.
____ 9. I behave as I should in school.
____ 10. Kids in my class are friendly.
____ 11. The kids in class include everybody in what they do.
____ 12. I have trouble getting all my school work finished.
____ 13. School tests make me worry.
____ 14. School is fun.
____ 15. I have trouble keeping the rules in class.
____ 16. Teachers don't understand kids very well.
____ 17. The kids in my class are hard to get along with.
____ 18. If I have a bad day in school, the teacher will understand.
____ 19. I am afraid I will fail in school.
____ 20. I'm proud of my school work.
____ 21. I have trouble with my temper.
____ 22. The teachers expect more of me than I can do.
____ 23. You can't trust the kids in school very far.
____ 24. Teacher is fair to all the kids.
____ 25. I worry about my grades in school.
____ 26. I do as well in school as most of the kids in my class.
____ 27. I get in fights.
____ 28. The kids in class pick on me.
____ 29. When about to have trouble, the teacher helps me to behave.
____ 30. I feel like giving up school.

School Attitude Survey -
To Be Completed by Student:

____ 31. What we learn in school is important to know.
____ 32. I get blamed for things other kids do.
____ 33. The teachers have favorites.
____ 34. I wish I didn't have to go to school.
____ 35. I get nervous sitting in class.
____ 36. I do well in my school studies.
____ 37. The rules for the class are too strict.
____ 38. What we study in school is pretty hard.
____ 39. I get bored in school.
____ 40. The teacher helps me when I need it.
____ 41. I get blamed when it isn't my fault.

SELF-ESTEEM INVENTORY

NAME_____ DATE_____

Please mark each statement in the following way:

If the statement describes how you usually feel, put a check in the column "LIKE ME". If the statement does not describe how you usually feel, put a check in the column "UNLIKE ME".

There are no right or wrong answers.

	LIKE ME	UNLIKE ME
Example: I'm a hard worker.		
1. I spend a lot of time day-dreaming.		
2. I'm pretty sure of myself.		
3. I often wish I were someone else.		
4. I'm easy to like.		
5. My parents and I have a lot of fun together.		
6. I never worry about anything.		
7. I find it very hard to talk in front of the class.		
8. I wish I were younger.		
9. There are lots of things about myself I'd change if I could.		
10. I can make up my mind without too much trouble.		
11. I'm a lot of fun to be with.		
12. I get upset easily at home.		
13. I always do the right thing.		
14. I'm proud of my school work.		
15. Someone always has to tell me what to do.		
16. It takes me a long time to get used to anything new.		

	LIKE ME	UNLIKE ME
17. I'm often sorry for the things I do.		
18. I'm popular with kids my own age.		
19. My parents usually consider my feelings.		
20. I'm never unhappy.		
21. I'm doing the best work that I can.		
22. I give in very easily.		
23. I can usually take care of myself.		
24. I'm pretty happy.		
25. I would rather play with children younger than I am.		
26. My parents expect too much of me.		
27. I like everyone I know.		
28. I like to be called on in class.		
29. I understand myself.		
30. It's pretty tough to be me.		
31. Things are all mixed up in my life.		
32. Kids usually follow my ideas.		
33. No one pays much attention to me at home.		
34. I never get scolded.		
35. I'm not doing as well in school as I'd like to.		
36. I can make up my mind and stick to it.		
37. I don't really like being a boy - girl.		
38. I have a low opinion of myself.		
39. I don't like to be with other people.		
40. There are many times when I'd like to leave home.		
41. I'm never shy.		
42. I often feel upset in school.		

	LIKE ME	UNLIKE ME
43. I often feel ashamed of myself.		
44. I'm not as nice looking as most people.		
45. If I have something to say, I usually say it.		
46. Kids pick on me very often.		
47. My parents understand me.		
48. I always tell the truth.		
49. My teacher makes me feel I'm not good enough.		
50. I don't care what happens to me.		
51. I'm a failure.		
52. I get upset easily when I'm scolded.		
53. Most people are better liked than I am.		
54. I usually feel as though my parents are pushing me.		
55. I always know what to say to people.		
56. I often get discouraged in school.		
57. Things usually don't bother me.		
58. I can't be depended on.		

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