

Institute for Clinical Social Work

MEASURING THE IMPACT OF MILIEU THERAPY  
FOR STUDENTS EXCLUDED FROM PUBLIC SCHOOLS

A Dissertation Submitted to the Faculty of the  
Institute of Clinical Social Work in Partial Fulfillment  
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By

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For Winnie, John, and Joe

## ABSTRACT

This research project was designed to assess the long-term impact of milieu therapy on students expelled from the public schools due to serious emotional disturbances. The analyses were conducted using data archived in the case files of a private nonprofit therapeutic day school that serves children diagnosed with serious learning emotional and behavioral disabilities. The sample consisted of cases selected from the archives of all closed records of children attending the Jeanine Schultz Memorial School from 1980 to 2004. The total sample consisted of 182 records containing all basic research data. Students came from the greater Chicago-area, and represented diverse racial and socio-economic backgrounds. Demographics included birth date, gender, age at placement, level of pathology (DX) at entry and exit, age at exit and length of placement. Academic outcome measures were assessed on an annual basis using the Iowa Test of Basic Skills. Behavioral outcomes were assessed annually with Behavioral Evaluation Scale-2 School version. The Iowa Test results indicated significance in improvement of all academic areas. The Behavior Evaluation Scale-2 School Version results indicated significance in improvement of behavior within the subscale of Learning Problems. These areas were impacted by the independent variables of age at entry, duration of treatment, and diagnostic complexity.

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## CHAPTER 1

### INTRODUCTION

When the Education for All Handicapped Children Act (PL 94-142) was enacted in 1977, amended to the Individuals with Disabilities Education Act in 1990, it mandated that the public school system provide services for children who are diagnosed as seriously emotionally disturbed. Because of this, public schools have been forced to identify and provide appropriate services for students who are diagnosed with serious emotional and behavioral problems. The law states that such students are to be served in the least restrictive environment to protect them from being stigmatized.

The passage of P.L. 94-142, by the U.S. Congress reflected the growing dissatisfaction with the practice of placing handicapped children in self-contained special classrooms away from regular classrooms. This policy of the least restrictive environment is based on the premise that students with disabilities must be educated with children who are not handicapped to the maximum extent possible. Such laws have led to mainstreaming.

In 1995, Landrum and Singh evaluated the prevalence of emotional and behavioral disorders in American school-age children and adolescents as 11.8%. Of

those diagnosed, fewer than 1% of the school-age population have been identified as seriously emotionally disturbed and therefore eligible for special education services under P.L. 101-476. Landrum and Singh suggested that many students identified with serious emotional disturbance may not be receiving appropriate mental health, child welfare and/or juvenile justice services. They believe that in 1995 there was a critical lack of data on the characteristics of students with serious emotional disturbances who were referred to systems of care outside of the school. Current data reported in *The Centers for Disease Control and Prevention* tracks a rise in autism to one in every 150 school aged children in the U.S. (2007). These skyrocketing numbers present a serious challenge for the public schools.

A second complicating factor occurs when there are multiple diagnoses. Rock (1997) suggested that little attention has been paid to students who manifest coexisting symptoms of learning disabilities and emotional and/or behavioral disorders. His estimates of the incidence of concurrence--between 38% and 75% of students with serious emotional disturbance also have learning disabilities, and between 24% and 52% of children with learning disabilities have significant social and behavioral problems. The U.S. Department of Education (2000) reported that 23% of special education students had two disabilities and 9% had three or more disabilities. Of children with two disabilities, 24% had learning disabilities and emotional disturbance. Both estimates qualify this as a serious problem for the American public school system, and one that seems to be worsening because of more sensitive diagnostic tests and increased public awareness of these problems.

Landrum, T., Katsiyannis, A., and Archwamety, T., (2004) analyzed student data from the U.S. Department of Education's Annual Reports to Congress on the Implementation of the Individuals with Disabilities Education Act to assess patterns in the educational placement of students with emotional and behavioral disorders (EBD) and their school exit. They focused on student outcomes and participation in the general education curriculum to assess the relationship between placement and exit patterns from 1985 to 1998 for students with EBD. They evaluated general education classes, resource rooms, separate class placements and school exit patterns (graduation vs. dropout patterns) among students diagnosed with EBD. While rate of placement in separate classes showed a slight decline (35% to 31%) from 1985 to 1998, it remained the most common placement option for students with EBD. Placements in general education classrooms increased by only 8% (19% to 27%) for EBD students by 1998.

Their study of exit patterns focused on dropout rates versus graduation with diplomas between students with EBD and those with other disabilities. Dropping out was the most common means of school exit for students with EBD aged 14 years and older. Dropout rates showed only a slight decline over the first 4 years of the last decade, followed by an increasing trend for the remainder of the decade. The dropout rate for EBD students was about 40% greater than for students with all other disabilities. The overall rate of placement in general classes was lower for students with EBD (27%) than for students with other disabilities (50%).

To best serve the EBD student, multiple services are often recommended. These services including medical, psychotherapeutic, special educational and physical and

speech therapy are most effective when integrated and available over the long term. Short-term stays in different facilities undermine the possible value of multiple services. Therapeutic gain is also impeded by the inconsistency of various interventions when offered sequentially. Children whose serious disabilities call for long-term intervention must also deal with changing developmental issues from childhood, through adolescence and even into early adulthood. A well-trained staff representing a comprehensive array of professional skills produces the best outcomes when they work together with the youngster in a planned multilevel intervention tailored to the individual child. When all staff are trained in one approach that includes the philosophy, mission, theoretical framework and intervention methods of the program one would expect the best outcomes for children. Sanders has suggested that the therapeutic attitude of the milieu staff should “. . . use every effort to see the world from the [child’s] point of view. Once children or adolescents feel that they are understood, or that we are very interested in understanding, they are not only relieved, but eventually they begin to be willing to explain themselves to us more, and even perhaps gradually change.” (1989, pp. 29-30).

This research is meant to quantify the value of milieu therapy utilized at the Jeanine Schultz Memorial School, a private day program designed to meet the needs of the students whose emotional, behavioral and learning difficulties have lead to their dismissal from the public school system. The children in this sample demonstrate marginal behavioral and emotional adjustment, experience academic failure in regular public school, as well as adjustment problems in the home and in the community.

Little has been written on psychoanalytic milieu therapy utilizing an out-patient day school. The focus of most research (Pfeiffer & Strzelecki, 1990; Curry, 1991;

Zimmerman et al., 1993; Pfeiffer & Shott, 1996; Zimmerman, 1996) has been on residential school settings.

Residential programs provide twenty-four-hour-a-day care with a wide range of activities and treatment interventions to assist disturbed youngsters in dealing with life experiences in a consistent and productive manner. Establishing interpersonal relationships in the therapeutic environment is seen as essential for effective positive growth and increasing self esteem for successful treatment.

Shapiro (2001-2002) notes a major advantage of residential treatment is the availability of different treatment modalities. Since the youngsters have various backgrounds, personalities, and problems, a therapeutic milieu in a residential treatment center is often characterized by consistent rules and routines, program activities, group sessions, individual psychotherapy, conflict interventions, family treatment, parent groups, and special education. The classroom can become an additional environment in which to evaluate and enhance a child's behavior as the teachers participate in the student's treatment.

Noshpitz (1992) states, "In sum, then, residential treatment and the formulation of the concept of a therapeutic milieu confronts many of the same problems that engage psychotherapy in general." (p. 118).

The Jeanine Schultz Memorial School offers long-term interventions which coordinate multiple services such as: special education, psychotherapy, psychiatric/medical consultation, speech therapy, a breakfast and lunch program, adaptive physical education and vocational placement in a day school setting. The school accepts referrals of students from ages three to twenty one and infrequently to age twenty-four. Specific

interventions are designed to meet individual needs within the psychosocial developmental level of each student. This is especially important when the developmental stage lags well behind the chronological age.

The Director meets with his staff once a week to discuss each student. Specific interactions between the students and staff are reviewed on an ongoing basis. Each event is evaluated first for its immediate relevance to the here and now and then in terms of the historical relevance to the student's developmental level. On-going staffings ensure opportunities for staff development and therefore enrich the therapeutic intervention for the students. The Director also conducts a weekly conference with the Principal that focuses on general curriculum and technical issues of relevance to building design and educational interventions.

The milieu philosophy is expressed through the staff interactions that embody specific theory through methods of treatment and education in each interaction with students throughout the day. Each staff member, professional and nonprofessional, becomes a therapeutic agent within the corrective emotional environment. It is believed that such encounters result in therapeutic growth in terms of intrapsychic developmental structure and social maturation.

As noted above, specific interventions for educational and therapeutic problems in this school are tailored to the developmental, interpersonal, and intrapsychic level of each student over whatever period of time necessary to resolve fixation points and move the student forward to age appropriate developmental integration. The theoretical model for the treatment of psychodynamic issues is ego psychology within the object relationship framework. The therapeutic interventions focus on the relationships between

student and staff members. These concepts of residential milieu therapy have been modified to work within a day school setting.

An archival study of the Jeanine Schultz Memorial School records will compare entry and exit diagnoses, behavior and academic records over time for each student. Success of the milieu treatment will be evaluated for both academic and emotional/behavioral outcomes for three factors – age at entry into treatment, duration of treatment and complexity of diagnoses.

## CHAPTER II

### LITERATURE REVIEW

In the 30 years since the original Handicapped Children Act in 1977, there has been much concern with the quality of care for special education students that are reflected in the evolution of this field of research. This review of literature will focus on two variables central to predicting and evaluating success for special needs students: training for inclusion teachers and training for special students in mainstream classes.

Birch advocated mainstreaming as early as 1955 although he did not use that term. At the time, he saw the need for mainstreaming because there were few special education classes. Birch recommended providing services for Educable Mentally Retarded children in regular classes until special classes could be established. Birch later defined mainstreaming as “providing high quality special education to exceptional children while they remain in regular grades for as much of the day as possible.” (1974, p.2). The original concept of mainstreaming evolved into inclusion, which implied that special education students could be served in regular classrooms for the major part of the day and supplemental special education staff would be available on an as-needed basis.

Initially attempts to serve handicapped students following the mandate focused on students who had been segregated in special classrooms. They were integrated into the mainstream population for as much of the school day as possible. Guskin (1973) pointed out that a significant number of special educators felt that mildly handicapped children could be best served by mainstreaming them into regular classrooms with normal peers. Special services such as tutoring, consulting and crisis teaching could be offered as needed. In this model the special education teachers would be retrained as resource teachers. Although the administrative decision to mainstream followed the Federal mandate, it was in the regular class that the handicapped child usually began his schooling and failed. There was little preparation of teachers for mainstreaming and that was divided among affective, cognitive, and behavioral components. The consequences of moving seriously behaviorally and emotionally disturbed children into regular classrooms with poorly prepared teachers were not considered initially.

In response to the President's Committee on Mental Retardation (1970) action began to be taken to restructure the education of teachers, administrators, and counselors to equip those going into the field. The most crucial issue was changing teachers' attitudes toward handicapped children rather than concentration on instructional skills. Work by Brooks and Bransford (1971) exemplified that of the field. The results indicated that a concentrated effort to acquaint regular classroom teachers with emotional and behavioral issues of exceptional children was beneficial. Attitude shifts regarding special education were evaluated. There were significant changes in perceptions of several special education related concepts including – exceptionality, prevention, rehabilitation, IQ, ME, and integration.

Brophy and Good (1970) investigated the processes by which teachers communicate differential performance expectations to different children. An observational study of dyadic contacts between teachers and individual students in four first-grade classrooms was performed. The ethnic composition of the school was 75% Anglo-American, 15% Mexican American, and 10% Afro-American, representative of the area's general population. The four teachers ranked the children in order of their overall achievement. In each class, three boys and three girls high on the teacher's list and three boys and three girls low on the teacher's list were selected for observational study. The teachers demanded better performance from those children for whom they had higher expectations and accepted poor performance from students for whom they held low expectations.

Later work by Good and Brophy (1972) extended the earlier study. Here they focused on differential teacher behavior toward different students in relation to the attitudes teachers held toward those students. Data was collected in nine first grade classrooms of two hundred seventy children and nine teachers in upper-middle-class Caucasian, lower class Caucasian white, and lower class African-American families. Each teacher ranked her students according to the expected levels of achievement. Sixteen 2½-hour observations were made in each classroom using the Brophy-Good dyadic interaction observation system (Brophy & Good, 1970; Good & Brophy, 1972). Then teacher attitude data was collected through a mailed questionnaire. The four questions were as follows:

1. Attachment: If you could keep one student another year for the sheer joy of it, whom would you pick?

2. Concern: If you could devote all your attention to a child who concerns you a great deal, whom would you pick?
3. Indifference: If a parent were to drop in unannounced for a conference, whose child would you be least prepared to talk about?
4. Rejection: If your class was to be reduced by one child, whom would you be relieved to have removed?

The results indicated that teachers' attitudes toward children do correlate with differential teacher behavior. Teachers were found to provide attachment students with additional support in subtle ways as they were seen as high achieving and responsive. Low achievers appeared to be objects of teacher concern (especially if they were girls) or rejection (especially if they were boys). Children in the middle range of achievement were less salient to the teachers and were represented in the indifference category.

Children in the attachment group were seen as conforming and fulfilling the personal needs of teachers. Children in the concern group made extensive but appropriate demands of the teachers. The indifference group was comprised of students who were seldom noticed by the teachers. The rejection group was seen as making overwhelming demands of the teachers. These data show that classroom life is an uneven affair, with some students receiving much more teacher contact than others. Teachers' attitudes toward students will affect the quality and quantity of contacts they have with students.

A number of teacher preparation approaches to mainstreaming have been evaluated. Glass and Meckler (1972) focused on preparing elementary teachers to instruct mildly handicapped children in regular classrooms by means of a summer

workshop. They defined “mildly handicapped children” as mentally retarded, emotionally disturbed, behaviorally disordered, educationally handicapped, learning disabled, or brain injured. They were referred from the regular education programs because of teacher perceived behavioral or learning problems. Glass and Meckler developed an all-inclusive definition of “mildly handicapped” and called for a “zero reject model” to insure a place for all children in the mainstream of education. Glass and Meckler’s subjects were composed of 18 teacher trainees who participated in an 8-week workshop offered by the Department of Special Education at Indiana University during the summer of 1971. Thirty-eight children aged 12 years were enrolled in the workshop. Results indicate trainees saw themselves as more competent in their ability to teach mildly handicapped children in the regular classrooms and agreeable to maintaining such children in regular classes. Consistent with these attitudinal changes were perceived increases in specific diagnostic and remedial teaching management skills. In summary, they concluded that although specific skills and attitudes can be learned and practiced in a workshop setting, research is needed to determine if there is carry-over to actual classroom teaching. Further research should evaluate whether such procedures improve the status of mildly handicapped children in the mainstream classrooms.

Yates (1973) focused on the necessity of preparing regular classroom teachers to deal effectively with handicapped students in mainstreaming. Forty regular teachers from kindergarten through fifth grade participated in a program to provide special education preparation to regular classroom teachers. All but 3 hours of a 100-hour instruction used a laboratory/experimental approach as opposed to the traditional lecture method of instruction. Pre-and post test data for experimental and control groups

indicated a significant increase in the level special education information gained by the experimental group. The experimental group felt students of limited or superior intelligence and students with seizure states could be successfully integrated into regular classroom settings. They did not feel that children with significant behavioral or emotional problems could be integrated successfully.

Guerin and Szatlocky (1974) noted that studies to date had focused on the efficacy of special class versus regular placement, but virtually none had systematically evaluated the expectations of various ways of educating the retarded child in a cohort of nonretarded classmates. The controversy between regular and special classes has nearly obscured the fact that there are a wide variety of ways that integration can be accomplished. There are major program differences in such areas as who is integrated, how long they are kept in the regular classroom, what education system is involved, what teaching strategies are used and what support systems are employed. This study investigated the ways in which the integration of the mildly retarded student had been implemented in the public elementary schools of California. Grades 4, 5 and 6 were included in the study. Ages ranged from 9 to 13 years and intelligence scores ranged from 54 to 72. Student behavior was determined by direct observation and rated on Spaulding's Coping Analysis Schedule for Educational Settings (1967). The school districts were located in suburban, small city and rural areas. Data were collected and based on 20 to 30 ten-second observations of each special student, randomly selected students of the same sex in the same classroom during the same time period. The sample of students (27MR, 54N) and faculty (40), and administrators (16) was all small.

All but one of the administrators held positive attitudes toward integration. Teachers were less consistent. Positive attitudes were held by 62% of the teaching staffs, 19% held neutral attitudes, while 19% were negative. The amount of integration practiced by a school district was related to the type of plan that was chosen and the attitudes of the staff, rather than either the behavior or the intellectual ability of the retarded students in the school. Programmed partial integration was the method most frequently employed, but offered the retarded students the least amount of integration and the least amount of regular and special teacher support. The methods of combination classes and learning resource centers provided the student with a maximum amount of integration and also received the strongest regular and special teachers support. Retarded students who were integrated without careful selection behaved as “normally” as their regular classmates and as well as carefully selected retarded students. The staff that had the highest degree of “normal” expectations for their special students was in the fully integrated programs, which also showed greater student success. Because of the small sample size these results may not be widely applicable.

Johnson and Cartwright (1979) summarized the movement in special education through the 1970s. Their research on mainstreaming suggests teachers were often ill prepared both in terms of knowledge and attitude. They felt that mainstreaming would require training or retraining of regular school personnel due both to a lack of skills and negative attitudes. Johnson and Cartwright concluded that in the research they reviewed there was a consistent finding that regular teachers prefer special class placement rather than mainstreaming of children classified as mentally retarded, emotionally disturbed,

and learning disabled. The special education students were perceived as considerably below the class average in both social acceptance and academic achievement.

Using an experimental framework, Johnson and Cartwright investigated the roles of information and experience to improve teachers' knowledge and attitudes about mainstreaming. They compared the efficacy of single training sessions (either informational or experiential) with training that combined information and experience to ascertain which was most effective in improving prospective teachers' attitudes. The results revealed that the combined information and experience course did not surpass the information-only or the experience-only courses in improving general knowledge about mainstreaming the handicapped. No single course proved to be more effective than any other for improving general knowledge. However, the combination course and the information-only course were equal in effectiveness and surpassed the experience-only course for improving participants' attitudes.

The 1980s saw that the attempts to enhance teachers' skills and attitude toward mainstreaming had progressed to a limited degree. Crisci (1981) interpreted the slow progress as due to confusion about the specific skills or the general competencies needed by regular education teachers to accommodate difficult mainstreamed students into their classrooms. Aloia and Aloia (1982) recognized that providing each handicapped child with an appropriate education is a complex and multi-faceted process. One factor in selecting an appropriate placement for each child might be the attitude and expectations of the regular classroom teacher. Aloia and Aloia felt the use of the Teacher Expectation Questionnaire (TEQ) could facilitate the correct teacher selection process. The TEQ was designed to measure the initial expectations of the regular classroom teacher toward the

mainstreamed handicapped child in four areas. The first two areas examined Teachers' expectations of the child's academic and behavioral potential in their classrooms. The third area examined Teachers' perceptions of their ability to work with the child. The fourth area was a general attitude or stereotype scale (Aloia, 1976). The value of this instrument was primarily in making the initial decision about the placement of children with appropriate teachers. The authors noted that the long term effectiveness of the placement should be determined by ongoing monitoring of the child's progress.

Kerr, and Zigmond (1986) investigated the classroom standards and expectations held by regular and special educators in high schools, using a large sample of 220 regular educators and 24 special educators from three large urban high schools serving grades 9-12. The special educators worked with learning disabled, emotionally disturbed, and educably mentally retarded students in resource or self-contained classes in grades 9-12. Two of the high schools served lower middle-class, racially mixed neighborhoods, while the third served a lower class, predominantly Caucasian area.

Unexpected similarities were observed between special educators and regular educators in terms of holding similar expectations and agreeing on target behaviors. The exceptional items reflected that regular educators were more rigorous in their expectations and standards for classroom behavior, especially in the case of deportment. This finding was not surprising given that regular educators teach large classes and have fewer possibilities for individualization. For both groups, items such as rule following, listening to the teacher and complying with teacher requests received the highest rankings. The items viewed as intolerable included: inappropriate sexual behavior, stealing, aggression, and refusing to obey rules. The focus on acceptable classroom

conduct paralleled the findings from studies of elementary schools. Acting out behavior was particularly disruptive in normal classrooms and reduced time spent on academics for both teachers and students.

Yanito, Quintero, Killorn, & Striefel (1987) reviewed research literature on teacher attitudes toward mainstreaming, the implications of these attitudes for successful mainstreaming, and methods for impacting positive attitudes of teachers toward mainstreaming and toward children with handicaps. The most commonly used measure of teacher attitudes was the written questionnaire. Questionnaires provide quick, unobtrusive measures of self-reported attitudes and of expectations about mainstreaming and about the handicapped child. The findings indicated that a naturalistic observation method is the best data system for assessing a true picture of teacher behavior – of teacher behavior toward mainstreaming and toward people who are handicapped. There are often differences between a teacher's expressed attitude and his or her actions as observed by others. The discrepancy between expressed attitude and observed behavior can distort results if only self-report data are taken into consideration when determining how well suited a particular teacher may be for coping with the child with emotional and behavioral deficits.

Kauffman, Lloyd & McGee (1989) focused on teachers' attitudes and their technical assistance needs associated with adaptive and maladaptive behavior of children. The teachers who enrolled in an in-service course in behavior management served as subjects. Of a sample of 77 classroom teachers, 61 of the teachers (51 female, 10 male; 57 Caucasian and 4 African-American) returned questionnaires. The mean age was 39 years (24 to 56); mean year teaching experience was 15 years (range 1 to 35). The results

were congruent with previous findings indicating that these teachers were most concerned about control and order in the classroom and least concerned about students' relations with their peers. Teachers found maladaptive behaviors intolerable. Special and regular education classroom teachers did not differ significantly as groups in attitudes toward behavior and technical assistance.

Semmel, Abernathy, Butera, & Lesar (1991) surveyed 381 special and regular educators assessing perceptions and opinions surrounding the regular education initiative. Six school sites in central and southern California and 16 school sites in northern Illinois were selected. Results favored special education practices or pullout programs in elementary schools where students with special needs were serviced outside of mainstream classrooms. The data indicated that both regular and special education teachers were not dissatisfied with current special education delivery systems. They preferred that special needs students be dealt with by specially trained personnel.

Bell's 1992 sample included 152 regular full-time classroom teachers in the metropolitan school district (108 females, 44 males). Elementary and secondary teachers were equally represented and more highly represented than related arts and special education teachers. Teachers were asked to describe how students in programs for emotionally disturbed feel when encountering regular education situations. The students were then interviewed separately in open-ended questionnaires to solicit candid responses concerning regular classroom participation. The results showed that teachers felt they were not trained to successfully integrate students from programs for emotionally disturbed into their classrooms. The teachers agreed that students in programs for the emotionally disturbed are better served in self-contained programs.

Special education teachers did not believe they had the actual knowledge needed to integrate students from programs for the emotionally disturbed into regular classrooms. In the final analysis emotionally disturbed students were the least preferred of all handicapped students. The consensus among teachers was that these students were better served in self-contained programs for the emotionally disturbed because of their disruptive behaviors and predictable underachievement in regular classrooms. Most importantly, students diagnosed as emotionally disturbed preferred their classes for the emotionally disturbed more than regular mainstream classes consistently across age, gender, ethnicity and years in a special program. This was a particularly important finding because it evaluated the child's point of view about being mainstreamed.

Baker & Zigmond (1995) evaluated case reports among 4 dimensions: context for inclusion, model of inclusion, role of special education teachers, and educational experiences of students with Learning Disabilities. The five sites were located in five different states in either urban, suburban or rural locations. The results indicated that schools differed widely in terms of (a) who provided the leadership and motivation for the change in services, (b) how school personnel were selected to participate in the new model, (c) how Learning Disabled students were distributed into general education classes; and (d) and the nature of the special education that was provided. The success of the inclusion program depended on using involved personnel who wanted to participate. The critical success factor was use of special education teachers with specific skills in all observed inclusion models. However, "if special education is to be delivered within the general education classroom and through modifications of the general education curriculum, it is conceivable that the [use of] specially-trained teachers will diminish and

that school districts will seek to employ less expensive and less well educated individuals to assist in the general education class” (p. 179). The results of this work suggest that the success rates for L.D. students would decline in that situation.

Scruggs & Mastropieri (1996) analyzed responses to questionnaires for 10,560 teachers and other school personnel. The results indicated that although about half of the teachers felt that inclusion could provide some benefits, only one-third of teachers believed they had sufficient time, skills, training, or resources necessary for mainstreaming/inclusion.

Based on Good & Brophy’s original work (1970, 1972), Cook, Tankersley, Cook, & Landrum (2000) asked superintendents and directors of special education in six Ohio school districts to nominate one or two of the most highly inclusive elementary schools in their districts for participation. The final sample included 70 general education inclusive teachers, representing 92.1% of all the inclusive teachers at sample schools. Any student formally identified as having a disability who attended a general education class for any part of a typical school day was considered to be an included student with a disability. The exceptions were students receiving only speech and language services. Teachers were asked to nominate three of their students who represented the best response to prompts in four-attitudinal categories: Attachment, Concern, Indifference, and Rejection. Consistent with predictions based on a model of instructional tolerance, analysis indicated that included students with disabilities were significantly underrepresented in the Attachment category and significantly overrepresented in the Concern and Rejection categories. Greater experience teaching in inclusive classes was also associated with higher rates of Concern nominations for included students with disabilities.

Greshum (1982), focused on mentally retarded, learning disabled and emotionally disturbed children who have been mainstreamed. He refuted the assumptions that placement of handicapped children in regular classrooms will result in increased social interaction or acceptance between handicapped and non-handicapped children, or that mainstreamed handicapped children will model the behavior of their non-handicapped peers because of increased exposure. His results demonstrated that mainstreaming efforts have failed because handicapped children were placed in regular classrooms without special training on the requisite social skills crucial for peer acceptance.

Jenkins, et al. (1985), observed 43 preschool children, ages 3 to 6 years. Of these children, 36 were mildly handicapped having at least 25% measured age delay in at least two of seven developmental areas. Final results indicated four of six post-year measures of development (i.e. cognitive, pre-academic, language, and fine motor) failed to show significant differences between handicapped children in the integrated and segregated preschools. On a measure of gross motor skill, students in the segregated classes scored significantly higher than those in the integrated classes. In general, the data indicates that social interactions by handicapped children occurred no more frequently in the integrated classrooms than in the segregated classes. The overall findings suggest that although including normal peers in special preschools did not enhance the development of handicapped youngsters. It did not detract from their education. This small sample of mildly handicapped children saw no real gains from inclusion.

Johnson, et al. (1986), evaluated 72-sixth grade students (27 handicapped) and 51-fourth grade students (15 handicapped classified as learning disabled and emotionally disturbed). In Study 1 students received one hour daily instruction for 10 or 11 days in

cooperative, competitive, or individualistic lessons. The results showed that positive relationships between handicapped and nonhandicapped students occurred more during cooperative learning. Positive relationships between the two groups that resulted from cooperative learning techniques generalized into unstructured classroom activities. This small study did find limited social gains that transcended the classroom.

Bailey & Winton (1987) evaluated the expectations of families of both handicapped and non-handicapped children immediately prior to the introduction of handicapped children into a day care center that had previously served only non-handicapped youngsters. Only 42 families of the non-handicapped children were asked to participate and nine families of the handicapped children. Parents in the two groups both agreed that mainstreaming provided handicapped children with exposure to the real world and mainstreaming promoted community acceptance of the handicapped. Parents of handicapped children were less likely on the follow-up to agree that mainstreaming helped families of handicapped children learn more about normal development or that mainstreaming gave them more of a chance to meet and interact with families of normally developing children. Mainstreaming drawbacks suggested that parents in both groups felt that the children would not receive enough help from teachers, that teachers would not be appropriately qualified and that seeing handicapped children rejected would upset the families. Although small in scale, this study did evaluate important parental attitudes before and after experiencing mainstreaming.

Cole, K.N., Mills, P.E., & Dale, P. (1989) evaluated an intervention sample of 110 children, ages 3-7 years, who were in a pre-school special education class for cognitive and/or language delays. The students participated over the four years of the

intervention phase of the study and exited the intervention for at least one year. The interventions consisted of 58 students who received Direct Instruction in academic skills, such as language, reading, and math with the goal of maximizing academic learning time. The second group consisted of 52 students who received Mediated Learning curriculum which consisted of development of cognitive processes of input, collaboration, and output rather than the specific academic content. The students were followed up at 1-year post-intervention and again at 2 years post-intervention. The results demonstrated that children from both programs generally maintained or increased cognitive and academic skills following intervention. Neither program was superior overall. Significant differential effects were noted in the first year's follow-up, but these decreased by the second year post intervention.

Cole, D. A., and Meyer, L. H. (1991) evaluated 91 subjects between ages of 6 and 21 years, who had an estimated IQ no greater than 30, 55 in segregated specialized and 36 in integrated schools with regular and special education. Their mean age was 13.5 years ( $SD=3.3$ ). The effects of integrated versus segregated schooling on educational and social competence of children with severe Developmental Delays were examined across a 2-year period using both classroom observation and standardized child-assessment measures. The results demonstrated that no differences were found on a traditional measure of developmental skills. However, on a measure of social competence, integrated children progressed whereas segregated children regressed. This study highlighted again what seems to be a substantiated finding that the greatest gains of mainstreaming are increased social skills.

Cole, Mills, Dale & Jenkins (1991) studied 100 subjects (71 boys and 29 girls) who had mild and moderate disabilities with several overlapping categories. Eighty percent were delayed in language, 50% were cognitively delayed, 65% had fine motor deficits, 60% had delays in gross motor skills, and 60% exhibited social-emotional delays. Twenty-four normally developing children (15 boys and 9 girls) served as models in integrated classrooms. This study was conducted over a four-year period using preschool classes that met for half days (2 hours per day). Two classes each year were integrated (4 normally developing students, 8 students with disabilities), and two were segregated (12 students with disabilities). All students were randomly assigned to classrooms. This was a well designed study that provided an adequate intervention period. The results revealed that higher performing students gained more from integrated classes, whereas lower performing students gained more from segregated classes. The data suggests a need for careful monitoring of lower functioning students to ensure appropriate academic and social stimulation.

While many authors by the 1990s were concerned that some interventions on behalf of special education students were ineffective, Fuch and Fuch (1994) felt the full inclusionists needed to heed advice because,

their continued provocative rhetoric will polarize a field already agitated . . . that special education is in the process of dividing into opposite camps . . . the reactionaries who wish to eliminate special education . . . and rule out thoughtful self-criticism that can lead to constructive adaptations. (p.305).

Fuch and Fuch concluded that,

Special education...must redefine its relationship with general education. Now is the time for leadership that . . . looks at general education with a sense of what is possible, respects special education's traditions and values and the law that undergirds them; and seeks to strengthen . . . other

educational options that can provide more intensive services, to enhance the learning and lives of all children. (p. 305).

This rhetoric captures the essential finding of two decades of research.

Kauffman, Lloyd, Baker and Riedel state,

Nearly all teachers have at least one student who fits the current federal definition of . . . having an ‘emotional disorder.’ Such students may be severely antisocial, aggressive, and disruptive. They may be socially rejected, isolated, withdrawn and nonresponsive. They may show signs of severe anxiety or depression or exhibit psychotic behavior. They may vacillate between extremes of withdrawal and aggression, and they nearly always have serious academic problems in addition to their social and emotional difficulties. These students’ problems are severe, pervasive, and chronic – not minor, situational, or transitory. In many appeals for restructuring or reforming special education, the call is for inclusion of all students with disabilities. No attempt is made to segregate the population into those with cognitive deficits due to developmental delay vs. emotional problems. It is informative to consider the nature of the problems faced before inclusion of all students with emotional or behavioral disorders in regular schools and classes becomes a reality. (1995, pp. 542-543).

United States Department of Education (2000) statistics showed that less than 1% of public school students were identified as having emotional or behavioral disorders.

The majority of these students are now served in separate classes or facilities. If as Kauffman (1995) suggested there is a seriously disturbed student in many classes then regular classroom teachers need to be prepared to teach and manage those students with emotional or behavioral problems. This is particularly true if special education classrooms are going to be eliminated.

Singh & Landrum (1994) review demonstrated that during the 1990-91 school year, over 392,000 students in the United States were identified as seriously emotionally disturbed (SED) and eligible for special education services under the Individuals with Disabilities Education Act, P.L. 101-476. Many professionals feel the actual number is three to six times greater. Children and adolescents with SED continue to be served in

restrictive settings such as psychiatric hospitals, juvenile justice learning centers and residential treatment centers even though the effectiveness of such treatment is equivocal. Very little is known about the characteristics of children who are admitted or need psychiatric services, or for whom such placement may be the most therapeutic, short-term treatment option. The field has few longitudinal studies of predictor variables for placement and treatment outcomes for children and adolescents with SED.

Singh, et al. (1994) study was meant to provide preliminary information on the characteristics of children and adolescents with and without SED diagnoses who receive partial hospitalization and inpatient psychiatric services. Two trained research assistants reviewed the medical and educational records of 250 subjects and collected demographics, treatment history, psychological, and educational data for each admission. The students' educational records were reviewed to determine whether they were served in regular-education programs prior to their admission to the hospital, or receiving special education services for one or more disabilities. Those students with disabilities other than SED were grouped together and labeled other disabilities (OD) for purpose of data analysis.

The characteristics of children and adolescents labeled SED and OD were compared to those of students in regular education on all variables. Of the 250 children and adolescents, the school system identified 46% (N=116) no disabilities, 36% (N=91) as SED, and 18% (N=43) as OD (e.g. LD, mental retardation, hearing impairment). The majority of the sample were boys 68% (N=168). Boys with SED outnumbered girls with SED by a ration of 4 to 1. The average age of the sample was 11.6 years in all three groups. The majority of students were either Caucasian (56%) or African American

(40%) and (69%) lived at home prior to admission and were discharged to their own homes (68%) after treatment. Of the total sample, 56% had previously been admitted to a psychiatric hospital. The SED group had significantly more prior inpatient and outpatient psychiatric admissions. The majority of the sample had no history of alcohol (80%) or drug abuse (85%). Similarly, 90% of the total sample did not have a criminal history. This sample suffered significantly higher levels of pathology than studies previously reviewed.

The three most frequently diagnosed psychiatric disorders in the total sample were disruptive behavior disorders, mood disorders and ADHD. In order of prevalence, mood disorders, disruptive behavioral disorders, and ADHD were diagnosed most often in the regular education group, and disruptive behavioral disorders, ADHD, and mood disorders in the SED and OD groups. The category of disruptive behavioral disorders was the most prevalent psychiatric diagnosis for children and adolescents with SED who are served in the community. Nevertheless, while mood disorders was the major psychiatric problem of the regular education students, over 28% of the SED group were also diagnosed with mood disorders, generally major depression. This challenges the belief that students with SED are primarily externalizers, rather than internalizers.

Singh, et al. (1994) concluded that although there were acknowledged differences between students with SED and regular education students who need or receive psychiatric services, the difference was more of degree than of kind. The regular education students, as well as the students with OD, exhibited problems similar to those students with SED. Whether they were classified by their respective schools as SED or not, all children in this sample needed psychiatric services. Their problems were

perceived by their teachers, parents, mental health professionals, or the courts as serious and complex enough to warrant admission to a psychiatric hospital. The prevention implication was that children at risk for psychiatric disorders and behavioral or social maladjustment need a continuum of services that includes early identification and comprehensive treatment services. If precursors to serious problem behaviors can be reliably identified and preventive community-based services provided, there would be hope that the next generation of children and adolescents. With SED, may not need restrictive, out-of-home treatments.

Kauffman & Willis (1995) in anticipation of an increase of more difficulties in students reviewed the strategies that research and experience have shown to be effective. Successful programs for students with emotional or behavioral disorders include measures to control disruptive behavior so the teachers will have an opportunity to teach academic and social skills. Offering a curriculum that helps students learn self-control, attain academic competence, and acquire employment-related attitudes and skills for community adaptation is imperative. Special education and mental health services for student's emotional and behavioral disorders have been known to produce significant gains. Kauffman calls for:

1. Systematic, data-based interventions with specific problems exhibited by individual students which are implemented with a high degree of fidelity;
2. Continuous daily assessment and monitoring of progress;
3. Multi-component treatments which are coordinated and mutually supportive as opposed to piecemeal or provided in isolation;

4. Provision for frequent guided practice of academic and social skills giving students frequent practice and coaching in actual skills in a safe setting that avoids failure;
5. Programming for transfer and maintenance-interventions that can sustain skills in environments other than school; and
6. Commitment to sustained intervention.

Kauffman concludes that knowing what is needed to help students is not the same as being able to provide it. His research revealed the need for well trained, experienced and mutually supportive personnel located in close physical proximity to one another with a very low pupil/staff ratio (approximately 5:1 for students in day or residential treatment for the most severely disabled students). Kauffman states, “not only are these conditions seldom met, but we suspect that very few school systems, let alone regular classroom teachers, will ever be prepared or willing to accept some students with emotional or behavioral disorders.” (1995, pp. 544-545).

Conderman, Crawford, & Frankenberger (1996) advocated the use of team approaches for working with children with disabilities. They describe to three different team approaches:

1. The multidisciplinary model had members from various disciplines working independently with the student or family. Team members using this model tend to work in isolation as they evaluate students and so may fail to consider the whole child. When these professionals from different disciplines meet, their recommendations were often complex and conflicting.

2. The interdisciplinary model allowed more interaction among team members as programming decision are made by the group, even though evaluations and interventions are usually conducted in isolation.
3. The trans-disciplinary team approach used a joint team approach that assumes the team members provide their services together.

Regardless of the actual model used, the ability to work collaboratively and effectively with team members is believed by many educators to be a prerequisite orientation for any effective intervention.

Chow (1999) discussed the pros and cons of total inclusion and introduced the concept of equifinality to evaluate the value of this approach. He states, “When one is brave enough to run the theoretical gauntlet of including disabled students into regular classrooms, one will be bewildered to discover that there are basically two camps fighting for theoretical recognition. As a cost-cutting measure, administrators and politicians fling their support behind the inclusionist camp wholeheartedly, while others believe that children with disabilities require individualized education, the LRE (least restrictive environment) camp.” (1999, p.1).

The principal of equifinality referred to “sameness of treatment” which is generally accepted as the safeguard against discrimination as it transcends cultural and racial lines. Children of school age were guaranteed equal access to education, regardless

of their sex, color, religion or nationality. However, Chow feels, this became meaningless if education were not delivered in a way that could nurture both disabled and nondisabled students equally. The best educators provide students with school environments that are conducive to learning as well as providing adequate resources to maximize individual student development. What is appropriate for one child with disabilities would not necessarily be appropriate for another eligible child, and neither of those solutions is likely to be appropriate for a normal child. Balancing the special needs of a few against the well being of the majority becomes a delicate balancing act. Chow stated that emphasis on equality that promotes sameness of treatment may compromise the disabled students who require more individual attention than the nondisabled students. Schools operating on stringent budgets find these mandates hard to fulfill.

Scott, Vitale & Masten (1998) recommended helping students with disabilities through the use of instructional adaptations that facilitate learning. Instructional adaptations required teachers to implement alternative teaching actions such as modifying materials, assignments, testing procedures, and grading criteria to enhance the success of students with disabilities within general classroom population. This raised the question of the practicality as it assumed ease of use, implementation knowledge and skills of teachers, the time and effort involved, and support resources provided for the teachers. In one study (Johnson and Pugach, 1990), elementary teachers considered 57 different interventions as reasonable. The only interventions that were questioned were removing the student from class or dealing with each student on an individual basis. The adaptations found most feasible were those that involved students in the class as a whole and provided reinforcement and encouragement. Another salient finding of this research

was that teachers' ratings for adaptations were positively correlated with their ratings for willingness to implement. This makes sense as no one would endorse a method they were not capable of adapting.

Gay (1997) reviewed earlier work that emphasized identifying and assisting school children with developmental tasks. The Daniel Prescott's Child Study Program at the University of Chicago (1935 to 1950) described the drive toward growth of the person with the concurrent demands of family, school, peer group, and community. Gay indicated that this approach was adapted from a program originally developed by Daniel A. Prescott, Fritz Redl, Caroline Zachery and others at the Universities of Chicago and Maryland in the 1940s. The resultant "life adjustment tasks" was also referred to as "developmental tasks." The focus was on education and developmental tasks in educational psychology, corrections and rehabilitation. Developmental tasks require that one chooses one's lifework, one's mate, friends and philosophy of life. The child needs to accomplish these developmental tasks because of his own aspirations and to respond to the demands of family and society. The tasks are related to his physical and emotional maturity level rather than to his chronological age. He proceeds from birth to death taking on tasks of learning, social roles and achievement which must be mastered to make normal progress. A developmental task assumes an active learner interacting with an active social environment. The tasks arise at a certain periods in life and lead to success or failure of the individual. The sequence of developmental tasks confronting children and youth include managing a changing body, effectively functioning in ones' culture, developing and maintaining interpersonal relationships and becoming an individual with a personal sense of values and the ability to love.

The basic goal of this educational approach was to present the benefits of identifying and assisting school children with their developmental tasks for school personnel. This may be a more effective approach with seriously disturbed children. Focusing on broader life issues might insure a more successful approach to their eventual integration into adult society.

Inclusion of all students with emotional and behavioral disorders requires answers to the following questions: How will nondisabled students be affected by the modifications of the regular classroom that are necessary to manage and teach students with emotional and behavioral disorders? How will schools justify to parents the placement of students known to be highly volatile, disruptive, and perhaps violent into regular classrooms? As special schools and classes are eliminated as placement options, what alternatives are most likely to be used for these students? What will be the benefits to students with emotional or behavioral disorders of being included in regular classrooms? What training would be sufficient to allow regular classroom teachers to deal with these students? What additional support services will be provided to regular classroom teachers? How will the success of inclusionary programs be assessed? Despite mandates which evolved that require educators from various disciplines to assess children, plan appropriate interventions, and collaboratively work as a team, few teacher preparations programs offer clinical practicums or coursework aimed at developing these competencies.

A review of the literature makes clear that teacher attitudes toward emotionally and behaviorally disabled children both impact success of mainstreaming in classrooms. The skills and experience level of the teachers also contribute to the success or failure of

the special education students. Many types of training aimed at teachers mandated to accept special education children in their general classes have been implemented and evaluated. Those that give substantial experiential modeling and include attitude change components work best to prepare teachers to accept the new students. Evaluations of teacher, student and parent outcomes demonstrate that general education teachers prefer to integrate high and low IQ students and those with mild or time limited difficulties (such as seizures) rather than students with severe emotional and behavioral problems. Students with severe problems prefer segregated classroom with specialized services in at least one study. Many studies indicate that poor outcomes result when such students are mainstreamed. Parents in one study had high expectations for the normalizing influence of mainstreaming on their special needs children. Overall mainstreaming seems to provide some social gains and least academic loss when students suffer from mild disorders (such as mild retardation). When the student has significant emotional problems combined with disruptive behaviors, teachers, parents and even students would choose specialized classrooms that provide individualized treatment.

## CHAPTER III

### THEORETICAL FRAMEWORK

Psychoanalytic theory models the impact of emotions on development and functioning. Two fundamental premises concern the principle of psychic determinism and the principle of unconscious mental processes. Psychic determinism suggests that no mental event happens by chance. Each psychic event is determined by the preceding one. The centrality of the unconscious principle is reflected in the proposition that consciousness is the exception rather than the rule of psychic processes. These two hypotheses, expressed as metaphor, are guides that determine all subsequent theorizing concerning the psychic apparatus. (Brenner, 1955, 1982 & Freud, 1958).

Unconscious forces, prompted by developmental events, impact emotions that are subsequently driven from the patient's awareness. The concept of psychic energy is assumed to be part of the drives and seen as being invested in a particular object or person. Freud (1953, 1955, 1959, 1962a, 1962b, 1963, 1964, 1966,) defined cathexis as the amount of psychic energy that is attached to the mental representation of a person or thing. Memories, thoughts and fantasies of the object, referred to as mental representations, are cathected. The greater the cathexis, the more important is the object.

Drives are directed toward these cathected objects. A prime example of this is the mother who is a source of instinctual gratifications for the child. Freud postulated these drives have a genetically based development system from infancy to adulthood.

Freud labeled these forces “resistance.” These prevent the patient from becoming aware of events and emotions. Recognizing resistance entails a dynamic understanding of unconscious processes. Resistance must be overcome in order for the memory to be recalled. Freud believed those unconscious thoughts were wishes. During a traumatic event, the wish contradicting the patient’s ego-ideal might cause guilt and emotional pain. As a result the wish might be repressed. These repressed wishes might then be expressed as a neurotic symptom. The therapist’s function is to restore the wishes to consciousness so that the patient can deal with them realistically.

Freud developed methods of free association, interpretation of dreams, and slips of the pen and tongue to uncover unconscious material. Freud’s work, *The Interpretation of Dreams* (1900) reflected his Topographic Model of Drive Theory and also reflected his belief that the dream was the royal road to the unconscious. Freud, focusing on sexual development in his *Three Essays on Sexuality* (1905) presented the sequence of sexual drive from infancy on. These stages of oral (first year and a half of life), anal (next year and a half of life) and phallic (about the third year of life) were described as psychosexual development in the child. The three stages led to the adult stage known as the genital phase. Each stage had the task of reducing biological tension through the sexual organs of the mouth, anus and genitals respectively. These stages were influenced by constitutional and environmental influences within each child as the manifestations of the sexual drive took place. Freud was less clear about the aggressive drive but linked it

to repression of the sexual urge. Freud's earlier topographic theory or hypothesis was later developed into the "structures" of the id, ego and superego (1923). The id comprised the psychic representations of the drives. The ego consisted of functions having to do with the individual's relation to his environment. The superego was comprised of moral precepts and ideal aspirations. In the structural model, ego and superego functions remain largely conscious.

In 1926 Freud developed a new theory of anxiety related to traumatic and dangerous situations which flooded the ego with stimuli from the id. These could not be discharged effectively. Typically dangerous situations are loss of the object during the oral stage, loss of the object's love during the anal stage, loss of the genital organ during the genital stage and subsequently guilt once the superego is formed. Freud asserted that anxiety was the central problem of mental illness. He viewed neurosis as an outcome of inadequate sexual development, particularly an unsuccessfully resolved Oedipal conflict. If the libido is prevented from obtaining optimal satisfaction during one or more of the developmental stages because of frustration or over indulgence, it may become fixated or arrested at that particular stage. This fixation in libido expresses itself through the character traits that reflect the earlier level of development.

#### Psychodynamic Theories of Bettelheim

Throughout Bettelheim's writings on theory and practice, he refers both to Freud's classical psychoanalytic topographies of unconscious, preconscious, conscious and to the three agencies of id, ego, and superego. From this standpoint, Bettelheim can be seen as a classical drive psychologist. Over time, Bettelheim came to be seen more

accurately as a pluralist as his writings broadened to include the ego psychology tradition. Bettelheim focused on both intrapsychic and interpersonal phenomena in his explorations of emotional conflicts in seriously disturbed children.

This integration of the intrapsychic and interpersonal aspects of human development can be seen in Bettelheim's writings. In *Love Is Not Enough* (1950), he described his approach as mainly psychoanalytic following the direction of Aichorn's work in the institutional treatment of delinquents, as well as the writings of Sigmund and Anna Freud, and Fritz Redl.

Bettelheim clarifies that,

In general, when applying our theory to practice, our approach is more concerned with strengthening the ego than with bringing unconscious tendencies to light, although we must do the latter as well. This we do by supporting the ego in its efforts to control instinctual desires and its strivings to master the problems of reality. These remarks are not meant to imply that strengthening the ego and making conscious the unconscious are contradictory . . . in supporting the ego in its battle with the id we must often bring to consciousness the nature and direction of instinctual tendencies and show the child how much damage might result if those tendencies were never to be checked. The difference is one of emphasis, not of kind . . . This strengthening of the ego through experiences in which problems arising out of everyday occurrences are handled successfully, bringing to awareness of unconscious tendencies as a step toward controlling them, is the opposite only in method and not in essence of classical psychoanalysis. Classical analysis, of course, concentrates on bringing the unconscious into consciousness as a step in undoing resistive repressions. (1950, pp. 36-37).

Bettelheim (1950) accepted fully Freudian theories of the structure of human personality and development but he utilized a very different method conditioned by the problems he faced in treating disturbed children. These problems were less a matter of rigid inhibitions but more of incongruous development, misinterpretation of reality and poor self-control in nonverbal autistics.

Bettelheim's second book, *Truants from Life* (1955), was essentially an extension of the theoretical framework with the addition of Erikson's (1950) lifelong developmental model based on successful and unsuccessful resolutions of stage dependent social tasks. In a subsequent book, *The Informed Heart* (1960), Bettelheim considers the limitations of the psychoanalytic theory of personality "because it overstresses the importance of the inner life to the neglect of the total man as he deals with his human and social environment." (p.21). This can be seen as an extension of Freudian theory – much like Erikson's. Bettelheim's life work centered on the application of psychoanalysis to social problems. He had the opportunity to observe the impact of psychoanalysis on two autistic children whom he lived with for several years as part of their treatment.

Bettelheim recognized that,

For very disturbed persons the impact of classical psychoanalysis is not enough to promote the necessary personality changes; the impact of psychoanalysis itself, or of a life organized on its basis, had to be in effect all the time, not just for one hour of the day ...It had to be an environment that offered meaningful human relations, satisfying living conditions and significant goals, not simply an application of psychoanalysis to the life they already knew." (1960, p.11).

This is the first description of what will later be known as milieu therapy.

Bettelheim's experience as a Jewish inmate in a Nazi concentration camp during WWII prompted a profound awareness of the tremendous impact of environment on behavior and personality. The impact of the concentration camp undid within a few weeks what years of a useful and successful analysis had done. He saw rapid changes taking place in his behavior and personality. Up to this point, Bettelheim believed that the personality-shaping influence of the immediate family was all-important and that

society in the broader sense was relatively negligible by comparison. He also believed that nothing compared to psychoanalysis for freeing the individual and guiding him to higher integration. The camp experience taught Bettelheim that the cohesive environment could turn personality upside down in mature adults as well as in small children.

Psychoanalysis is not the most effective way to change personality. Being placed in a particular type of environment can produce much more radical changes, and in a much shorter time. Psychoanalytic theory was inadequate to explain fully what happened to the prisoners . . . Applied within the appropriate frame of reference it clarified much. Applied to phenomena outside of its province, it distorted their meaning instead of clarifying them. (1960, pp.18-19).

Like Frankl in *The Doctor and the Soul*, the impact of being threatened constantly with torture, starvation and death provoked strong, immediate, and radical personality changes in seemingly well-balanced adults. Frankl observed that people could sink to modeling their guards and become viciously violent turning on their fellow prisoners. Or they could become heroic and model humane behavior for their inhuman tormentors. This extreme experience profoundly impacted Bettelheim's assumptions about treating children.

Bettelheim, having modified his thinking about psychoanalysis based on Drive Theory in terms of environmental experience in the concentration camps, turned to other psychoanalytic paradigms for further understanding and conceptualization. Being a product of his times, he initially turned to the pioneering work on ego psychology by Anna Freud, Heinz Hartmann, Erik Erikson and Fritz Redl. Bettelheim simultaneously turned to works on Object Relations and in particular, Margaret Mahler's contributions. Bettelheim was faced with the task of being a classically trained Drive psychologist with

a need for assessing newly developing paradigms in his quest for treating serious emotionally disturbed youngsters in need of both psychotherapy and social adaptation for both the youngsters as well as the staff members caring for them.

Hartmann (1950, 1958, 1964) saw the ego in more expansive terms than many of his predecessors. He suggested that the ego was an important autonomous force and its energy was not necessarily derived from the id and regulated by the superego, as Freud thought, but rather both ego and id originate in inherited predispositions that follow independent courses of development. Hartmann focused on the synthesizing and integrative ego functions (e.g. perception, attention, memory, rational thought and action) vis-à-vis normal behavior. He suggested that certain activities of the ego are conflict free; the ego is not always in conflict with the id, external world, and superego. The ego also has the capacity to neutralize sexual and aggressive energy so it can use regression in the service of the ego. Hartmann's contribution to adaptation suggests that the organism changes the environment in order to make it more agreeable and then changes itself to adapt to the changes it created. This is a continual process of mastery, molding and synthesis. In its synthesizing function, the ego integrates and reconciles conflicts between itself, the id, superego, and the external world, as well as conflicts within itself.

Erikson (1963) identified the ego as having the overall unifying purpose of rendering coherence to experiences, conscious or unconscious, and leading to consistent behavior. According to Erikson, the ego has the positive role of maintaining effective functioning rather than just the negative role of avoiding anxiety. Erikson, like Hartmann, sees defenses as adaptive, as well as maladaptive. The defenses represent the ego's ability to deal with stress, resolve conflict, recuperate and contribute to identity.

Erikson's approach enhances Freudian analysis by positing the ego as a creative problem solver throughout the entire life span. The ego emerges out of, and is impacted by the genetic, social, cultural and historical influences upon each individual. Much of Bettelheim's post-camp theorizing reflects Erikson's vision.

Erikson defines the ego as creative and adaptive in its synthesizing efforts to integrate the body, mind and social processes. He transformed Freud's psychosexual stages of development into psychosocial stages by making explicit the social component suggested in Freud's theory. One is able to recognize Hartmann and Erikson's influence on Bettelheim in terms of expanded ego functioning as it deals with conscious and unconscious psychosocial developmental issues within the context of milieu therapy.

Redl (1951, 1952, 1957) while recognizing that Bettelheim's term for milieu therapy required embedding the child in a total environmental design for treatment, broke down the concept of milieu into many time limited facets. Redl conceived of milieu therapy in terms of a non-residential approach. He felt that in all cases "environmental stimuli" were expected to do the treatment job in conjunction with the therapist. The milieu should be designed so at least some aspects of the child's environment fits the whole child in a favorable way. The whole child in a total life situation is dealt with for only a short time span. With children, treatment invariably means acting, in addition to talking or fantasizing. This calls for an understanding of ego development because the problem of reality - contact and the question of control functions are immediately involved. The therapist must gauge the capacity of the child's partially disabled ego to cope with symptomatic issues such as acting out before encouraging overt expression of aggressive impulses. He felt their pathology was tied up with disturbances in the ego

functioning. Support for the ego was needed to survive treatment through a total treatment design.

Bettelheim (1967) refers to Mahler (1965) regarding early infantile and childhood development in terms of diagnostic and treatment issues. Mahler studied both severely disturbed and normal children. He described a series of developmental stages from the fourth month of life to a stable self-concept developing near the end of the third year. He called this process' separation-individuation during which the ego develops from a state of primary narcissism to recognition of the external environment. Mahler explored the roots of ego development by focusing on the interaction between the infant and primary caregiver. Bettelheim (1967) while recognizing Mahler's (1965) significant contributions of the child's symbiotic relations to the mother disagreed: "it is erroneously assumed that any mother-child relationship is so valuable that it must be salvaged, even when it is damaging to the child" (p. 408).

Object relations theory and ego psychology are closely allied and can be appropriately integrated as mutually complimentary paradigms. In general the object relations theorists emphasize interpersonal relationships, while the ego psychologists emphasize conflict between intrapsychic structures (id, ego and superego) and their defense mechanisms. For example, in ego psychology infants' early experiences with caretakers are called object relations. Object relations theory recognizes that from birth onward individuals relate to other people and form important attachments that influence psychic structure and, in effect, ego development. Object relations theorists seek to understand this interaction between intrapsychic dynamics and interpersonal relations. Thus, ego psychologists are concerned with object relations and object relations theorists

are concerned with ego development (Engler, 1991, Pine, 1985, Greenberg, J. & Mitchell, 1983).

Pine (1985) states that,

In the child's personal and internal drive, ego, object, and self psychologies...it is impossible, except artificially for the sake of exposition, to tease out simple threads of development that clearly represent one domain or another. We come to a time when every psychic act has to be conceptualized in terms of multiple function. (pp. 64-65).

Pine, in pursuing this integrated task, draws upon Waelder's (1936) concepts of multiple function. It is based on the premise that actual life experiences demonstrate development is shaped in diverse ways. Multiple function reflects how specific behaviors accrue new functions and how all behavior becomes interrelated over time. Waelder (1941) felt psychotherapists had the opportunity of observing that if one's internal difficulties have been removed, the external situation, though unchanged, often prove to be no longer unbearable (e.g. a person's inability to obtain employment may be due to underlying dependence needs). He focused on the interplay between the person and his environment.

The integration of ego psychology and object relations theory is further clarified when Bettelheim (1967, 1974) refers to Anna Freud's (1954) description of a schizophrenic adolescent girl who requested that her analyst be with her the whole day because she saw herself as a different person with him, in school and with her foster family. Bettelheim referring to Kanner (1943) advised that such children be placed outside the home with warm, understanding persons. Anna Freud (1954) suggested that these children require a therapist who offers herself in the flesh as a steady, ever-present object so the child's personality could be unified around this image. Anna Freud

understood basic deficiencies in the child's ego structure resulting from lack of sufficient opportunities to introject any one object. Initially it was difficult for Bettelheim to modify his approach from classical psychoanalysis because this model had guided his own development. However, Anna Freud's clarification helped Bettelheim redefine analysis from a narrower to a broader concept.

### Bettelheim's Milieu Therapy

As noted above, his experiences first in the concentrations camps and later at the Orthogenic School forced Bettelheim to reexamine the classical model. Central to this reevaluation was his observation that it was not uncommon for the environment to precipitate significant changes in personality. This perception strengthened Bettelheim's conviction that personality development is rooted as much in society as it is in biology and early caregiving experiences. The crucial issue for Bettelheim was identifying how malleable personality traits might be, i.e., which aspects of personality can change, and which remain relatively unchanged by radical changes in the environment. This work led to the development of milieu therapy. "I had to learn once again that love is not enough; that the good life can be achieved for individual and society only if, in addition to 'love,' it is also based on the constructive, healing, personality building (not just ego building) propensities of work." (1960, p. 31). While Bettelheim felt Freud "developed a superb theory of libido (sex, aggression) he left us too small a theoretical frame of reference for understanding the nature and importance of lasting human attachments, and of work within his system." (1960, p. 26).

The Sonia Shankman Orthogenic School of the University of Chicago was established as a residential treatment facility for the rehabilitation of children with very severe emotional disturbances. It also functioned to conduct research and to train staff (Bettelheim, 1955). Bettelheim became the Director of the School in 1944, shortly after he left Europe and the adverse experiences of the Second World War (Bettelheim, 1960). His work with autistic children there established the program as a world-renowned treatment center for serious childhood disturbances. According to Bettelheim,

The success of a therapeutic milieu depends on the soundness of its view of man, and the realm of experiences it offers to the patient to restore him to mental health; in short, on its philosophy. Yet even the best theoretical understanding of what is involved in such restoration will be ineffective if it is not developed into the right practice. Only individual persons can do this, though they can be aided (or impeded) by the organizational structure. Whether or not the institution achieves its purposes depends on whether it is staffed by the right persons, working within the right organizational setting. (1974, p. 355).

Bettelheim's primary concern was to understand and motivate staff members to achieve the professional and attitudinal skills needed to achieve personality change within a therapeutic milieu. He assumed that,

Not everybody who is attracted to helping psychotic patients can live up to the demands, both of devoting oneself to others and of changing oneself. While helping others in order to help oneself, if one is sincere about helping oneself, is not such a bad motive for therapeutic work, the rock on which they run aground is that of frozen defenses of which they don't dare let go. (1974, p. 357).

To define the effective therapist, Bettelheim (1974, p.355) utilized both Erikson's concept of generativity and Maslow's definition of self-actualization. Erikson's (1963) psychosocial stage of Generativity versus Stagnation occurs during the middle years of twenty-five to fifty. It entails the ability to be productive and creative in life, especially with regard to the welfare of ensuing generations. Maslow (1970) refers to self-actualization as the desire to fulfill one's unique potential. Meeting such goals allows one to experience contentment and peace within oneself. For Bettelheim participating in a therapeutic community is one way of achieving higher integration for oneself.

Second to the staff, Bettelheim (1974) felt that the design of the physical structures and the internal organization of a mental institution would be best if one applied psychoanalytic thinking to its development. Fifty years ago the field did not have a definitive and successful model for working with autistic children, nor an understanding of how the entire environment impacted personality development. Bettelheim indicated that psychoanalysis by itself was not the treatment of choice for patients in need of residential care. However, since there was no better body of theory available at that time to explain the lives and minds of psychiatric patients,

psychoanalytic understanding of human behavior was the best source to begin thinking about institutional design.

Milieu Therapy utilizes the integrated efforts of the total staff as well as the structure and decoration of the building and every aspect of the program. (Bettelheim, 1950). In this model each interaction by every staff member has the potential for therapeutic advancement and should be directed by that design. The underlying theoretical concepts utilized by Bettelheim were psychoanalytic, emanating from classical drive psychology modified by the application to milieu therapy. Such modifications were required due to the patient's limited intrapsychic development. The majority of children were not at the Orthogenic School because of repressive or defense mechanisms that interfered with the normal process of living. Some children were devoid of repression and hardly socialized at all. Others' defensive efforts had failed completely and they were totally withdrawn, not speaking or eating. The treatment was meant to bring some intelligible order out of chaos. The reorganization of disjointed personalities was secondary, and came much later, if at all.

Bettelheim said,

Although some also suffer from having had too much to repress, and although all of them have worked out pathological defenses for themselves, the most important reason for their inability to get along in the world is their having failed to organize their personalities from the very beginning . . . their living experiences have failed to coalesce and stayed fragmentary to such a degree that no more than the rudiments of personalities have developed. (1950, p.27).

Bettelheim's approach to bringing order into the child's personality relied mainly on the child's desire to get along in a world that provides him with ample satisfaction of all needs. Bettelheim felt that a child has to be convinced that contrary to his past

experiences, this world can be pleasant. Once the impulse to join the world becomes part of his personality, then the child could learn to accept the less pleasant aspects of life. In normal development the child is only expected to learn to control his behavior, and to tolerate lack of immediate satisfaction after an adequate experience of having his important needs satisfied. It is through the satisfaction of his needs that the child forms positive relationships with the adults who provide for his well being. He identifies with this adult and the identification forms the nucleus for organizing his talents, interests, and desire, out of the chaotic inner life.

Bringing order into chaos, in a therapeutic milieu is based on daily experience with adults who provide the child with models of reasonable and orderly living. This challenges him to take up their pattern—first in his external and then in his internal life. Bettelheim indicated that many of the residential patients had never formed a meaningful relationship. They must rely on the staff for their primary relationships.

The Orthogenic School incorporated the concepts of milieu therapy into the school setting because most children entered the Orthogenic School with an “active aversion to learning, to going to school or to any pressure to do so.” (1950, p. 133). He claimed that even children who did well academically before they came to his program were afraid of school because they never got along well with other children. If a child learned well and got along reasonably well with other children, he did not need institutional treatment. Consequently, a major task was to bridge the emotional gap between the student’s psychological and educational needs.

Some of the emotional problems reflected in resistance included:

1. Fear of losing freedom and independence;
2. Fear of exploring the world or learning about it;
3. Fear of learning about sex;
4. Family constellations that led to learning inhibitions (e.g. death of a parent);
5. Fear of competition. (Bettelheim, 1950).

The teacher's relationship with the student was designed to be another opportunity for developing mastery over conflict to provide the child with a chance to succeed.

The student's journey was conceptualized as progress from a generalized fear of learning, to the development of a relationship with a trusted teacher, to acquiring the courage and confidence for mastering learning activities, to the final successful adjustment to the classroom. This approach was meant to be flexible, dependant on each case. On any given day in one classroom there would be some students who were still fighting learning, others starting their initial adjustment, and those who had overcome their fear of learning. Staff must be able to understand and be responsive to these differences. Bettelheim explained, "The teacher's knowing what the child ought to learn is of little use unless the child himself is convinced he ought to learn for his own good. The child must first, realize what prevented him from learning and second, recognize that his old ways (not learning) were ineffective even when viewed from what he feels are his own interests." (1950, p. 150).

Bettelheim felt that most emotionally disturbed and many normal young children believe that adults have powers of divination. This accounts for their fear of adults and

their efforts to hide their thoughts and emotions. The children need to be helped to learn, so that knowledge is acquired through classroom work (such as reading and writing) rather than magically acquired through the staff's powers. Bettelheim was describing the emotional component of Piaget's magical thinking, the preoperational child's belief that if he thinks it so, so it will be. The milieu approach was meant to slowly convince students of the value of learning and to lessen fear of learning.

An important clinical caveat offered by Bettelheim is central to the process of trust building:

We are most anxious to strengthen the child's ego, to enhance his self-respect, his feeling of adequacy, to convince him that he is able to understand, to change and control his own action. Nothing is more conducive to developing these attitudes than the conviction that one can figure out by oneself just what motivates one, and nothing is more deflating than to have to think that others can understand the mainspring of one's innermost behavior either better or sooner than oneself. Therefore, we do not use our hunches, or information received from parents, for example, unless the child has first informed us of it, or we not only think, but also really know that he knows what goes on. But once he has told us about it, we feel free to make use of it at appropriate moments, even if the child has forgotten it, because such information has become part of our relation, is now common and no longer a private possession. (1950, p. 152).

Bettelheim felt that while it may be possible to set specific tasks in a class of normal children, such a policy is impossible in a school for seriously disturbed children.

He states,

Anyone even roughly familiar with paranoid, delusional, or autistically withdrawn children can well imagine that expecting them to set tasks for themselves would result in near bedlam, destructive for themselves and

even more so for those who are further advanced and whose still feeble efforts at self-regulation would be crushed by the chaotic self-assertion of the more disturbed children. (Bettelheim, 1950, p. 153).

Ways must be found to convince the student that accepting adult-set tasks does not imply any giving up of rights to independence. Bettelheim offers various procedures to reduce anticipatory anxiety. Clear learning expectations, immediate teacher help for problems, responsiveness to student directed learning approaches and one-on-one tutoring are essential. To do this well the classes must be small, four to eight students, the assignments well structured and relatively brief, with student teacher ratio no more than two to one.

The teacher can use such understanding of a child's emotional problems to organize other activities so they do not interfere with the child's comfort in the classroom. Certain themes or words in textbooks (mother, father, brother, sister, baby, eating) may evoke negative feelings or have strong ambivalent connotations. The child's past may interfere with his ability to perform in the present. Assignments have to take this into account. The goal would be to help the student make progress with the learning problems and the emotional problems simultaneously. The classroom, an objective setting, can be a good place for the child to feel more secure as it offers some distance from his emotional problems.

Consequently, Bettelheim stated that a treatment institution must place a special emphasis on the full understanding of a child's needs and difficulties. The teacher at such an institution must be observant but staff actions should not be based on one opinion. Observations made by others who work with the child are shared and compared

with those of the psychiatrist or director. The concept of sharing clinical information about a student insures greater understanding and proper intervention with each student.

To offer such true security to the patients, the staff must possess it; and while not every worker will be able to call a full measure of it his own, the staff's social solidarity around their work provides it for the patients, and themselves. (1974, p. 222).

Interestingly enough Bettelheim felt that while the staff is curious to get to know the parents, experience had taught him that such contacts might do more harm than good. For example, the teacher may feel annoyed when the parent asks why the child has not made more progress. Bettelheim thought it was easier for the school's social worker or director to explain to a parent why a child was not making progress in learning at the moment. Bettelheim also espoused the need for different standards in evaluating students at the treatment center. Classroom groupings were not arranged by grade or age.

Children who had successfully outgrown one emotional or learning difficulty were utilized to help others. In this way, the student could test his own newly acquired gains by helping others. This was done by playing games, as well as through conventional learning. When a child is asked to teach his new knowledge to another child he may enjoy repeating over and over something that he would resist having to repeat. This takes advantage of the pride a child feels in his new achievement, makes it secure through repetition.

It should be emphasized that classroom teaching in a specialized setting makes a continual contribution to the understanding and solution of emotional problems not directly connected with learning. A well-organized classroom represents concrete and definite tasks to the student. This together with the routine nature of classroom activities

often permits a troubled student the opportunity to state his most pressing problems to a teacher in the safety of routine. The children may feel that since classroom activities must go on, the teacher will not follow up their statements any further than they wish. He may also believe that the group will pay scant attention.

Bettelheim concluded by explaining that the children should spend an average of about three and one half hours in the classroom during a normal school day. If they wish, they can spend their recess time in the classroom, but should play games, or complete self-directed projects. Even in the relatively short time devoted to studying, a considerable amount of that is spent painting or drawing, in taking care of animals in the schoolrooms, and other extracurricular activities, including playing games when an assignment is finished. Moreover, there should be no study periods outside of class time, no assignments, nor any other written or academic work to be done after school. Once the learning inhibition is overcome, staff's problem was to insure that the student did not make too rapid academic progress and/or exceed their academic age level. This can create unique problems in subsequent adaptation once leaving the therapeutic school setting.

Because of the individual attention we give to each child, and because the task of learning is geared to the child's inclinations and is potentially enjoyable, most children, once their learning inhibitions are entirely removed, can easily make two or more years academic progress in a single year's time . . . In no case can the treatment of a child be considered completed until he is able not only to succeed in the classroom . . . but really wants to learn on his own and is able to enjoy classroom experiences.... he must be able to recognize which subject matter or learning experiences are most in line with his talents and interests . . . he must have learned to achieve in accord with his developmental level and natural endowment . . . Both intellectually and academically, the child must have learned not only to accept himself as he is, but to strive to make the best use of his individual assets, within the limits of what society and

he himself may expect of him, but emotionally independent of what an artificial norm may require. (Bettelheim, 1950, pp. 168-169).

Bettelheim felt the most important elements in milieu therapy were human relations, which make the child feel secure and heal the split in his inner world as well as between others and himself. Bettelheim also concluded that,

In milieu therapy . . . the staff must be helped not to give up, by encouraging them to believe that hard work based on good practice will eventually win the day . . . There is no universal way of assisting staff members. (Bettelheim, 1974, p.337).

The director and senior staff members can be of assistance in this area through staff development vis-à-vis tangible demonstrations of the value of the individual staff member's methods so she can go on year after year with her strenuous tasks.

## CHAPTER IV

### METHODS

#### Design

This research project was designed to assess the long-term impact of milieu therapy on students who had been expelled from the public schools due to serious emotional disturbance. The analyses were conducted using data archived in the case files of a private, nonprofit therapeutic day school that serves children diagnosed with serious learning, emotional and behavioral disabilities.

#### Research Hypotheses

1. Treatment is more effective when it begins earlier; (DOB, Entry date, Iowa change Scores, behavior evaluation change subscale scores will be analyzed).
2. Treatment of a longer duration leads to enhanced result (Entry Date, Exit Date, Entry DX, and Exit DX will be analyzed).
3. Mild and moderately emotionally disturbed youngsters will profit most and will have better outcomes; (DX entry, behavior evaluation change score, Iowa change score will be analyzed).

### Sample

The sample consisted of cases selected from the archives of all closed records of children attending the Jeannine Schultz Memorial School from 1980 to 2004. The total sample consisted of 182 records containing all basic research data. Students came from the greater Chicago area, and represented diverse racial and socio-economic backgrounds.

### Instrumentation

The student data retrieved from the records focused on three areas – demographics, academic and behavioral outcomes.

1. Demographics were collected using a form that noted: birth date, gender, age at placement level of pathology (DX) at entry and exit, age at exit and length of placement. This form was designed for the project. (See Appendix A)
2. Academic Outcome measures were assessed on an annual basis using the Iowa Test of Basic Skills. (See Appendix B)
3. Behavioral outcomes were assessed annually with Behavioral Evaluation Scale-School version. (See Appendix C)

### Diagnostic Categories

Since the mission of the Jeanine Schultz Memorial School is to treat severely emotionally disturbed youngsters, all of the youngsters suffered from some form of severe psychopathology. The major complication that had to be addressed before analysis of diagnostic categories could continue was the change in both naming and content that

occurred in several of the categories of successive editions of the Diagnostic and Statistical Manual. Over the more than twenty years covered in the archival records, there were three published editions: DSM III, DSM III-R, and DSM IV. The comparable diagnostic categories used in this study across the three editions are delineated in Tables 2 and 2a.

Changes of note occurred in Learning Disorder classifications of ADD, PDD and Communication Disorders. Each record was read by the author to compare diagnostic categories. When a question about diagnoses arose, the file was evaluated independently by a second skilled staff member to confirm reliability of diagnostic category.

**Table 1. Comparable Diagnostic Categories in DSM III, IIR, IV: Learning and Psychotic Disorders**

	DSM III	DSM IIR	DSM IV
<b>I. Learning Disorders</b>			
1. ADD	314.00 Attention Deficit D w/out Hyperactivity  314.01 Attention Deficit DO w/Hyperactivity	314.00 Undifferentiated Attention Deficit DO w/out Hyperactivity  314.01 Attention Deficit DO (mild, moderate, sever)	314.00 Attention Deficit Hyperactive DO, predominately I inattentive type  314.01 Combined Type
2. PDD	299.0x Infantile Autism  299.9x Childhood Onset Pervasive Developmental DO	299.00 Autistic DO  299.80 PDD NOS	299.00 Autistic DO  299.10 Childhood Disintegration DO
3. MR	317.0(x) Mild MR (I.Q.- 50-70)  318.00 Moderate MR (I.Q. 35-49)  318.1(x) Severe (I.Q. 20-34)	317.00 Mild MR (I.Q.- 50-70)  318.00 Moderate MR (I.Q. 35-50)  318.10 Severe (I.Q. 20-35)	317.00 Mild  318.00 Moderate  318.1 Severe
4. LD	315.00 Reading DO  315.10 Arithmetic DO  315.31 Language DO- Expressive & Receptive	315.00 Reading DO  315.10 Arithmetic DO  315.31 Language DO- Expressive & Receptive	315.0 Reading DO  315.1 Mathematic DO  315.2 Written Expression DO
<b>II. Psychotic/ Mood Disorders</b>			
5. Psychotic	296. 34 Major Depression w/ Psychotic Features  295.xx Schizophrenic DO  295.70 Schizoaffective DO	296. 34 Major Depression w/ Psychotic Features  295.xx Schizophrenic DO  295.70 Schizoaffective DO	296. 34 Major Depression w/ Psychotic Features  295.xx Schizophrenic DO  295.70 Schizoaffective DO
6. Affective (Mood)	296.3x Major Affective DO  296.6x Bipolar-mixed  300.40 Dysthymia DO	296.3 Major Depression- Recurrent  296.6x Bipolar –mixed  300.40 Dysthymia DO	296.3 Major Depression- Recurrent  296.6x Bipolar –mixed  300.40 Dysthymia DO

**Table 1a. Comparable Diagnostic Categories in DSM III, IIR, IV: Others**

	<b>DSM III</b>	<b>DSM IIR</b>	<b>DSM IV</b>
<b>III. Other Disorders</b>			
7. Impulse Control	312.34 Intermittent Explosive DO 312.39 Atypical Impulse DO	312.34 Intermittent Explosive DO 312.39 Impulse Control DO, NOS	312.34 Intermittent Explosive DO 312.30 Impulse Control DO, NOS
8. Anxiety	300.01 Panic DO 300.02 Generalized Anxiety DO 300.30 Obsessive Compulsive DO 309.81 Post Traumatic Stress	300.01 Panic DO 300.02 Generalized Anxiety DO 300.30 Obsessive Compulsive DO 309.89 Post Traumatic Stress	300.01 Panic DO 300.02 Generalized Anxiety DO 300.3 Obsessive Compulsive DO 309.81 Post Traumatic Stress
9. Communication	N/A-Absent in DMS III (See LD category)	315.39 Developmental Articulation DO	315.31 Expressive Language DO 315.31 Mixed Receptive & Expressive DO 315.39 Phonological DO
10. Personality	301.60 Dependent Personality DO 301.82 Avoidant Personality DO 301.83 Borderline Personality DO	301.60 Dependent Personality DO 301.82 Avoidant Personality DO 301.83 Borderline Personality DO	301.6 Dependent Personality DO 301.82 Avoidant Personality DO 301.83 Borderline Personality DO
11. Tic	307.23 Tourettes DO	307.23 Tourettes DO	307.23 Tourettes DO
12. Adjustment	309.24 Adjustment DO w/ Anxious Mood 309.30 Adjustment DO w/ Disturbance of conduct	309.24 Adjustment DO w/ Anxious Mood 309.30 Adjustment DO w/ Disturbance of conduct	309.24 Adjustment DO w/ Anxious Mood 309.30 Adjustment DO w/ Disturbance of conduct

The Iowa Tests of Basic Skills battery provides a comprehensive and continuous measurement of growth in the fundamental skills: vocabulary, reading, the mechanics of writing, methods of study, and mathematics. These skills are crucial to day-to-day learning activities as well as to future educational development. In each curricular area, a single wide-range test is provided to represent the range of skills development from low-level Grade 3 through superior Grade 9. This test is given to elementary level students and those high school level students who do not have sufficient academic skills to take the high school version of the test.

The Behavior Evaluation Scale-2 School Version is a valid and reliable data collection procedure that yields objective and quantifiable data regarding frequency and severity of behaviors of concern. The format of the BES-2 provides accurate measurement of behaviors by classroom teacher and other school personnel who have direct and ongoing contact with the student. Seventy-six items representing specific observable and measurable behaviors are presented and rated by staff for prevalence and severity in a comprehensive set of behavior problems that may occur among children and youth. The BES-2 is utilized for grades K-12.

### Procedures

The author reviewed each record for all students who have completed their treatment and left the school by January of 2004. The demographic data was coded on the project designed form.

Each Iowa Basic Skills test grade for five subtests and the total score were identified and entered into a data set by date of assessment. Some youngsters particularly

those who had spent the most time in treatment had multiple test scores. Some had few scores. All were entered and age-adjusted calculations for the test given closest to entry and that given closest to exit from the program were used to compute final change scores. An Age-Adjusted calculation was performed to smooth out the effects of random and extraneous factors. (See Chapter 5, Results).

## CHAPTER V

### RESULTS

#### Introduction

The archived records reviewed for students who had left the school totaled 182 cases. The records included:

1. age at entry and age at exit from the institution;
2. at least one diagnosis at entry and one at exit;
3. at least two measures of the Iowa Test of Basic Skills, given near entry and exit dates;
4. at least two measures of the Behavior Evaluation Scale-2 School Version, one completed near entry and one near exit dates.

The analyses include descriptive statistics, correlation matrices, analyses of variance and model building using regression analyses.

Descriptive statistics were computed for all demographic and diagnostic measures which included gender, race, and age at placement and at exit, level of pathology at entry and exit, and completed duration of placement.

## Predictor Measures

The milieu program defined as an integrated treatment approach of educational, social service, health and mental health interventions has been established at the Jeanine Schultz Memorial School since 1970. Modalities of individual and group psychotherapy and social service casework were added at that time for both the students and their families. Other modalities were subsequently added including psychiatric and medical consultation, nursing, adaptive physical education, computer educational program and a nutritious breakfast and lunch program. A residential treatment center was reserved for students who could not be accommodated in a day treatment modality.

Student age at entry into the program (four groups), duration of placement (short, moderate, long), and level of diagnostic pathology at entry (mild, moderate, complex) were used as predictor measures. These measures were grouped logically according to the data into approximately equal groups.

### Entry age

Group 1 Early Childhood	1-25.4%	(3-9 years)
Group 2 Preadolescence	25.5-46.6%	(10-12 years)
Group 3 Early Adolescence	49-75%	(13-14 years)
Group 4 Late Adolescence	76-100%	(15-19 years)

### Duration of treatment

Short	1-34%	1 month -2 years
Moderate	34.2-67%	2-4.5 years
Long	67.1-100%	4.6-16.8 years

### Diagnostic groupings

Group 1	Mild	1 diagnosis
Group 2	Moderate	2 diagnoses
Group 3	Complex	3 or more diagnoses

## Outcome Measures

The Iowa Test of Basic Skills and the Behavior Evaluation Scale-2 School Version (BES) were utilized to evaluate academic and emotional/behavioral outcome measures.

Iowa Test of Basic Skills produces cognitive skills scores in the form of grade equivalents. In order to adjust for the association between these scores and student age, the expected grade based on student age was subtracted from the scores yielding a measure reflecting a positive or negative difference between actual and expected levels of skills. In order to minimize the effect of variation in scores due to random or tangential factors, and differences in the actual length of time for which scores are available, composite baseline and final scores were averaged over the first and the last two to three years. Change scores were then computed from these composites. Three separate ANOVA's were computed to evaluate the significant impact of age at entry, duration of treatment and diagnostic complexity on the academic measure.

Scores from the Behavior Evaluation Scale-2 School Version are standardized with a mean of 10 and a standard deviation of 3. As with the cognitive measures, composite baseline and final scores were averaged over the first and the last two to three years to smooth out the effects of random and extraneous factors, and change scores were then computed from the composites. Five separate ANOVA's were computed to evaluate the impact of age at entry, duration of treatment and diagnostic complexity on the five subscales of the behavioral measure.

Because there was evidence of significant relationships in the ANOVA analyses a series of multiple regression analyses were computed to model the relative impact of the

three predictor variables on the two outcome variables. The predictor measures described above, which are utilized in hypothesis testing, were regressed on each of the outcomes measures of the Iowa Basic Skills Test and the Behavioral Evaluation Scale.

Demographic information for the sample is presented in Tables 1, 2, 2a, 3, 4, and 5.

#### Description of the Sample

**Table 2. Sample Description**

<b>Description</b>	<b>Number/Mean</b>	<b>Percentage/Range</b>
Sex male/female	136/46	75%-25%
Age at entry	X=11.29 years	3.7-19.8 years
Age at discharge	X=15.82 years	5.9-23.1 years
Duration of treatment	X=4.23 years	1 month – 13.8 years

A total of 182 case records were reviewed in the study. Seventy five percent (N=136) were male and 25% (N=46) were female. This distribution mirrors the national gender statistics in special self-contained classrooms. Children, whose records were chosen for study, ranged in age from 3.7 to 19.8 years at entry although the extremes represented here were very rare. The average age of children at entry into the program was 11.3 years. They ranged in age from 5.9 years to 23.1 years upon discharge from the program. The average age of subjects at discharge was 15.8 years. Length of stay in the program ranged from 1 month to 13.8 years. The average length of stay in the program was 4.23 years, and again the extremes were unusual.

Frequencies for the total number of diagnoses at entry are noted in Table 3.

Children entered care with a wide variety of diagnoses that were grouped into three broad categories: Learning Disorders, Psychotic Disorders and Other Disorders. The first category of Learning Disorders included four types: Attention Deficit disorder, Pervasive Developmental disorder, Mental Retardation, and Learning Disability disorder. The second major category included the more serious Psychotic or Mood disorders. The third category included a number of problems that were referred to as neurotic or character traits in the earliest DSM formulations and as behavioral or adjustment disorders in later editions. There were six types included in the third category: Impulse Control Disorder, Anxiety Disorder, Communication Disorder, Personality Disorder, Tic Disorder and Adjustment Disorder.

Of the 182 cases reviewed, there were 76 different diagnostic patterns. It was necessary to group like diagnoses into broader categories for analyses for two reasons: the large number of individual diagnostic patterns and the relatively small size of the sample. Twelve diagnoses were grouped into three broad categories: learning disorders, psychotic disorders and other disorders. Most of the subjects were diagnosed with some kind of learning disorder. Ninety-six (52.74%) had attention deficit disorder, 47 (25.82%) had pervasive developmental disorder, 33 (18.13%) had some degree of mental retardation, and 26 (14.29%) were diagnosed as learning disabled.

Fewer were diagnosed with psychotic or mood disorders. Thirty-two (17.58%) were psychotic at entry and 55 (30.22%) had mood disorders at entry. The other disorders were distributed as follows: 44 (24.18%) had impulse control problems, 35

(19.23%) were diagnosed as anxiety disorder, 13 (7.14%) had communication problems, 7 (3.85%) each had personality or tic disorders and 4 (2.2%) had adjustment disorder.

**Table 3. Frequency of Diagnostic Category at Point of Entry**

<b>Learning Disorders</b>		
Attention deficit disorders	52.74%	N=96
Pervasive developmental	25.82%	N=47
Mental retardation	18.13%	N=33
Learning disability	14.29%	N=26
<b>Psychotic/Mood Disorders</b>		
Psychotic	17.58%	N=32
Mood	30.22%	N=55
<b>Other Disorders</b>		
Impulse control	24.18%	N=44
Anxiety disorder	19.23%	N=35
Communication	7.14%	N=13
Personality disorder	3.85%	N=7
Tic disorder	3.85%	N=7
Adjustment disorder	2.20%	N=4

The second complicating factor with regard to the diagnostic picture emerged as initial descriptive statistics were evaluated. The number of diagnoses for each child ranged from 1 to 5. The average number of diagnoses was 2.16 per child. The number of distinctive individual diagnostic arrays seen in this relative small sample was considerable. (See Table 4). Only 47 students (25.82%) entered care with one diagnosis. Seventy (38.46%) had two separate diagnoses, while 65 students had three, four or five diagnoses at entry. This complexity combined with the relatively small sample size meant that that original plan to compare like diagnostic complexes was untenable. Even in the simplest case of one diagnosis, there was little actual overlap in type of problem

behavior. To continue to utilize this essential predictor variable, the category was reconceptualized in terms of diagnostic complexity into three broad categories:

- 1) *mild* - defined as cases with one diagnosis at entry,
- 2) *moderate* - described cases with two diagnoses, and
- 3) *complex* - included those with three or more diagnoses at entry.

This reconceptualization is defensible if one thinks about the diagnostic pattern in terms of the complexity of intervention. Whether the presenting problem is simple depression or mental retardation, the prognosis, interventions and monitoring are relatively simple and narrowly focused. When a presenting diagnosis includes, for example, learning disabilities, major depression, impulse control problems and tic disorder the interventions necessary are complex, layered and more difficult to evaluate for independent effects.

**Table 4. Number of Diagnoses per Client at Entry**

<b>Valid Diagnoses</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percentage</b>
1.00	47	25.82%	25.82%
2.00	70	38.46%	64.28%
3.00	50	27.47%	91.75%
4.00	13	7.04%	98.79%
5.00	2	1.09%	100.00%
Total	182	100.00%	

The final level of complexity that plagued the predictor variable of diagnostic category was the fact that very few children experienced a changed diagnosis from entry until exit from the program. (See Table 5) Only 19 (10.05%) of the total experienced a changed diagnosis at exit. This should not be surprising given the serious and persistent nature of the majority of diagnostic categories represented at entry. The original hypothetical relationships were stated in terms that ultimately proved too simplistic. As a result of these preliminary analyses, this category was reconceptualized so that it retained its value as a predictor and allowed further model building with the current sample. All of the following analyses use diagnostic complexity as the predictor variable and omitted diagnostic change as an outcome variable.

**Table 5. Frequency of Changed Diagnoses at Exit from Program**

No change	163	89.55%
Changed diagnosis	19	10.05%
Total	182	100.00%

The next level of analysis was devoted to evaluating the outcome measures—the Iowa and the Behavioral Evaluation Scales. Both descriptive statistics and correlation matrices were computed for each. In Table 6, the mean, standard deviation and range of scores for first and last Iowa Basic Skills Achievement Test of each case in the sample were computed.

**Table 6. Means, Standard Deviation and Range of Scores for First and Last Iowa Tests**

<b>SUBTESTS</b>	<b>MEANS</b>	<b>ST.D.</b>	<b>MIN</b>	<b>MAX</b>
Voc 1	3.89	2.65	-.9	11.0
Voc 2	5.08	3.30	-.4	19.0
Read 1	4.04	2.74	-.2	20.7
Read 2	4.83	3.10	+.5	21.3
Language 1	3.50	2.48	-.7	9.4
Language 2	4.51	2.42	-.4	9.2
Math 1	3.54	2.59	-.7	10.8
Math 2	4.49	2.58	0	15.1

It is apparent that there is great variability for this sample in all of the subscales of the Iowa Test of Basic Skills. It is also clear that the average for all of the subscales is quite low. For example, the average Vocabulary 1 score of 3.89 at entry is out of a possible 20 points. There was a relatively small gain at the second testing for Vocabulary 2. This was true for each of the remaining categories: Reading 4.04-4.83, Language Arts

3.50-4.49, Math 3.54-4.49. This is to be expected in a sample diagnosed with multiple learning difficulties as well as disruptive emotional syndromes. Together these symptom patterns coupled with behavioral problems predict to lower academic achievement. What should be noted here was that there were higher average scores noted in every academic category from the beginning to the end of the students' stay.

### Correlational Analyses

Next, Pearson correlation coefficients were computed comparing the level of association between the three predictor variables—age at entry, number of diagnoses, and duration of treatment with the academic outcome measure—the age-adjusted change scores on the Iowa test. (See Table 7). Duration of treatment and age at entry are significantly and negatively correlated—( $r = -.331$ ,  $p < .0001$ ). The earlier one enters treatment, the longer the possible time for remaining in treatment. Iowa change scores are also significantly and positively correlated with age at entry ( $r = .304$ ,  $p < .008$ ). The earlier one enters the program the greater the gain in basic academic skills.

**Table 7. Correlation Matrix for Entry Age, Diagnostic Complexity, Duration of Treatment by Age-Adjusted Change in Iowa Basic Skills Scores**

	<b>Age at entry</b>	<b>Number of diagnoses</b>	<b>Duration of treatment</b>	<b>Age-adjusted change score on Iowa</b>
Age at entry N=182	1.00			
Number of diagnoses N=182	r = .035 p<.634	1.00		
Duration of treatment N=182	r = -.331** p<.0001	r = -.060 p<.419	1.00	
Age-Adjusted Change Score N=74	r = .304 ** p<.008	r = -.175 p<.135	r= .059 p<.618	1.00

In Table 8, the means, standard deviations and the range of change scores for the five Behavior Evaluation Scales are displayed. All of the change scores are negative demonstrating that there has been a reduction in scores for all five subscales. This means that there was a reduction in measurable behaviors in learning problems, interpersonal problems, inappropriate behavior, unhappiness and fear. It is noteworthy to mention that these scales were completed by different faculty across the time period during which most of the students were evaluated—average duration of treatment was 4.23 years. This would reduce the reporter bias resulting from evaluating one's students at the beginning and end of one class year.

**Table 8. Mean, Standard Deviation and Range of Change Scores for Five Behavior****Evaluation Scales**

<b>N = 89 Missing =96</b>	<b>Change Score Learning Problems</b>	<b>Change Score Interpersonal Problems</b>	<b>Change Score Inappropriate Behavior</b>	<b>Change Score Unhappiness</b>	<b>Change Score Fear</b>
Mean	-.6742	-.5506	-.6629	-.6629	-.7416
Standard Deviation	2.1678	2.4169	2.5179	2.5582	2.7116
Minimum Scores	-8.00	-9.00	-11.00	-9.00	-9.00
Maximum	3.00	4.00	4.00	4.00	5.00

Pearson correlation coefficients were computed to evaluate the relationship between the three predictor variables and the five subscales of the behavioral measure. The correlation matrix is displayed in Table 9. The age at entry is significantly and negatively correlated to the duration of treatment ( $r = -.331$ ,  $p < .0001$ ) as noted in Table 8 for the academic measure. Those who enter treatment earlier tended to have longer stays.

There were also a number of significant positive correlations between subscales of the Behavior Evaluation Scale-2 School Version. This indicated a high degree of multicollinearity and suggests that these subscales may not be independent measures of each trait.

Learning problems were correlated with Interpersonal Problems ( $r = .614$ ,  $p < .0001$ ), Inappropriate Behavior ( $r = .648$ ,  $p < .0001$ ), Unhappiness ( $r = .482$ ,  $p < .0001$ ), Fear ( $r = .403$ ,  $p < .0001$ ).

Interpersonal Problems were also correlated with Learning Problems ( $r = .614$ ,  $p < .0001$ ), Inappropriate Behavior ( $r = .783$ ,  $p < .0001$ ), Unhappiness ( $r = .659$ ,  $p < .0001$ ), Fear ( $r = .558$ ,  $p < .0001$ ).

Inappropriate Behavior was correlated with Learning Problems ( $r=.648$ ,  $p<.0001$ ), Interpersonal Problems ( $r=.783$ ,  $p<.0001$ ), Unhappiness ( $r=.725$ ,  $p<.0001$ ), Fear ( $r=.655$ ,  $p<.0001$ ).

Unhappiness was correlated with Learning Problems ( $r=.482$ ,  $p<.0001$ ), Interpersonal Problems ( $r=.659$ ,  $p<.0001$ ), Inappropriate Behavior ( $r=.725$ ,  $p<.0001$ ), Fear ( $r=.655$ ,  $p<.0001$ ).

Fear was correlated with Learning Problems ( $r=.403$ ,  $p<.0001$ ), Interpersonal Problems ( $r=.558$ ,  $p<.0001$ ), Inappropriate Behavior ( $r=.655$ ,  $p<.0001$ ), Unhappiness ( $r=.729$ ,  $p<.0001$ ).

The number of significant correlation between subscales is a measure of multicollinearity. It indicates that these subscales may not be independent measures of traits.



## Hypothesis Testing

Initially three separate analyses of variance were computed independently to evaluate the impact of age at entry, duration of treatment and complexity of diagnoses on the Age-Adjusted change scores of the Iowa Basic Skills Test. To evaluate the impact of the age, duration and complexity variables on the behavioral measure, five separate analyses of variance were computed, one to evaluate each subscale measure. The results will be presented separately for each of the three hypotheses.

Change scores for the behavior measures were computed by subtracting the first score from the second. For the Iowa composite scores, a testing date of October 1 was assumed. The age at testing was computed using this date and the student's date of birth. An expected Iowa composite score was then computed by subtracting 5 from the age at testing. Computed expected scores lower than -1 were rounded up to -1 (pre-school), and scores higher than 12 were rounded down to 12 (12<sup>th</sup> grade). Differences between the (computed) expected Iowa composite scores and the actual scores were computed by subtracting the (computed) expected Iowa composite score from the actual Iowa composite score. These measures reflect the difference between the students' actual performance and the normative average. An overall change score was computed by subtracting the difference between actual and expected for the first Iowa testing from the difference between actual and expected for the last Iowa testing. This change score, when positive, reflects improvement in performance relative to expectations based upon age at testing.

Evaluation of Hypothesis 1: “Treatment will be more effective when it begins earlier” are shown in Tables 10 and 10a. In Table 10, the mean score, standard deviation and standard error are reported for the initial and final testing and for the change scores. Although all of the age ranges experienced small raw score increases, when scores were adjusted for age, younger children had negative scores ( $\bar{X}=-.5857$ ). The largest positive raw score gains were noted for those children who entered during adolescence, particularly early adolescence ( $\bar{X}=.5889$ ).

**Table 10. Mean, Standard Deviation, and Standard Error for Initial, Final and Age-Adjusted Change Scores of the Iowa Test of Basic Skills by Age Category**

IOWA DESCRIPTIVES					
		N	Mean	Std. Deviation	Std. Error
Age-Adjusted Expected Iowa 1	Early Childhood	44	6.1500	6.1500	3.65440
	Preadolescence	39	8.4231	8.4231	1.73182
	Early Adolescence	30	10.0467	10.0467	1.73001
	Late Adolescence	26	11.7654	11.7654	.37836
	Total	139	8.6791	8.6791	3.14660
Age-Adjusted Expected Iowa 2	Early Childhood	37	8.4622	8.4622	3.02410
	Preadolescence	26	10.3769	10.3769	1.27226
	Early Adolescence	24	10.9667	10.9667	1.49424
	Late Adolescence	21	11.9952	11.9952	.02182
	Total	108	10.1667	10.1667	2.39797
Age-Adjusted Change in Iowa	Early Childhood	28	-.5857	-.5857	1.12964
	Preadolescence	12	-.6583	-.6583	1.56754
	Early Adolescence	18	.5889	.5889	1.52889
	Late Adolescence	16	.1937	.1937	.96848
	Total	74	-.1432	-.1432	1.36202

In Table 10a the results of the analysis of variance demonstrate that there are significant age related changes in Iowa scores in the initial testing ( $F=33.970$ ,  $p<.0001$ ), final testing ( $F=15.991$ ,  $p<.0001$ ) and for the Age-Adjusted change score ( $F=4.074$ ,  $p<.01$ ). The level of positive change in basic academic skills is significant and impacts those in early adolescence most.

**Table 10a. ANOVA of Initial, Final and Age-Adjusted Change Scores of the Iowa by Age of Participants at Entry**

		Sum of Squares	df	Mean Square	F	Sig.
Age-Adjusted Expected Iowa 1	Between Groups	587.757	3	195.919	33.970	.000
	Within Groups	778.593	135	5.767		
	Total	1366.349	138			
Age-Adjusted Expected Iowa 2	Between Groups	194.224	3	64.741	15.991	.000
	Within Groups	421.056	104	4.049		
	Total	615.280	107			
Age-Adjusted Change in Iowa	Between Groups	20.131	3	6.710	4.074	.010
	Within Groups	115.291	70	1.647		
	Total	135.422	73			

Evaluation of Hypothesis 1 for the Behavioral Evaluation Scale provides data in terms of change scores only for each of the five subscales in Tables 11 and 11a. In Table 11, the mean score, standard deviation and standard error are reported for the change scores. Total average change was in the desired direction: Learning Problems ( $X=.6742$ ), Interpersonal Problems ( $X=-.5506$ ), Inappropriate Behavior ( $X=-.6629$ ), Unhappiness ( $X=-.6629$ ), and Fear ( $X=-.7416$ ) with virtually every behavioral measure showing lower levels of behavioral problems throughout the four levels of age: early childhood, preadolescence, early adolescence and late adolescence.

Only one subscale, Learning Problems, showed a statistically significant change in the predicted direction ( $F=2.827$ ,  $p<.043$ ).

**Table 11. Mean, Standard Deviation and Standard Error for Change Scores on Five Subscales of the Behavioral Evaluation Scale for Four Age Groupings**

		N	Mean	Std.Deviation	Std. Error
B2-B1 Learning Problems	Early Childhood	33	-.8485	2.62347	.45669
	Preadolescence	26	-1.4231	1.60432	.31463
	Early Adolescence	16	.3125	1.92246	.48061
	Late Adolescence	14	.0000	1.66410	.44475
	Total	89	-.6742	2.16782	.22979
B2-B1 Interpersonal Problems	Early Childhood	33	-.7879	2.67812	.46620
	Preadolescence	26	-.6538	2.38231	.46721
	Early Adolescence	16	-.4375	2.22017	.55504
	Late Adolescence	14	.0714	2.16490	.57860
	Total	89	-.5506	2.41685	.25619
B2-B1 Inappropriate Behavior	Early Childhood	33	-.6667	2.80253	.48786
	Preadolescence	26	-1.1538	2.44446	.47940
	Early Adolescence	16	-.5625	2.52900	.63225
	Late Adolescence	14	.1429	1.87523	.50118
	Total	89	-.6629	2.51786	.26689
B2-B1 Unhappiness	Early Childhood	33	-.5455	3.14336	.54719
	Preadolescence	26	-.9615	2.44100	.47872
	Early Adolescence	16	-.9375	2.08066	.52017
	Late Adolescence	14	-.0714	1.68543	.45045
	Total	89	-.6629	2.55816	.27116
B2-B1 Fear	Early Childhood	33	-.9091	3.15598	.54939
	Preadolescence	26	-.9231	2.71180	.53183
	Early Adolescence	16	-.2500	2.35230	.58808
	Late Adolescence	14	-.5714	2.06488	.55186
	Total	89	-.7416	2.71163	.28743

**Table 11a. ANOVA of Final Change Scores of Behavioral Evaluation Scale by Age of Participants**

		Sum of Squares	df	Mean Square	F	Sig.
B2-B1 Learning Problems	Between Groups	37.524	3	2.508	2.827	.043
	Within Groups	376.026	85	4.424		
	Total	413.551	88			
B2-B1 Interpersonal Problems	Between Groups	7.757	3	2.586	.434	.729
	Within Groups	506.266	85	5.956		
	Total	514.022	88			
B2-B1 Inappropriate Behavior	Between Groups	15.518	3	5.173	.811	.491
	Within Groups	542.370	85	6.381		
	Total	557.888	88			
B2-B1 Unhappiness	Between Groups	8.878	3	2.959	.444	.722
	Within Groups	567.009	85	6.671		
	Total	575.888	88			
B2-B1 Fear	Between Groups	6.054	3	2.018	.268	.849
	Within Groups	641.002	85	7.541		
	Total	647.056	88			

Evaluation of Hypothesis 2: “Treatment of longer duration will lead to enhanced academic and behavioral outcomes” was evaluated independently for each set of outcomes as with Hypothesis 1.

In Table 12, the mean, standard deviation and standard error are displayed for initial, final and age-adjusted change scores for each of three levels of duration of treatment: Short treatment (1 month-2 years); Moderate treatment (2-4.5 years); and Long treatment (4.6-16.8 years). The raw change scores show that the worst scores were linked to the shortest stays. ( $X = -.3000$  for short term treatment).

**Table 12. Mean, Standard Deviation, and Standard Error for Initial Final and Age-Adjusted Change Scores of the Iowa Test of Basic Skills by Duration of Treatment**

		N	Mean	Std.Deviation	Std. Error
Age-Adjusted Expected Iowa 1	Short (1mo-2yrs)	53	8.3396	3.30666	.45420
	Moderate (2-4.5 yrs)	30	8.5833	3.40437	.62155
	Long (4.6-16.8 yrs)	56	9.0518	2.85249	.38118
	Total	139	8.6791	3.14660	.26689
Age-Adjusted Expected Iowa 2	Short (1mo-2yrs)	29	9.4517	2.99686	.55650
	Moderate (2-4.5 yrs)	26	9.8385	2.54528	.49917
	Long (4.6-16.8 yrs)	53	10.7189	1.79776	.24694
	Total	108	10.1667	2.39797	.23075
Age-Adjusted Change in Iowa	Short (1mo-2yrs)	16	-.3000	.77889	.19472
	Moderate (2-4.5 yrs)	14	.0786	.96570	.25810
	Long (4.6-16.8 yrs)	44	-.1568	1.62186	.24450
	Total	74	-.1432	1.36202	.15833

**Table 12a. ANOVA of Initial, Final and Age-Adjusted Change Scores of the Iowa by Duration of Treatment**

		Sum of Squares	df	Mean Square	F	Sig.
Age-Adjusted Expected Iowa 1	Between Groups	14.161	2	7.081	.712	.492
	Within Groups	1352.188	136	9.943		
	Total	1366.349	138			
Age-Adjusted Expected Iowa 2	Between Groups	33.785	2	16.892	3.050	.052
	Within Groups	581.495	105	5.538		
	Total	615.280	107			
Age-Adjusted Change in Iowa	Between Groups	1.090	2	.545	.288	.751
	Within Groups	134.332	71	1.892		
	Total	135.422	73			

In Table 12a, the analysis of variance is marginally significant for the final test scores ( $F=3.050$ ,  $p<.052$ ). There is no significant pattern of positive gain in academic skill scores reflected in the non significant change scores ( $F=.288$ ,  $p<.751$ ). This is probably due to the large variation in length of stay in the relatively small sample.

The average raw scores shown in Table 13 demonstrate a reduction in behavioral problems for each subscale. The highest level of change is reported for those with the longest duration of treatment: Learning Problems ( $X= -.9130$ ), Interpersonal Problems ( $X=.8261$ ), Inappropriate Behavior ( $X= -1.0217$ ), Unhappiness ( $X=1.0662$ ), and Fear ( $X=.9130$ ).

An analysis of variance in Table 13a demonstrated that there was no significant reduction of symptoms linked to duration of stay: Learning Problems ( $F=.650$ ,  $p<.525$ ), Interpersonal Problems ( $F=.616$ ,  $p<.542$ ), Inappropriate Behavior ( $F= .976$ ,  $p<.381$ ), Unhappiness ( $F=1.307$ ,  $p<.276$ ) and Fear ( $F=.254$ ,  $p<.776$ ).

**Table 13. Mean, Standard Deviation and Standard Error for Five Subscales of Behavioral Evaluation Scale by Length of Treatment**

Duration of Treatment		N	Mean	Std.Deviation	Std. Error
B2-B1 Learning Problems	Short (1mo-2yrs)	21	-.2857	2.02837	.44263
	Moderate (2-4.5 yrs)	22	-.5455	1.96946	.41989
	Long (4.6-16.8 yrs)	46	-.9130	2.32691	.34308
	Total	89	-.6742	2.16782	.22979
B2-B1 Interpersonal Problems	Short (1mo-2yrs)	21	-.2857	1.92725	.42056
	Moderate (2-4.5 yrs)	22	-.2273	1.95014	.41577
	Long (4.6-16.8 yrs)	46	-.8261	2.79924	.41273
	Total	89	-.5506	2.41685	.25619
B2-B1 Inappropriate Behavior	Short (1mo-2yrs)	21	-.3333	1.42595	.31117
	Moderate (2-4.5 yrs)	22	-.2273	1.82396	.38887
	Long (4.6-16.8 yrs)	46	-1.0217	3.10905	.45840
	Total	89	-.6629	2.51786	.26689
B2-B1 Unhappiness	Short (1mo-2yrs)	21	-.4286	1.20712	.26342
	Moderate (2-4.5 yrs)	22	-.0455	2.33966	.49882
	Long (4.6-16.8 yrs)	46	-1.0652	3.03610	.44765
	Total	89	-.6629	2.55816	.27116
B2-B1 Fear	Short (1mo-2yrs)	21	-.7143	2.19415	.47880
	Moderate (2-4.5 yrs)	22	-.4091	2.51962	.53718
	Long (4.6-16.8 yrs)	46	-.9130	3.03188	.44703
	Total	89	-.7416	2.71163	.28743

**Table 13a. ANOVA of Final Change Scores of Behavior Evaluation Scale by Length of Treatment**

		Sum of Squares	df	Mean Square	F	Sig.
B2-B1 Learning Problems	Between Group	6.158	2	3.079	.650	.525
	Within Groups	407.392	86	4.737		
	Total	413.551	88			
B2-B1 Interpersonal Problems	Between Group	7.264	2	3.632	.616	.542
	Within Groups	506.758	86	5.893		
	Total	514.022	88			
B2-B1 Inappropriate Behavior	Between Group	12.379	2	6.190	.976	.381
	Within Groups	545.509	86	6.343		
	Total	557.888	88			
B2-B1 Unhappiness	Between Group	16.986	2	8.493	1.307	.276
	Within Groups	558.902	86	6.499		
	Total	575.888	88			
B2-B1 Fear	Between Group	3.800	2	1.900	.254	.776
	Within Groups	643.256	86	7.480		
	Total	647.056	88			

Evaluation of Hypothesis 3: “Mild and moderately impaired students will have better academic and behavioral outcomes than those with multiple diagnoses,” was measured independently for each of the outcomes. In Table 14, the mean scores, standard deviations and standard error are reported for three levels of diagnostic complexity: Mild=one diagnosis, Moderate=two diagnoses and Complex=three or more diagnoses. The average raw change scores move in the predicted direction – from +.3850 for mildly handicapped children to -.3370 for severely handicapped children.

The analysis of variance shown in Table 14a demonstrates that there is no significant change in academic skill scores linked to the level of diagnostic complexity of the case ( $F=2.125$   $p<.127$ ).

**Table 14. Mean, Standard Deviation and Standard Error for the Initial, Final and Age-Adjusted Change Scores of the Iowa Test of Basic Skills by Diagnostic Complexity**

		N	Mean	Std. Deviation	Std. Error
Age-Adjusted Expected Iowa 1	1 Dx	37	9.6243	2.93385	.48232
	2 Dxs	51	8.2608	3.48213	.487660
	3+ Dxs	51	8.4118	2.84462	.39833
	Total	139	8.6791	3.14660	.26689
Age-Adjusted Expected Iowa 2	1 Dx	28	10.6107	2.14672	.40569
	2 Dxs	37	9.8892	2.91945	.47996
	3+ Dxs	43	10.1163	2.04438	.31177
	Total	108	10.1667	2.39797	.23075
Age-Adjusted Change in Iowa	1 Dx	20	.3850	1.51875	.33960
	2 Dxs	27	-.3407	1.37373	.26437
	3+ Dxs	27	-.3370	1.15830	.22291
	Total	74	-.1432	1.36202	.15833

**Table 14a. ANOVA of Initial, Final and Age-Adjusted Change Scores of the Iowa by Diagnostic Complexity**

		Sum of Squares	df	Mean Square	F	Sig.
Age-Adjusted Expected Iowa 1	Between Groups	45.627	2	22.813	2.349	.099
	Within Groups	1320.723	136	9.711		
	Total	1366.349	138			
Age-Adjusted Expected Iowa 2	Between Groups	8.479	2	4.239	.734	.483
	Within Groups	606.801	105	5.779		
	Total	615.280	107			
Age-Adjusted Change in Iowa	Between Groups	7.648	2	3.824	2.125	.127
	Within Groups	127.774	71	1.800		
	Total	135.422	73			

Evaluation of Hypothesis 3 for the Behavioral Scale is reported for change scores only for each of the five subscales in Tables 15 and 15a. In Table 15, the mean score, standard deviation and standard error are reported for the change scores across the three levels of diagnostic complexity – mild, moderate and complex.

The average raw scores shown in Table 15 demonstrate that the fewest problems in each subscale occur for those in the mild diagnostic category: Learning Problems ( $X = -1.000$ ), Interpersonal Problems ( $X = -1.0556$ ), Inappropriate Behavior ( $X = -.8889$ ), Unhappiness ( $X = -.7222$ ), and Fear ( $X = -.9444$ ). There was no significant reduction of behavioral problems as measured by the Behavior Evaluation Scale-2 School Version that was linked to diagnostic complexity.

**Table 15. Mean Standard Deviation and Standard Error for Five Subscales of Behavior Evaluation Scale by Complexity of Diagnosis**

Diagnostic Complexity		N	Mean	Std. Deviation	Std. Error
B2-B1 Learning Problems	1 Dx	18	-1.0000	2.24918	.53014
	2 Dxs	32	-.3750	2.26829	.40098
	3+ Dxs	39	-.7692	2.07062	.33156
	Total	89	-.6742	2.16782	.22979
B2-B1 Interpersonal Problems	1 Dx	18	-1.0556	2.20887	.52063
	2 Dxs	32	-.0625	2.21341	.39128
	3+ Dxs	39	-.7179	2.64524	.42358
	Total	89	-.5506	2.41685	.25619
B2-B1 Inappropriate Behavior	1 Dx	18	-.8889	2.08324	.49102
	2 Dxs	32	-.3750	2.62433	.46392
	3+ Dxs	39	-.7949	2.64754	.42395
	Total	89	-.6629	2.51786	.26689
B2-B1 Unhappiness	1 Dx	18	-.7222	2.29592	.54115
	2 Dxs	32	-.6563	2.32253	.41057
	3+ Dxs	39	-.6410	2.89725	.46393
	Total	89	-.6629	2.55816	.27116
B2-B1 Fear	1 Dx	18	-.9444	2.55463	.60213
	2 Dxs	32	-.5938	2.39434	.42326
	3+ Dxs	39	-.7692	3.06475	.49075
	Total	89	-.7416	2.71163	.28743

**Table 15a. ANOVA of Final Change Scores of Behavior Evaluation Scale by Diagnostic Complexity**

		Sum of Squares	df	Mean Square	F	Sig.
B2-B1 Learning Problems	Between Groups	5.127	2	2.564	.540	.585
	Within Groups	408.423	86	4.749		
	Total	413.551	88			
B2-B1 Interpersonal Problems	Between Groups	13.306	2	6.653	1.143	.324
	Within Groups	500.717	86	5.822		
	Total	514.022	88			
B2-B1 Inappropriate Behavior	Between Groups	4.251	2	2.125	.330	.720
	Within Groups	553.637	86	6.438		
	Total	557.888	88			
B2-B1 Unhappiness	Between Groups	.083	2	.042	.006	.994
	Within Groups	575.804	86	6.695		
	Total	575.888	88			
B2-B1 Fear	Between Groups	1.470	2	.735	.098	.907
	Within Groups	645.586	86	7.507		
	Total	647.056	88			

## Modeling

The final level of evaluation that was completed in this study is that of model building using multiple regression analyses. This step is justified because several variables did show significant correlations and significant relationships when evaluated separately by analysis of variance. The value of model building is that it can weigh the relative contribution of all predictor variables at once to tease out their relative links to the outcome variables.

One multiple regression analysis was performed to evaluate the impact of the three predictor variables (age at entry, duration of treatment and diagnostic complexity) on academic performance evaluated using the age-adjusted change scores from the Iowa. The results are reported in Table 16. The total model was significant ( $F=4.268$ ,  $p<.008$ ).

The age at entry into treatment was the strongest predictor ( $p<.003$ ). The diagnostic group contributed the next largest weighting ( $p<.072$ ). Duration of treatment was not significant in this model ( $p<.267$ ). The  $r$  squared value (.155) indicates that about 16% of the variance in the academic change scores is accounted for in this model.

**Table 16. Multiple Regression Model Predicating Iowa Basic Skills Change Scores from Age at Entry, Treatment Duration and Diagnostic Complexity**

**Table 16a. Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.393 <sup>a</sup>	.155	.118	1.27884
a. Predictors: (Constant), Diagnostic Group, Age Groups (Entry into Tx), Duration Group				

**Table 16b. ANOVA**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.942	3	6.981	4.268	.008 <sup>a</sup>
	Residual	114.480	70	1.635		
	Total	135.422	73			
a. Predictors: (Constant), Diagnostic Group, Age Groups (Entry into Tx), Duration Group						
b. Dependent Variable: Age-adjusted Change in Iowa						

**Table 16c. Model with Standard Error, Beta Scores and Significance for Three Predictor Variables**

Coefficients <sup>a</sup>						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	-.893	.788		-1.134	.261
	Age Groups (Entry into Tx)	.415	.134	.362	3.084	.003
	Duration Group	.219	.195	.132	1.120	.267
	Diagnostic Group	-.345	.189	-.202	-1.828	.072
a. Dependent Variable: Age-Adjusted Change in Iowa						

Five additional multiple regression analyses were computed to evaluate the relative impact of the three predictor variables (age at entry, duration of treatment and diagnostic complexity) on each of the five behavioral outcomes (learning problems, interpersonal problems, inappropriate behavior, unhappiness and fear). The results of each of these analyses are depicted in Tables 17, 18, 19, 20 and 21.

None of the regression models for the behavioral outcomes measure reached significance: Learning Problems ( $F=1.218$ ,  $p<.308$ ); Interpersonal Problems ( $F=.524$ ,  $p<.667$ ); Inappropriate Behavior ( $F=.568$ ,  $p<.638$ ); Unhappiness ( $F=.465$ ,  $p<.708$ ); Fear ( $F=.157$ ,  $p<.925$ ).

**Table 17. Multiple Regression Model Predicating Learning Problems Change Score from Age at Entry, Treatment Duration and Diagnostic Complexity**

**Table 17a. Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.303 <sup>a</sup>	.092	.070	2.402
a. Predictors: (Constant), Diagnostic Group, Duration Group, Age Groups (Entry into Tx)				

**Table 17 b. ANOVA**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.049	3	5.683	1.218	.308 <sup>a</sup>
	Residual	396.502	85	4.665		
	Total	413.551	88			
a. Predictors: (Constant), Diagnostic Group, Duration Group, Age Groups (Entry into Tx)						
b. Dependent Variable: B2-B1 Learning Problems						

**Table 17c. Model with Standard Error, Beta Scores and Significance for Three**

**Predictor Variables**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2	(Constant)	-1.250	1.272		-.983	.329
	Age Groups (Entry into Tx)	.352	.230	.176	1.529	.130
	Duration Group	.139	.303	-.053	-.460	.647
	Diagnostic Group	6.481E-02	.301	.023	.215	.830
a. Dependent Variable: B2-B1 Learning Problems						

**Table 18. Multiple Regression Model Predicting Interpersonal Problems Change Score from Age at Entry, Treatment Duration and Diagnostic Complexity**

**Table 18a. Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.135 <sup>a</sup>	.018	-.017	2.43671
a. Predictors: (Constant), Diagnostic Group, Duration Group, Age Groups (Entry into Tx)				

**Table 18b. ANOVA**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.330	3	3.110	.524	.667 <sup>a</sup>
	Residual	504.692	85	5.938		
	Total	514.022	88			
a. Predictors: (Constant), Diagnostic Group, Duration Group, Age Groups (Entry into Tx)						
b. Dependent Variable: B2-B1 Interpersonal Problems						

**Table 18c. Model with Standard Error, Beta Scores and Significance for Three Predictor Variables**

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
3 (Constant)	-.663	1.435		-.462	.645
Age Groups (Entry into Tx)	.206	.260	.093	.793	.430
Duration Group	-.198	.342	-.068	-.579	.564
Diagnostic Group	5.640E-02	.340	.018	.166	.868
a. Dependent Variable: B2-B1 Interpersonal Problems					

**Table 19. Multiple Regression Model Predicting Inappropriate Behavior Change Score from Age at Entry, Treatment Duration and Diagnostic Complexity**

**Table 19a. Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.140 <sup>a</sup>	.020	-.015	2.53662
a. Predictors: (Constant), Diagnostic Group, Duration Group, Age Groups (Entry into Tx)				

**Table 19b. ANOVA**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.962	3	3.654	.568	.638 <sup>a</sup>
	Residual	546.926	85	6.434		
	Total	557.888	88			
a. Predictors: (Constant), Diagnostic Group, Duration Group, Age Groups (Entry into Tx)						
b. Dependent Variable: B2-B1 Inappropriate Behavior						

**Table 19c. Model with Standard Error, Beta Scores and Significance for Three Predictor Variables**

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
4 (Constant)	-.167	1.494		-.112	.911
Age Groups (Entry into Tx)	.140	.271	.060	.517	.607
Duration Group	-.322	.356	-.105	-.905	.368
Diagnostic Group	-2.630E-02	.353	-.008	-.074	.941
a. Dependent Variable: B2-B1 Inappropriate Behavior					

**Table 20. Multiple Regression Model Predicting Unhappiness Change Score from Age at Entry, Treatment Duration and Diagnostic Complexity**

**Table 20a. Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.127 <sup>a</sup>	.016	-.019	2.58183
a. Predictors: (Constant), Diagnostic Group, Duration Group, Age Groups (Entry into Tx)				

**Table 20b. ANOVA**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.292	3	3.097	.465	.708 <sup>a</sup>
	Residual	566.596	85	6.666		
	Total	575.888	88			
a. Predictors: (Constant), Diagnostic Group, Duration Group, Age Groups (Entry into Tx)						
b. Dependent Variable: B2-B1 Unhappiness						

**Table 20c. Model with Standard Error, Beta Scores and Significance for Three Predictor Variables**

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
5 (Constant)	.328	1.520		.216	.830
Age Groups (Entry into Tx)	-3.835W-02	.275	-.016	-.139	.890
Duration Group	-.409	.362	-.132	-1.131	.261
Diagnostic Group	1.073E-02	.360	.003	.030	.976

a. Dependent Variable: B2-B1 Unhappiness

**Table 21. Multiple Regression Model Predicting Fear Change Scores from Age at Entry, Treatment, Duration, and Diagnostic Complexity**

**Table 21a. Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.074 <sup>a</sup>	.006	-.030	2.75145
a. Predictors: (Constant), Diagnostic Group, Duration Group, Age Groups (Entry into Tx)				

**Table 21b. ANOVA**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.568	3	1.189	.157	.925 <sup>a</sup>
	Residual	643.488	85	7.570		
	Total	647.056	88			
a. Predictors: (Constant), Diagnostic Group, Duration Group, Age Groups (Entry into Tx)						
b. Dependent Variable: B2-B1 Fear						

**Table 21c. Model with standard Error, Beta Scores and Significance for Three Predictor Variables**

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
6 (Constant)	-1.089	1.620		-.672	.503
Age Groups (Entry into Tx)	.161	.294	.065	.549	.584
Duration Group	-5.724E-02	.386	-.017	-.148	.882
Diagnostic Group	6.049E-02	.383	.017	.158	.875
a. Dependent Variable: B2-B1 Fear					

## CHAPTER VI

### DISCUSSION AND IMPLICATIONS

#### Introduction

The Individuals with Disabilities Education Act in 1990 mandated the public school provide services for children with serious emotional disturbance. The law directs that such students be placed in the least restrictive environment commensurate with each student's level of disability. Research over the 30 years since this legislation was enacted makes clear that most general classrooms and academic teachers are not equipped to deal with children whose disabilities make them disruptive, violent or self-destructive without individualized attention. The newest national statistics available (2007) concerning the alarming rise in the number of children diagnosed with some form of autism highlights the continued importance of this federal mandate. The law has important significant implications both for the severely disabled children and for the public school classrooms struggling to meet the mandate with limited budgets.

When a public school system identifies seriously disturbed students who can no longer be served in their classrooms, they are often referred to the therapeutic milieu of the school we have studied. By providing extensive, well-coordinated services to the students and their families, in a therapeutic milieu, these students who have experienced multiple setbacks and sporadic or ineffective treatment begin to experience academic, emotional and behavioral successes. This study was meant to evaluate the long-term

impact of this therapeutic milieu through an archival record review of all students treated over the last three decades.

Three variables were hypothesized to predict to two kinds of outcomes. Age at entry into the program, length of stay at the school and complexity of the presenting diagnoses were all predicted to increase academic success and to decrease emotional and behavioral problems. Age at entry contributed significantly to academic gains in the final model. Diagnostic complexity contributed marginally to explaining those gains. Length of stay was not significantly related to either academic gains or reduction of problems. There was a significant reduction in learning problems linked to age at entry but it was not predictive in the final model. Neither length of stay nor complexity of diagnoses was significantly related to reduction of emotional or behavioral problems in the final model.

The majority of studies make clear that many public school principals and teachers have negative attitudes toward the concept of inclusion and prefer pull-out special education programs for emotionally and behaviorally disabled students. Though there are many approaches to retraining regular academic classroom teachers for inclusion, it is difficult to include disruptive students with demanding special needs into a large class of normal students. Everyone suffers and school systems are beginning to come to terms with this reality.

The therapeutic milieu program evaluated in this study has a vital and productive role in serving a population of seriously disturbed children who have been expelled from the larger state system. By providing specialized educational and mental health services within a therapeutic milieu, students who have known little success in the classroom can thrive. Students with serious disabilities such as schizophrenia, autism and mental

retardation as well as those who exhibit serious homicidal or suicidal behaviors that make them a threat to others and themselves need a comprehensive treatment program. The therapeutic milieu that focuses on their serious psychological and social deficits within an academic setting that provides comprehensive services in an intensive manner has proven successful. The ultimate aim is to enhance cognitive, intrapsychic and interpersonal aspects of the student's life by developing stagnant ego development through object relationships. This provides the student with self-confidence through mastery over his deficits and provides the student with a willingness to change and a chance to succeed. The key ingredient is convincing each student to establish trusting relationships, to know himself better and to gain control over destructive emotional and behavioral patterns within a supportive learning environment.

### Results

The results of this study demonstrate that the children who have been accepted for treatment in this therapeutic milieu reflect the national picture of disabled youngsters. Male students outnumber female student three to one. The average age of entry into the specialized program was eleven years and the average stay was a little over four years.

What distinguishes this sample was that an overwhelming majority of the students experience significant emotional and behavioral problems. Most youngsters experienced some kind of Learning Disorder. Over half are diagnosed as Attention Deficit Disorder with an additional 44% diagnosed with either Mental Retardation or Pervasive Developmental problems. Forty-eight percent have either Psychotic or Mood Diagnoses,

while 43% have Impulse Control or Anxiety Disorder. More importantly these serious diagnosed problems co-exist in the same child for three quarters of the entire sample.

Clearly the children accepted into the therapeutic milieu program have serious, multilevel difficulties that make them particularly difficult to treat. In addition, many of the conditions are not amendable to 'cure' and will show little change in basic pathology despite any level of treatment (for example, mental retardation or schizophrenia). The fact that only 10% showed changed diagnoses when they exited the program support this interpretation.

Correlational analyses were run for both outcome variables. Those for Iowa change scores indicated that age of entry and duration were significantly and negatively correlated with outcome scores as might be expected. The earlier one enters treatment, the greater the possible treatment time available. In further causative analyses it was determined that the age at entry is significantly predictive of success while length of treatment is not.

The second set of correlational analyses for the Behavioral Change Scale showed there were a number of significant correlations between the five subscales. This indication of a high degree of multi-collinearity means that scores on individual scales may not be operating independently. Thus a score on the Fear scale is significantly related to the score on the Anxiety scale, potentially inflating both. Care should be taken not to interpret each as an independent measure of a different aspect of the child's behavior. However, examination of the average raw score data shows a small reduction in symptomatic behavior in most problem areas over time. This pattern of reduction in observed problem behavior could be interpreted as recognition that students do show an

overall change for the better from entry to exit. Because the scoring is completed annually by different teachers as the children progress through the school, the pattern of reduction is even more suggestive of success. If scoring bias is operating, each new teacher evaluation should cancel the gain noted by the last.

### Hypothesis Testing

**Hypothesis 1 – Treatment is more effective when it begins earlier; (DOB, Entry date, Iowa change Scores, behavior evaluation change subscale scores will be analyzed).**

This premise received significant support. Analyses of variance demonstrated significant age linked change in Iowa initial scores ( $p < .0001$ ), final scores ( $p < .0001$ ) and most importantly in age-adjusted change scores ( $p < .01$ ). Given that students come into the program with multiple entrenched problems, one would not expect significant academic gain. The findings that there were significant age-related changes in Iowa scores for age-adjusted change scores are surprising in several respects. First: while the average subscale scores were low, each academic category showed some degree of gain from the beginning to the end of the student's placement. The Iowa test scores ranged widely from a low of  $-0.9$  to a high of  $+21.3$ . With variability this great, coupled with the relatively small sample, it is remarkable that there are any significant findings. This is due to the universal gains recorded in all subtest skill areas.

Second: The strongest impact, or largest gain, was made when the student entered treatment in early adolescence (13-14 years). Traditionally the very youngest children are also most profoundly disturbed. When the public system refuses entry to a

child under 12 years old, it is most often because of the magnitude of the problem that the child presents to the system. As a review of the literature demonstrated, the regular classroom is not equipped to deal with violent homicidal acting out, severe pathology that prevents language formation as in autism or mental retardation or psychotic extremes of mood disorder. Because the therapeutic school accepts and attempts to deal with children as young as 4 years old, it is plausible that these children would present the greatest academic challenges.

Third: Given the average age of entry into this program is around 11 years old, the students have experienced a great deal of failure in the public school system already. On average once they enter the therapeutic milieu they begin to make academic improvement. Though the changes are small, as seen in the raw scores, they are universal and reliably linked to the age at entry into the specialized treatment program. The level of positive change in basic academic skills is significant and impacts those in early adolescence most.

The five Behavioral Evaluation subscale scores were evaluated independently to measure the impact of age at entry into treatment. The level of change reached significance only for Learning Problems ( $p < .043$ ). The greatest reduction occurred in preadolescence for the 10-12 year olds. The total raw average score change was in the desired direction for virtually every behavioral measure in each age level—early childhood, preadolescence, early adolescence, and late adolescence. Problems with the subscales multi-collinearity may account for the lack of significant differentiation among the remaining scales. Variability in range of age at admission (3.7 to 19.8 years) also contributes to the problem of finding significance when the real change scores are

relatively small. Many of the chronic behavior problems show some reduction but to a lesser degree than Learning Problems. Given the serious nature of the student diagnoses at time of entry expectation of large reductions in behavioral and emotional problems is unrealistic.

**Hypothesis 2 – Treatment of a longer duration leads to enhanced result (Entry Date, Exit Date, Entry DX, and Exit DX will be analyzed).**

There was no significant support for this hypothesis for Iowa scores. Analysis of variance demonstrated marginally significant increases ( $p < .052$ ) in final test scores. There was no significant pattern of positive gain in academic skills reflected in age-adjusted change scores ( $p < .751$ ). The large range in length of stay (1 month to 16.8 years) contributes to the difficulty of defining significance in a relatively small sample.

Examination of the raw scores clearly demonstrates that the worst scores were associated with the shortest stays ( $X = .3000$ ), but it was the moderate length stays ( $X = +.0786$ ) rather than the longest stays ( $X = -.1568$ ) that produced the greatest positive gains in academic skills. Because these changes are not significant it is not useful to speculate about relative treatment time. The unexpected pattern noted above may be a function of sample anomalies.

For the Behavioral Evaluation subscale scores an analysis of variance demonstrate that there were no significant reduction of symptoms linked to duration of stay. Examination of the raw score averages demonstrates that the shortest stays (under 2 years) produced less reduction in symptoms while the longest stays (over 4.6 years) produced the greatest symptom reductions in every subscale. The moderate length stay

did not produce a patterned set of results. Caution should be exercised in making any interpretation of raw scores that do not predict reliably to the outcome.

**Hypothesis 3 – Mild and moderately emotionally disturbed youngsters will profit most and will have better outcomes; (DX entry, behavior evaluation change score, Iowa change score will be analyzed).**

Mild and moderately impaired students will have better academic and behavioral outcomes. Analysis of variance demonstrates that there is no significant change in Iowa scores linked to level of diagnostic complexity (p.127). Examination of raw average scores demonstrates that those students who enter with one diagnosis score higher over time than those with two or more diagnoses.

Analyses of variance for the five behavioral outcomes demonstrated no significant reduction in behavioral problems related to diagnostic complexity. Examination of raw average change scores showed that most symptom reduction occurred for those students with one diagnosis only.

The range of diagnostic patterns in this sample of 182 was very large—76 different diagnostic patterns relative to the size of the sample. While clinical expertise makes clear prognostic differences related to the level and type of behavioral and emotional problems experienced by the students, the rather crude reduction of this crucial variable was meant as an effort to keep it in the final analyses. It is clear that a student who is diagnosed with severe Mental Retardation compared to one diagnosed with ADD will have very different academic prognoses. In a similar way a student diagnosed with

Schizophrenia and one diagnosed with Tic disorder will have different behavioral and emotional outcomes.

Reducing the complex diagnosis variable to level of complexity, while theoretically defensible, does not reflect the reality of the students' capability for change. A much larger sample (between 760 & 1800) would be needed to develop cells of matched diagnostic patterns of sufficient size.

The final level of evaluation that was completed in this study is that of model building using multiple regression analyses to compare the relative impact of the three predictor variables on each outcome variable. This step was justified because several of the predictor variables did reach significance in independent analyses. The value of model building is that it can weigh the relative contribution of all predictor variables in combination to the outcome variables.

The model to evaluate the relative impact of age at entry, duration of treatment and diagnostic complexity on academic performance was tested using the age-adjusted change scores from the Iowa Basic Skills test. The total model reached significance. Age at entry into treatment was the strongest predictor ( $p < .003$ ). Diagnostic complexity contributed the next largest weighing ( $p < .072$ ). Duration of treatment was not a significant predictor in this model ( $p < .267$ ). This model accounts for approximately 16% of the variability in the academic change scores. This is a very modest predictability estimate, but in a small sample with great variability in each of the predictor variables it is still surprising.

Five multiple regression analyses were run to model the relative impact of the three predictors on the five Behavioral Evaluation subscale change scores. None of the regression models were significant for any behavioral change outcome. In the final models, neither age at entry, duration of treatment, nor complexity of diagnoses predicted to a reduction of emotional or behavioral symptoms.

### Limitations

There are three major problems that limit the applicability of these findings. First is the major limitation in the lack of complete archival data on each student which reduced the size of the final useable sample data. More attention to effective record keeping is one of the positive institutional outcomes resulting from this extensive archival review. The second is the problem of the multi-collinearity of the Behavioral Evaluation subscales that severely limited the use of this instrument. As it was utilized regularly throughout the 30 years of the study, there were great hopes that it would provide a consistent picture of each student's behavioral and emotional changes over time. More training on the use of this instrument with particular attention to clarifying the differences between the subscales may result in more reliable use of the instrument in the future. The third limitation of this study is that there was no direct comparison between outcomes found in this therapeutic milieu environment and those in a public school special education intervention. Though there were significant academic gains noted in this program, it would be useful to be able to compare these to the average gains experienced in the public school. Future research might compare relative gains and begin

to address which intervention is most effective for students and most cost effective for the taxpayers.

### Policy Implications

Public school teachers are often underprepared to deal with the symptomatic behavior of the serious emotionally disturbed student in their classrooms. The teachers are untrained to work successfully with students who are homicidal, suicidal, and have serious learning problems.

These students, even if their teachers had training, would have difficulty being treated in a normal classroom with twenty five other regular students. As a result the public schools often refer their students with extreme behavioral acting-out and severe learning disabilities to private therapeutic facilities.

Although the public schools do not work well with these kinds of students, an extended day in a therapeutic milieu with teachers trained to deal with extremes of behavioral as well as academic deficits can produce both behavioral and emotional gains and academic success. These teachers are trained in therapeutic interventions as well as specialized academic interventions. In addition the small classroom size allows for a high staff to student ratio and much one-on-one interaction with teachers and other staff members. The additional support staff includes teacher's aides, clinical social workers, a speech therapist, psychiatrist, nurse and work-study supervisors for vocational training who enrich the therapeutic milieu experience. It would be difficult for the public schools to replicate such intensive and multiple services due to having larger classes. National experts have predicted the numbers of identified emotionally behaviorally disordered

students will increase. This is exemplified in the most recent prevalence figures.

Tuchman (2003) referring to Autism Spectrum Disorder (ASDS), claims one explanation for the increased number is a greater and earlier awareness, especially in severely affected children. New data suggests the rate of autism in the U.S. is 4.2 cases per 1,000 and 15.5 per 1,000 for mental retardation as compared to 3.6 per 1,000 for cerebral palsy and 1.4 per 1,000 for hearing and vision impairment (Centers for Disease Control and Prevention, 2007). These increases mean greater need for specialized treatment outside of the normal public school classroom.

Cost effectiveness is a relevant and important issue when seeking therapeutic interventions, especially with such chronic and widespread psychiatric disorders. The costs of a private therapeutic school, which will be higher, can have long range results that demonstrate cost effectiveness. The student who completes high school and is able to enter and maintain a suitable place in society will provide a life-time of productivity. While the costs of the intensive milieu experience are approximately one third more than public schools special education, the concept of prevention and treatability suggest the economic efficacy of a private therapeutic program for the most severely disabled.

Specialized treatment for severely disabled children would be most effectively provided in small, specialized therapeutic classes. These children can not be effectively treated in mainstream public classrooms.

### Clinical Implications

This study examined the impact of psychodynamic theories and treatment modalities upon seriously emotionally disturbed youngsters attending a private day

therapeutic school. The students were excluded from the public schools due to chronic psychological and academic deficits that manifested through aggressive and defiant behavior and reflected serious developmental delays. While the philosophy and therapeutic orientation was psychoanalytic and valued all psychodynamic paradigms, the major focus was on ego psychology and object relations. Psychoanalysis concerns itself with human development and behavior as a system of psychotherapy to diminish unconscious conflicts manifested in current emotions and behavior. The ego in a therapeutic school serves to mediate between the wishes of the child and demands of teachers and peers to accomplish adaptation within academic and emotional areas. Object relations are closely allied to ego development in the bond that is established between the child and the therapeutic school staff.

The school setting by providing a therapeutic milieu in which all the staff and activities focus on the child's needs in an individualized fashion will increase relationships and ultimately ego strength. The goal will be to strengthen the ego and enhance interpersonal relationships. In essence the therapeutic school environment represents a specialized microcosm of the world and an opportunity for adaptation in which they are given great support.

APPENDIXES

APPENDIX A  
DEMOGRAPHICS FORMS





APPENDIX B  
IOWA TEST OF BASIC SKILLS

OUTCOMES

Subject #	Name of Subject	Behavioral Evaluations	Yr.	Yr.	Yr.	Iowa Tests	Yr.	Yr.	Yr.	Yr.	Qualitative Evaluations
		Learning Problems				Vocabulary					
		Interpersonal Difficulties				Reading					
		Inappropriate Behavior				Language Arts					
		Unhappiness/Depression				Spelling					
		Physical Symptoms/Fear				Capitalization					
						Punctuation					
						Usage					
						Work Study					
						Visual Materials					
						Reference Materials					
						Mathematics					
						Concepts					
						Problems					
						Computation					
						COMPOSITE					
		Learning Problems				Vocabulary					
		Interpersonal Difficulties				Reading					
		Inappropriate Behavior				Language Arts					
		Unhappiness/Depression				Spelling					
		Physical Symptoms/Fear				Capitalization					
						Punctuation					
						Usage					
						Work Study					
						Visual Materials					
						Reference Materials					
						Mathematics					
						Concepts					
						Problems					
						Computation					
						COMPOSITE					



APPENDIX C  
BEHAVIORAL EVALUATION SCALE

OUTCOMES

Subject #	Name of Subject	Behavioral Evaluations					Iowa Tests					Qualitative Evaluations
			Yr.	Yr.	Yr.			Yr.	Yr.	Yr.	Yr.	
		Learning Problems					Vocabulary					
		Interpersonal Difficulties					Reading					
		Inappropriate Behavior					Language Arts					
		Unhappiness/Depression					Spelling					
		Physical Symptoms/Fear					Capitalization					
							Punctuation					
							Usage					
							Work Study					
							Visual Materials					
							Reference Materials					
							Mathematics					
							Concepts					
							Problems					
							Computation					
							COMPOSITE					
		Learning Problems					Vocabulary					
		Interpersonal Difficulties					Reading					
		Inappropriate Behavior					Language Arts					
		Unhappiness/Depression					Spelling					
		Physical Symptoms/Fear					Capitalization					
							Punctuation					
							Usage					
							Work Study					
							Visual Materials					
							Reference Materials					
							Mathematics					
							Concepts					
							Problems					
							Computation					
							COMPOSITE					

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