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THE PRACTICE OF OCCUPATIONAL THERAPY AS A RELATED SERVICE
FOR STUDENTS WITH BEHAVIORAL DISORDERS:
AN EXPLORATORY STUDY

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

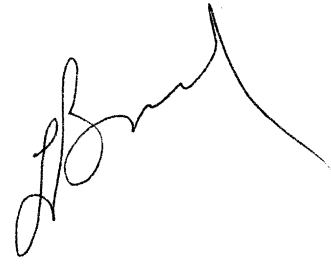
DOCTOR OF PHILOSOPHY

BY

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Although the profession of occupational therapy had its origins in the treatment of the mentally ill, and was among the pioneers in developing community-based programs to meet the social and emotional needs of children, a study of 28 therapists practicing in the public schools revealed that these occupational therapists did not serve students with behavioral disorders unless they also exhibited a neurological disorder. The results of this study revealed that occupational therapy is not recognized by the educational sector as an essential related service for students with behavioral disorders. Occupational therapy is viewed as a modality much akin to physical therapy in which the focus is on motor skill development.

A comparison between the data generated in this study and the literature suggests that there is a marked discrepancy between the approaches, goals, and methods of therapy used by hospital-based versus school-based occupational therapists.

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CHAPTER I

INTRODUCTION

Antecedents to Psychosocial Occupational Therapy

While the potential for occupational activities such as exercise, play, and work to ameliorate psychosocial disorders has been recognized for thousands of years, the use of such interventions by the medical community has waxed and waned (Hopkins, 1988). The ancient Chinese, Persian, and Greek physicians used exercise to promote long life and the spirit of well-being. Playful diversions and work activities were frequent prescriptions by Roman physicians for the treatment of emotional, behavioral, and other psychosocial disorders. The essential relationship between a balanced lifestyle (comprised of work, play, and exercise) and the resulting effect on psychosocial functioning was an established principle in the earliest treatment programs.

The middle ages ushered in a return to a less humane perspective on the treatment of psychosocial disorders. Persons with such disorders were labeled as mentally defective or diseased. They were social outcasts. A psychosocial disorder was viewed as a punishment for impure

thoughts or deeds. Consequently, mental patients were routinely incarcerated. Therapy programs consisting of exercise, work and play, were discontinued (Mosey, 1986).

During the 1800's there was once again a return to more humane treatment approaches similar to those used by the ancient physicians. Persons with psychosocial disorders were treated in a manner that led to this period of time becoming known as the moral treatment era (Hopkins, 1988). The interventions used in treating psychosocial disorders once again involved kindness and healthful occupations. The basic assumption of moral treatment was that given the proper environment and appropriate occupational activities, psychosocial disorders could be overcome. Work occupations were routinely prescribed for all patients. The therapy program typical of the moral treatment era included work, exercise, drama, reading, and music occupations. Some unscrupulous hospitals, however, abused the work concept associated with moral treatment and turned patients into laborers.

In the 1900's medicine began to document the relationship between psychosocial disorders and neurological disease. As psychosocial disorders were once again thought of as the outcome of a disease process, many treatment settings rejected work, play, and exercise occupations as therapeutic agents and began to incorporate such activities for their diversional benefit only. By the 1920's, the

moral treatment approach lost its credibility in the medical community. Patients with psychosocial disorders were given primarily custodial care, often without the benefit of occupational activities (Hopkins, 1988).

The Origin and Evolution of Psychosocial Occupational Therapy

Scientific advances in medical science brought about an end to the moral treatment era (Hopkins, 1988). Physicians became focused on the neurology of psychosocial disorders, and rejected environmental interventions due to their lack of scientific rigor. However, a group of humanistic psychiatrists and occupation practitioners reestablished the basic tenets of moral treatment in 1917 under the name of occupational therapy (Barris, Kielhofner & Watts, 1988). One of the most basic assumptions of the moral treatment approach was the belief that some degree of health always remains within the patient and that the patient's psychosocial health can be nurtured by engaging the patient in routine occupations (Meyer, 1922). Early occupational therapists used arts and crafts, games, and dance activities. The objective of such interventions was the promotion of a balanced lifestyle as the vehicle for influencing the patient's psychosocial health (Kielhofner & Barris, 1984).

In the mid-1950's occupational therapists began to succumb to the medical community's pressure to become more scientifically-based (Kielhofner & Burke, 1978). Therapists began to reject the occupational (balanced lifestyle) treatment model for providing services to patients with psychosocial disorders. Two prominent medical treatment models, psychoanalysis and neuropsychology, had become widely recognized in the medical community, and began to permeate the practice of occupational therapy (Barris et al., 1988). Occupational therapy became more and more a direct extension of psychiatry. Traditional work, play, and exercise occupations used by early therapists were rejected. However, other fields such as art therapy, music therapy, dance therapy, and recreation therapy emerged to incorporate the discarded occupational activities (West, 1984).

The current practice of psychosocial occupational therapy reflects interventions that have evolved from both the medical (psychoanalysis and neuropsychology) and the occupational (balanced lifestyle of work, play, exercise) treatment models. Five main occupational therapy frames of reference can be identified in the literature: developmental, functional, neurophysiological, occupational, and psychoanalytical (Cronin & Burnell, 1989; Kaplan, 1984). These five frames of reference are implemented from either a medical or an occupational service delivery model. A 1984 survey of therapists working in psychosocial settings

revealed that therapists report their most frequently used theory of intervention to be occupational behavior (Kielhofner & Barris, 1984). Occupational behavior is a recognized practice theory that evolved from the more global occupational frame of reference (Reilly, 1974). The 1984 survey also found occupational behavior to be the most frequently cited theory of psychosocial intervention in the occupational therapy literature. However, the survey revealed that, even though current occupational therapy literature contains few publications with a psychoanalytic base, occupational therapists frequently use psychoanalytical principles in their practice (Kielhofner & Barris, 1984).

In recent years, there has been a resurgence among many in the profession to reclaim the original service delivery model which focused on occupational interventions (American Occupational Therapy Association (AOTA), 1979). Reilly's 1962 lecture, was a poignant plea to reaffirm the assumptions of the professions founders and to reject the medical service delivery model as a basis for intervention (West, 1984). Since the publication of Reilly's lecture (Reilly, 1962), a steady progression of occupational therapy theorists have questioned the profession's allegiance to the medical model (e.g., Florey, 1989; Kleinman & Bulkley, 1982; Lillie & Armstrong, 1982; Minard, 1962; Mosey, 1974; Oakley,

Kielhofner & Barris, 1985; Reilly, 1969; Shannon, 1970, 1977; Vandenberg & Kielhofner, 1982; West 1967, 1984; Woodside, 1971).

While occupational therapists in traditional employment settings were struggling with their professional identity, they were urged to leave hospital environs and provide services in community-based settings (Reilly, 1969; West, 1984; Yerxa, 1967). Since the beginning of the 1980s, the public schools have become the second most common employer of occupational therapists (AOTA, 1986).

Occupational Therapy as an Education-Related Service

Occupational therapists have been employed by the schools since the early 1940's. Currently, approximately ten thousand occupational therapists are employed by public schools (Chandler, 1990). That number represents almost 25% of the total number of practicing occupational therapists in the nation (AOTA, 1985). Prior to the Education for All Handicapped Children Act (Federal Register, 1975), the traditional function of occupational therapists in the schools was to provide direct services for students with medical problems that interfered with their receiving an education (Gilfoyle & Hayes, 1979; Kalish & Presseller, 1980; Kinnealey & Morse, 1979; Royeen, 1986). The interventions provided by the therapists were primarily based on a medical model service delivery approach

(Royeen & Marsh, 1988). The Education for All Handicapped Children Act (EHA), also known as Public Law 94-142 (PL 94-142), stated that occupational therapy is to be provided for all handicapped students who are in need of such related services to benefit from special education. Although occupational therapy was specifically identified in PL 94-142 as a related service to be appropriately used for all of the handicapping conditions, it has been interpreted to be an intervention primarily for students with physical problems. The occupational therapy needs of students who do not display physical limitations are not being met (Florey, 1989). The Robert Wood Johnson Foundation (1988) found that occupational therapy services in the schools are concentrated on children having physical problems, vision/hearing deficits, other health impairment, and mental retardation. These findings are consistent with two earlier nation-wide surveys of practicing occupational therapists (Gilfoyle & Hayes, 1979; American Occupational Therapy Association (AOTA), 1986). These two surveys revealed that, as a general rule, occupational therapists were providing basically the same type of direct services (Dunn, 1988), to primarily the same students (e.g., those with orthopedic or developmental problems) as they did in the 1940's. The Robert Wood Johnson study is also consistent with a 1989 survey of occupational therapy in the schools (Brown, 1989). The 1989 survey compared the perceptions of educators with

those of therapists regarding the importance of therapy as a related service. While the therapists (72%) reported the treatment of sensory/motor problems as their most important service, a relatively small number of educators (26%) agreed. Educators perceived the occupational therapist's involvement in parent training as equally important to direct treatment of motor problems. However, only 17% of the responding therapists perceived parent training as a primary service of occupational therapy.

All the surveys of occupational therapy in the schools have shown that students with behavioral disorders are seen by relatively few of the nation's occupational therapists (AOTA, 1985; Brown, 1989; Florey, 1989; Robert Wood Johnson Foundation, 1988). This may be in large part attributable to (a) wide-spread confusion between both therapists and educators regarding the purpose of occupational therapy in the schools (Baron, 1989; Bloom, 1988; Brown, 1989; Coutinho & Hunter, 1988; Creighton, 1979; Hightower-Vandamm, 1980; Kalish & Presseller, 1980; Langdon & Langdon, 1983; Ottenbacher, 1982; Royeen & Marsh, 1988; Stephens, 1989) and (b) the belief held by some educators that occupational therapy is a duplication of comparable educational services already in place (Bloom, 1988; Ottenbacher, 1982). Occupational therapists have done little to demonstrate the need for their interventions as a related service for students with behavior disorders (Forness, 1988). In fact,

the profession has tended to essentially ignore students with behavioral disorders (Florey, 1989). The student with behavioral disorders is only briefly mentioned in three of the most widely-used occupational therapy texts (Hopkins & Smith, 1988; Mosey, 1986; & Pratt & Allen, 1989). However, the provision of occupational therapy services for students with behavior disorders is not new to the profession (Barker & Muir, 1969; Bell, 1977; Cermak, Stein, & Abelson, 1973; Edelman, 1953; Fergus & Buchanan, 1977; Florey, 1969; Forward, 1953, 1958, 1959; Fountain, 1972; Gleave, 1947; Gill, 1976; Howe, 1968; Klapman & Baker, 1963; Lackerbie & Stevenson, 1947; Llorens & Rubin, 1962; Rabinovitch, Bee, & Outwater, 1951; Rider, 1973). Contemporary intervention techniques reflect the profession's current emphasis on sensory-motor and neuromuscular modalities (Florey, 1989). The student with a psychosocial disorder not accompanied by a neurological or physical deficit has been ignored in recent years. This is further evidenced by the eligibility criteria for occupational therapy services recently adopted by the state of Louisiana which specifically prohibits occupational therapy from being involved with any special education student who does not display fine motor impairment (Carr, 1989).

There are undoubtedly many reasons for the infrequency of occupational therapy as a related service for students with behavior disorders. Whatever the specific reason, the

underutilization of occupational therapy with this student group lends support to the assertion of one prominent special educator that these students are the most underserved and inadequately served handicapped population (Weintraub, 1988).

CHAPTER II

PURPOSE OF THE STUDY

The purpose of this research study was to conduct an exploratory nation-wide survey to provide an initial assessment of the current form and scope of occupational therapy as an education-related service for students with behavioral disorders.

Significance of the Study

The study was significant in that it provided the first critical investigation into the everyday practices of occupational therapy for students with behavioral disorders. There has been no other study of occupational therapy with this population. The results of this study revealed the essential features of the practice of 28 occupational therapists. The data obtained in this study have the potential to be directly useful to the discipline of occupational therapy. In addition to the data on everyday practice, the therapists were assessed regarding their perception of their academic preparation to serve this population in the school setting. The data obtained in this study suggest curriculum changes to more adequately and

consistently prepare students, and thereby improve the quality of such services in the school setting.

This study provided clarification of areas in which occupational therapy for students with behavioral disorders could be both refined and further researched. One of the most pressing concerns, already identified in the literature and further supported by this study, is the need to determine how occupational therapy can become better integrated into the special education programming for students with behavior disorders.

Limitations of the Study

The primary limitation of the study was the process of identifying a representative group of therapists. As there are so few therapists serving students with behavior disorders in school settings (AOTA, 1986; Florey, 1989), a random sampling of therapists was not a satisfactory approach. The most viable means to identify a substantial number of appropriate therapists was to use the membership data bank maintained by The American Occupational Therapy Association. The data bank provided a list of therapists who, based on the 1986 AOTA survey, indicated that they treat a substantial number of students with behavior disorders. A preliminary data search was conducted and yielded 121 possible therapists nationwide. Though a number of the therapists identified by the data bank had changed

positions or populations since the 1986 survey, there was no better method readily available to identify the desired group of occupational therapists.

Another limitation to the study was the nature of the data collection. Survey research is subject to inherent limitations: the response rate is low, typically less than 75%, and the tendency toward misleading results is high. Those who did respond may not be representative of the population being studied. Additionally, a survey by mail does not provide control over time and setting, presentation, or for clarification of questions (Kerlinger, 1986). The unique information sought in this study required the development of a questionnaire specific to the data sought. Though the instrument used in this study was critiqued and modified based on the suggestions of four school-based occupational therapists and two occupational therapy faculty (see Appendix A), the potential for researcher bias remains a factor to be considered.

Definition of Terms

The terms which follow are used throughout this study and are defined accordingly:

1. Adaptation is the process of making adjustments in either the person's behavior or the environment to enhance survival or realize personal potential (Mosey, 1986).

2. Behavioral Disorder is a term which describes the presence of chronic behaviors that are inconsistent with the expected behaviors of the student's culture (Bullock, in press).

3. Education-Related Services are defined as "developmental, corrective, and other supportive services as are required to assist a handicapped child to benefit from special education" (Federal Register, 1975).

4. Functional is a term which describes a person who has those attributes necessary to perform adequately in the environment (Langdon & Langdon, 1983).

5. Handicapping Condition is a term used in The Education of All Handicapped Children Act of 1975. This act defined handicapping conditions "as being mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multi-handicapped, or having specific learning disabilities", which impair learning, thus requiring special education and related services. (Federal Register, 1975).

6. Intrinsic Motivation is that source of motivation that emanates from the behavior itself rather than from an extraneous source. Intrinsically motivated activity is activity done for its own sake and not for an external reward (Barris et al., 1988; Florey, 1969).

7. Occupation is the purposeful use of time by humans to fulfill their own internal urges toward exploring and mastering the environment that at the same time fulfills the requirements of the social group to which they belong and personal needs for self-maintenance (Kielhofner, 1980).

8. Occupational Behavior Therapy is an intervention that emphasizes the person's occupations of work, play, and self-care, using group processes, to promote emotional well-being through performance of social roles (Howe & Schwartzberg, 1986).

9. Occupational Behavior (activities): The organization of action based on skills, knowledge, and attitudes to make functioning possible in life roles (Reilly, 1974).

10. Occupational Performance refers to the ways in which the individual's psychosocial performance components are organized into behavioral patterns for meeting environmental demands (e.g., family interaction, activities of daily living, school/work, play/leisure/recreation and temporal adaptation) (Mosey, 1986).

11. Occupational Therapy is the art and science of directing participation in selected tasks to restore, reinforce and enhance performance, facilitate learning of those skills and functions essential for adaptation and productivity, diminish or correct pathology, and to promote and maintain health. Its fundamental concern is the

capacity, throughout the life span, to perform with satisfaction to self and others those tasks and roles essential to productive living and to the mastery of self and the environment (AOTA, 1972).

12. Psychosocial Disorder is a term describing a condition of psychological or social disruption that resulted from emotional disturbance, mental retardation, developmental disabilities or physical problem (Barris et al., 1988).

13. Psychosocial Occupational Therapy refers to occupational therapy interventions designed specifically for persons with psychosocial dysfunction (Barris et al., 1988).

14. Psychosocial Performance Components is a term which refers to the four performance components which constitute the psychosocial domain of occupational therapy (a) sensory integration, (b) cognitive function, (c) psychological function, and (d) social interaction (Mosey, 1986).

15. Psychosocial Treatment Setting is the environment in which an occupational therapist may provide services for persons with psychosocial dysfunction (Mosey, 1986).

16. Purposeful Activity is the major legitimate tool of occupational therapy. The doing processes that require the use of thought and energy and are directed toward an intended or desired end result (Fidler & Fidler, 1978; Mosey, 1986).

17. Sensory Integration is a term which describes the subcortical activity that allows for the processing of proprioceptive, vestibular, and tactile sensory input for functional use (Mosey, 1986).

18. Sensory Integration Therapy is an intervention approach that uses sensory input to normalize neural functioning in order to improve posture, lateralization, space orientation, and motor planning (Mosey, 1986).

19. Temporal Adaptation is the ability to organize one's time (daily behaviors) into a pattern of performance that enables one to fulfill required responsibilities and to enjoy required and desired social roles (Barris et al., 1988; Mosey, 1986).

CHAPTER III

Review of the Literature

Since the study addressed the two disciplines of special education and occupational therapy, it was necessary to review both bodies of knowledge for relevant literature. The special education literature was reviewed from 1965 through 1988 for reference to occupational therapy, adjunctive therapies, experiential therapy, and related services for the behaviorally disordered population. The Current Index to Journals in Education, Educational Resources Information Center, Resources in Education, and Psychological Abstracts were used to initiate the search. References of literature cited in these indexes were reviewed. The review revealed that the special education literature uses a variety of labels for this population, such as emotionally impaired, emotionally handicapped, severely emotionally disturbed, behaviorally disordered, and others. Each term was used in conducting this search. Occupational therapy literature was reviewed since its origin in 1922 through 1989. The Cumulative Index to the American Journal of Occupational Therapy Volumes I and II were used to initiate the search. Each issue of the journals, Occupational Therapy in Mental Health, and the

Occupational Therapy Journal of Research, was reviewed as there is no index for either journal. Key words used in conducting the occupational therapy search included emotionally disturbed, psychosocial dysfunction, behaviorally disordered, mental illness, and pediatric occupational therapy. Additionally, textbooks in both special education and occupational therapy were reviewed using the above descriptors.

To promote clarity and consistency, this literature review uses the single term, behavior disorders to subsume the various labels used in both bodies of literature. Behavior disorders is the term preferred by the Council for Children with Behavior Disorders (Huntze, 1985; Kauffman, 1986) and by other recognized leaders in special education (Braaten, Kauffman, Braaten, Polsgrove & Nelson, 1988).

The review of literature which follows provides (a) an overview of the occupational therapy body of knowledge specific to interventions for students with behavior disorders; (b) a discussion on the delivery of occupational therapy services for students with behavior disorders; and (c) a summary of the review of literature.

Overview of Occupational Therapy for Students with Behavior Disorders

Guidelines for Occupational Therapy Intervention

There are three nationally-recognized sets of guidelines for providing occupational therapy as a related service for the student with behavior disorders. Foremost, are the regulations of the EHA (Federal Register, 1975) which defines the purpose of occupational therapy as being (a) improving, developing or restoring functions impaired or lost through illness, injury, or deprivation; (b) improving ability to perform tasks for independent functioning when functions are impaired or lost; and (c) preventing, through early intervention, initial or further impairment or loss of function.

The American Occupational Therapy Association provides the second guide to intervention with the Standards of Practice for Occupational Therapy in Schools (AOTA, 1980). The standards for practice indicate that there are two appropriate reasons for occupational therapy referral (a) deficits in either general occupational performance or (b) deficits in specific occupational performance components. Occupational performance includes daily living skills, school/work activities, and play/leisure activities. The occupational performance components are neuromuscular, sensory integration, psychological/social and cognitive

functioning. The standards of practice specifically identifies appropriate interventions for addressing each of the deficit areas. The following summarizes the goals identified by the document as appropriate:

1. When the Individualized Educational Plan calls for a focus on occupational performance, the therapist should address self-care, homework-school activities, prevocational/vocational interests, and developmental play/leisure activities.

2. When the goal is to diminish neuromuscular deficits, the intervention should include range of motion, development of reflexes, sensory stimuli, positioning, adaptive equipment, splints and orthoses.

3. When the goal is to improve sensory integration, the therapist should use facilitating or inhibiting techniques to elicit vestibular, tactile, or proprioceptive responses.

4. When the goal is to improve a psychosocial dysfunction, the intervention should provide an environment in which the student can learn to deal with competition, frustration, success/failure, feelings, develop self-esteem, acquire appropriate social behaviors, and develop sensitivity to others.

5. When the goal is to improve cognitive functioning the therapist should provide an occupational therapy program that promotes concentration, attention, memory/recall, decision-making and problem-solving.

The third guideline for occupational therapy intervention is the position paper developed by the AOTA in 1981 (AOTA, 1981). The position paper addressed the goals and methods appropriate for occupational therapy as a related service. The paper stated that occupational therapy should be provided to enhance a student's ability to adapt to and function in the educational setting. It advises that therapy is to be accomplished through purposeful, goal-directed occupations (e.g., activities that facilitate or restore independent and functional performance).

Frames of References for Occupational Therapy Intervention

One of the earliest writings addressing occupational therapy goals for students with behavioral disorders appeared as a chapter in Principles of Occupational Therapy in which Gleave (1947) wrote that the student with behavioral disorders should be treated by therapists using a program of constructive work and play to increase both confidence and competency. For both young children and adolescents, Gleave conceptualized behavioral disorders as being a function of a play deficit. She did not address the etiology of the deficit, but directed therapists to focus on the remedial potential of therapeutic play with real-life meaning to the child. She wrote that the therapist could accomplish the goal of improving the child's confidence and competency by providing an environment in which habits and

approaches to tasks are relearned so that the expectation of success promotes the child's desire to be engaged, rather than disengaged, with society. Several theories of intervention are currently used by occupational therapists who serve students with behavioral disorders. These can be grouped into five frames of reference (a) developmental; (b) functional; (c) neurological; (d) occupational; and (e) psychoanalytical. Each of these frames of reference is reportedly holistic in that the focus is on a dynamic interaction between the child, therapist, environment and activities (Cronin & Burnell, 1989).

The developmental frame of reference. Several occupational therapy theorists have proposed the use of a developmental frame of reference for serving students with behavior disorders. The developmental frame of reference is typically focused on the student's fine motor skills, sensory processing, and perceptual-motor skills. The short-term objective of therapy is to increase the student's attention span and reduce distractibility (Hopkins, 1988). Llorens and Rubin (1962) incorporated a developmental approach with a group of elementary age students with psychosocial dysfunction. Their intervention program was designed to provide the student with opportunities for simple manual exploration of the environment. Activities such as painting, drawing, cutting, pasting, sorting by size, shape, color and form was fundamental to the program.

Students were encouraged to experiment with the various media provided. However, the activities were presented in structured learning modules. Activities such as leather, metal, decorative printing, and ceramics were common modalities. The goal of the craft activity was to prepare the child for group participation by increasing the child's attention span and decreasing distractibility.

Llorens, Rubin, Braun, Beck and Beall (1969) evaluated the effectiveness of their developmental program with a group of randomly selected public school students with both behavioral disorders and learning disabilities. The study compared the occupational therapy intervention with remedial education for improvement in behavioral and academic performance. The results indicated that a combined approach using both the developmental occupational therapy and remedial education produced the optimal effect.

George, Braun and Walker's (1982) developmental program was designed to be an early intervention for disadvantaged pre-school children. After a developmental assessment, the children, ages three to six, were engaged in experimental group programs. Group play activities were emphasized. Individual directed play was used for those who could not tolerate a group setting.

The developmental intervention reported by Agrin (1987) is unique in that it is one of only two publications in the occupational therapy literature specific to school-based

occupational therapy services for students who have behavioral disorders as their primary handicap (Florey, 1989). Agrin's program emphasized task groups in which the group must work together to complete the activity. The primary objective was to promote social skills development.

Clark, Mack & Pennington's (1988) intervention reflects a program similar to Agrin's with the focus being on social skills development. Baker, Gaffney and Trocchi (1989) also instituted a developmental program in which the emphasis was on promoting social skills, however, they implemented the program in a dyadic group format (i.e., one leader and two participants per group). They reported this format to be very helpful in promoting the acquisition of the social skills needed prior to large group interaction.

The functional frame of reference. A number of articles in the occupational therapy literature discussed function-based interventions for students with behavioral disorders. Lapidakis (1963) described a residential activity therapy program in which each patient received an individualized diet of activities ranging from baton twirling, to scouting, to special interest clubs. The focus in the various activities was to promote socialization competencies. Klapman and Baker (1963) described a similar occupational therapy program in which pre-adolescent residents were routinely involved in every day activities such as cooking, sewing, coloring, and discovery learning to promote the

experience of pleasure as a derivative of functional activity. Social skills development was also stressed during the activity process.

Barker and Muir (1969) also developed an activity program. They conceptualized the role of the occupational therapist as a facilitator of constructive work activity. Barker and Muir recognized that there was considerable divergence of opinion about what occupational therapists should be doing with students with behavior disorders. They stated that while some therapists see themselves as psychotherapists who use media to promote catharsis, other therapists use media to improve motor skills and sensory integration, and still others focus on work and competency building. The program described by Barker and Muir encouraged role overlap among various interdisciplinary staff members. They stated that the greatest overlap occurs in the activities that are often used by both occupational therapists and teachers. However, Barker and Muir pointed out that there are distinct differences in the manner in which the activities (used by the therapist and teacher) are initiated, the methods of instruction, and the purposes of the activities. The occupational therapy program developed by Barker and Muir emphasized social skill development through cooperative work activities. Bell's (1977) description of a therapy program in England is similar to

that of Barker and Muir in that activities are used to promote socialization and bring about healthy adjustments in attitude and behavior.

Fergus and Buchanan (1977) developed a functional activity therapy program in which the activities were primarily artistic in nature, such as tie-dying, pottery, screen-printing, batik, printing, candle-making, but culminated in a functional product. The objectives of the program were to increase self-esteem and group acceptance.

The neurological frame of reference. Several descriptions of neurologically-based occupational therapy programs for students with behavioral disorders appear in the literature. Cermak et al. (1973) reported a public school program in which hyperactive students with behavioral disorders were served through a program of psychotherapy, family casework, and activity group therapy. The activity therapy consisted of creative drama, play media, cognitive games, and discovery learning activities that involved the sensory systems. The objective of the program was to help the students develop internal controls that would enable them to consciously filter out distracting external stimuli. Success was measured by the student interacting more appropriately with others and verbalizing more self-confident responses.

Occupational therapists who practice from a neurological frame of reference, often attribute behavioral disorders to

sensory processing deficits (Ayres, 1972, King, 1978). Rider (1973) reported an experimental research study in which she sought to document the frequency of sensory integration deficits among students with behavioral disorders. Her study concluded that sensory integration deficits were present with significant frequency among students who have behavioral disorders. She urged therapists to test for this phenomena in that traditional psychotherapy would not assess sensory integration functioning thus ignoring what she saw as the etiology of many students' aberrant behavior.

The study conducted by Kohler (1980) also emphasized sensory integration. Students with behavioral disorders were randomly assigned to either a distraction-free or distractive room. The focus was on measuring the effect of the environment on distractibility. While the students in the distraction-free room, displayed increased time on task, their impulsivity did not change.

McKibben and King (1983) used a sensory integrative program with students who were classified as being behaviorally disordered but who also had learning disabilities. The program involved traditional sensory integrative activities that stimulated the vestibular, proprioceptive and tactile systems, in combination with group play activities. The students' teachers reported improved classroom behavior, coping skills and happiness.

The occupational frame of reference. The theory of occupational behavior is representative of the occupational frame of reference (Reilly, 1974). One of the most fundamental constructs of the theory of occupational behavior is the belief in the curative effect of meaningful, purposeful, work and play (Howe & Schwartzberg, 1986). Reilly's 1961 lecture proposed that it is only through "doing" that the human organism continues to exist (Reilly, 1962). The fundamental principle underlying occupational therapy based on the occupation frame of reference is the belief that all human beings have an innate urge to be engaged in occupational activities. Such activities are those that provide opportunities for the sensory and motor systems to be engaged in meaningful problem-solving occupation (Reilly, 1962). Proponents for the occupational frame of reference have asserted that work satisfaction should be the focus of occupational therapists, and that this focus should be served by providing opportunities to engage in self-initiated, purposeful, intrinsically-rewarding occupation (Yerxa, 1967).

A number of contemporary occupational therapists have developed interventions based on the occupational frame of reference. Vandenberg and Kielhofner (1982) identified play skill deficits in a group of psychiatrically hospitalized adolescents. Their intervention program focused on providing the adolescents with a nurturing, playful role

model who presented occupational activities in a challenging but playful way. Shannon (1977) also emphasized the importance of play in serving students with behavioral disorders. He stressed the relationship between play occupations and the development of adult competencies. Shannon used directed play to establish an environment in which competencies could be acquired. Adelstein, Barnes, Murray-Jensen, and Baker-Skaggs (1989) developed an occupation-based program for adolescents that used work/play activities such as, modeling building, cooking, and group games, to increase personal causation. The occupation-based interventions emphasized the student developing appropriate habits and an appreciation of routine.

The psychoanalytic frame of reference. According to Cronin and Burnell (1989), occupational therapists who practice from a psychoanalytic frame of reference focus on emphasizing free expression and resolution of conflict so that psychic growth can continue. Rabinovitch et al. (1951) described an occupational therapy program which used a psychodynamic approach. Occupational therapy activities such as leatherwork, copper tooling, dress making and cooperative group projects were used to help the student overcome frustration and to experience gratification. The aim of therapy was to provide opportunities for experiencing constructive behaviors, developing impulse control, and the channeling of destructive energies. The occupational

therapy environment was one of a "workshop". The relationship with the therapist was described as of paramount importance in the success of the program. Rabinovitch et al. (1951) pointed out that, in their residential facility, both occupational therapy and recreational therapy were viewed as primary services, rather than auxiliary activities. Edelman's (1953) article was a follow-up to Rabinovitch et al. (1951). The occupational therapy shop was described in detail. The workshop is conceptualized as a controlled but exploratory learning situation in which security was experienced. Group activities were emphasized with particular attention to participation in celebration of festive occasions. Howe (1968) described a similar program in which the focus was on development of improved self-image, relationships, and behavior through occupational therapy activities.

Psychodynamically oriented programs have also been developed by occupational therapists practicing in England and Canada. Forward (1958) provided a detailed account of an occupational therapy program for hospitalized students in London. She described the focus as being the development of social skills through small-group activity. Forward discussed the appropriate way to address the feeling states of inhibited and aggressive students through creative

occupational activity. The relationship between the student's inner conflicts and performance in occupational therapy was stressed.

Gill's (1976) article provided a detailed account of a psychodynamic occupational therapy program in Canada. The focus of program described was the use of occupational activity to help the hospitalized student develop in-sight through free expression. Activities such as pottery, films, poetry, music, debates, art, activities of daily living, role playing and group outings were discussed.

Frames of Reference used in School-Based versus Residential-Based Occupational Therapy

Adelstein et al. (1989) reported that community-based systems, such as the public schools, have basically failed to provide the occupational therapy services needed for students who have behavioral disorders unless they have accompanying organic etiologies. They asserted that unless the student with a behavioral disorders also has an identifiable perceptual-motor deficit, occupational therapy services are typically not made available in the schools. Florey (1989) confirmed their statements. She stated that, in recent years, the occupational therapy pediatric knowledge base has become focused on neurological and sensory-motor concerns and essentially overlooked the emotional development and behavior of children and

adolescents. This phenomenon has been most recently evidenced by the adoption of eligibility criteria in the state of Louisiana which specifically limits occupational therapy to only those students who have fine motor impairment that interferes with their school performance (Carr, 1989).

While group occupational therapy, emphasizing social skills acquisition, is common in children's residential settings, such interventions are rarely used by therapists working in the public schools with students who have behavior disorders. Adelstein et al. (1989) concluded that the difference in occupational therapy programming in residential settings versus school settings is attributable to school therapists serving only one discrete group of students with behavior disorders, i.e., those who have a sensorimotor deficit along with a behavior disorder. This statement is further supported by Cronin and Burnell (1989). They stated that Ayres (1972) theory of sensory integration (neurological frame of reference) was the most common intervention used by occupational therapists serving public school students with behavioral disorders. Ayres approach focused on improving the sensory system as a vehicle to improve both behavior and academic performance.

In contrast, the most common interventions used by occupational therapists in residential settings focus on improving the student's psychosocial components, (e.g.,

self-esteem, social skills, and performance skills), as the vehicle for improving academic performance (Cronin & Burnell, 1989). Sensory integration therapy is also used in residential settings as indicated for students with perceptual motor problems.

The Delivery of Occupational Therapy Services

An Occupational Therapy Perspective

Group activity is the primary service delivery format described in the literature. Services are usually provided in a "shop" or "workroom" atmosphere, an environment in which permissiveness is not the rule, but where controlled exploratory learning is encouraged (Adelstein et al., 1989; Agrin, 1987; Baker et al., 1989; Barker & Muir, 1969; Cermak et al., 1973; Edelman, 1953; Forward, 1958; Fountain, 1972; Gill, 1976; Lackerbie & Stevenson, 1947; Llorens & Rubin, 1962; Lillie & Armstrong, 1982; Rabinovitch et al., 1951).

Activities are selected by the therapist to promote successful group experiences, and to overcome the student's pervasive feelings of inferiority and incompetency. The activities are presented in a directed manner so that the performance skills needed for mastery can be acquired. Groups are typically organized by level of manual skills, motivation, and behavior. Heterogenous groups are more common than homogeneous to promote peer learning. Pasting,

cutting, gluing, painting, and constructing are common introductory occupational activities. The primary function of the art-like occupational activities is to promote competency in personal, social, and performance skills (Mosey, 1974). Craftsmanship and sportsmanship are also promoted as related competencies through occupations such as leather work, metal work, needlework, woodwork, and recreation pursuits. Other characteristic occupational activities are those such as gardening, cooking, and other daily activities.

The principles of occupational therapy promote the use of whatever occupations (e.g., work, play, self-care, recreation that the individual finds intrinsically motivating, and yield an adaptive response) (Florey, 1969; Meyer, 1922; Reilly, 1962; Yerxa, 1967). The changing variety in forms of occupation in everyday life constitutes the different types of modalities that are appropriate for use in occupational therapy. For example, as computers have found their way into many households, occupational therapy programs have incorporated computer activities (Kielhofner, 1983). The professionals who provide occupational therapy modify and adopt modalities based on their relevance to the individual's everyday life. The common denominator among the various therapeutic occupational activities is that they meet the basic need of human beings to be productive by

providing opportunities for exploration/mastery of the environment (Barris et al., 1988).

A Special Education Perspective on Occupation-Based Interventions

The types of modalities used by occupational therapists who serve students with behavioral disorders are often subsumed under the title of adjunctive or supportive therapies in the special education literature. Rizzo and Zabel (1988) referred to the use of art, music, writing, and other experiential activities by both teachers and therapists in the schools. They stated that adjunctive therapies tend to be practiced in hospitals, rehabilitation centers, and sometimes in the schools. Rizzo and Zabel described artistic adjunctive therapies as being focused on expression of feelings. Though they stated their recognition that adjunctive therapies have little empirical support, they urged special educators to provide students with behavioral disorders the opportunity for artistic, musical, and recreational activities. They lamented that such students are frequently denied expressive opportunities in which competencies can be experienced that are not available in pure academia. Several renowned special educators have recognized the importance of adjunctive therapies. Fenichel (1971) stressed the importance of providing students with behavioral disorders the opportunity

to experience mastery of self. He urged teachers to incorporate whatever types of activities that could lead to a successful experience. He alluded to a potential problem, however, in the blurring of the roles between teachers and therapists. Knoblock (1983) also addressed the importance of adjunctive therapies in serving students with behavioral disorders. He described in detail the activity programs in early settlement houses, such as Hull House in Chicago, that addressed the needs of the student with behavioral disorders in after-school activity programs. "Activity workers" were described as working with both the students and their family. Though Knoblock cited the contributions of Mary Reilly to serving the needs of the student with behavioral disorders, he described her as a mental health worker, overlooking her professional identity as an occupational therapist. Redl's (1951) program for students with behavioral disorders also made substantial use of activity workers.

In the early years of school-based interventions for students with behavioral disorders, therapeutic activity was recognized for its importance. Bower (1969) emphasized the importance of providing play activities for emotional growth and development. He stressed that play skills are necessary for success in the academic setting. He stated that the student with a behavioral disorder should not be treated as a miniature adult (e.g., through counseling and other

cognitive therapies), but provided interventions reflecting the child's role (e.g., to walk, talk, run, take things apart, or to understand how caterpillars become butterflies. According to Bower, doing should be channeled into competency. He stated that the surest way to help the student with a behavioral disorder is to provide competency building real-world activities. Hewett (1968) described an intervention for students with behavioral disorders that was instituted at the University of California at the Los Angeles Neuropsychiatric Institute. His description of the intervention includes a multidisciplinary approach which included psychology, psychiatry, social work, nursing, occupational therapy and education. The focus of the intervention was developmental wherein competencies were acquired in perceptual, motor, social, and cognitive skills in order to achieve developmental tasks. While Phillips (1981) admonished teachers for using supportive/adjunctive therapies with little regard for how the therapies functioned, and without knowing to what extent they have been researched, and how they are applicable in the educational settings, Rizzo and Zabel (1988) offered an alternative perspective. They stated that though adjunctive therapies have little documentation of effectiveness, the absence of such proof does not negate their value. Rizzo and Zabel proposed that adjunctive therapies may offer teachers another route through which educators can share

their unique interests and talents and established mode of communication that will generate an enthusiasm for learning in students with behavioral disorders.

Summary of the Review of Literature

Each of the three sets of guidelines for the practice of occupational therapy in the schools (AOTA, 1980; AOTA, 1981; Federal Register, 1975) identified function (as it relates to school performance) as the primary domain of school-based occupational therapy. While the various frames of reference for implementing occupational therapy for students with behavior disorders have different orientations, the modalities and goals were generally consistent. The review of literature revealed that the most common occupational therapy goal for the student with behavioral disorders was improved social skills. The divergence among the frames of reference lies in how social skills improvement was perceived to be accomplished. The developmental occupational therapists followed the belief that if the essential perceptual, motor, and sensory skills needed for developmental tasks were improved, social skills will also accrue. Developmental play and craft activities were the primary modalities. Functional occupational therapists emphasized skill development. They used activities that produced a functional product, e.g., cooking, sewing, piano lessons, etc. The objective was to experience pleasure as a

derivative of functional activity. Group activities were often used to generate cooperative work efforts. The neurological frame of reference addressed social skills through the nervous system. The occupational therapist who followed this orientation used developmental play, crafts, games, and other sensory stimulating activities. The objective was to improve the students ability to attend, to decrease impulsivity, to develop self-confidence and to cope better in social environments. The therapist who practiced from the occupational frame of reference emphasized work and play activities that were intrinsically motivating. Activities were incorporated that generated competencies relevant to adult role performance. The objective of intervention was the promotion of work satisfaction, improved habits and personal causation. Success was often measured by improvement in the student's ability to interact with others positively. Occupational therapists who were psychoanalytically-oriented also used traditional occupational therapy modalities such as leatherwork, dressmaking, cooking, group projects, role playing, group outings, and copper tooling. The objective was to use these activities to develop the student's insight and to resolve conflicts that interfered with social performance.

Each frame of reference emphasized the importance of creating the appropriate environment for occupational therapy to occur. According to the literature, the

occupational therapy environment is one in which exploration and experimentation are encouraged within a structure that allows for creativity but also offers the security of boundaries and natural consequences.

There is considerable variation in the frames of reference used by therapists working in residential settings for students with behavioral disorders. However, it appears from the literature that the neurological frame of reference has dominated the practice of school-based occupational therapist serving students with behavioral disorders.

According to the literature, the majority of occupational therapists who served students with behavioral disorders are employed in private residential settings. A group format was the most common format for the delivery of services. Individually appropriate activities of work, play, and self-care were emphasized. However, in the school setting, the emphasis appeared to be on sensory-motor development. Both approaches were consistent with the most basic of occupational therapy goals, that is, to elicit a functional, adaptive response.

While the special education literature has very few specific references to occupational therapy for students with behavioral disorders, there is an identifiable recognition that the type of interventions traditionally provided by occupational therapists were recognized as being essential developmental activities. The literature further

suggested that such occupational activities may be particularly relevant to students with behavioral disorders. Several noted authors stated that the student with a behavioral disorder is often excluded from many of the vital extracurricular activities that are necessary for normal progression in the school environment. Even though some special education authors chastised schools who adopted adjunctive therapies, due to the paucity of effectiveness research, they strongly encouraged further investigation into the use of occupation-oriented activities to meet the needs of students with behavioral disorders.

This study provides an initial investigation into the practice of occupational therapy as a school-based intervention for students with behavior disorders. Outcomes and effectiveness research cannot be conducted until such baseline data is available.

Chapter IV

METHODOLOGY

The review of the literature revealed that occupational therapy with students who have behavioral disorders has undergone little research scrutiny. No basic or applied research studies on the day-to-day practice of occupational therapy with this student population are reported in the literature. The intent of this study was to survey occupational therapists, who were serving students with behavioral disorders, for the purpose of establishing an initial investigation of the occupational therapy services provided under the umbrella of education-related services for this population. It was determined that a survey, in questionnaire format, would best meet the objective of conducting a descriptive, but empirically-based investigation of this type (Turney & Robb, 1971). The study was designed to be a global investigation of the day-to-day provision of occupational therapy services for students with behavioral disorders. The survey instrument was designed to elicit data that address the basic research questions that follow:

1. What are the demographic characteristics of therapists who are serving students with behavioral disorders?
2. Are occupational therapists in the schools serving a proportionate number of students with behavioral disorders?
3. What are the reasons for referral to occupational therapy, and are there identifiable patterns for referral to occupational therapy?
4. What age groups of students with behavioral disorders are being served by therapists, and are those groups represented proportionately?
5. What are the theoretical frames of reference used by occupational therapists who serve students with behavioral disorders, and does any particular frame of reference predominate services provided.
6. To what extent are the occupational therapy methods used to serve students with behavioral disorders representative of those described in the literature?
7. What types of consultation and monitoring services are occupational therapists providing students with behavioral disorders?
8. How do therapists perceive their relative acceptance by other school professionals who also provide programming for the students with behavioral disorders?

9. How do therapists perceive their own role in serving the student with behavioral disorders?

10. How do occupational therapists perceive their education in preparing them to meet the needs of students with behavioral disorders?

Instrument Development

The survey questions were developed based on the review of literature. The format, phrasing, and clarity of meaning was assessed by a group of occupational therapy professionals (four practitioners and two academicians). The reader is referred to Appendix A for the names and qualifications of the reviewers. The questionnaire was revised accordingly. Appendix B provides the reader with the final version of the questionnaire.

Subject Description

The subjects selected for this study were obtained by conducting a computer search of the American Occupational Therapy Association (AOTA) databank. The search identified those therapists who indicated in a 1985 nation-wide survey, conducted by the AOTA, that they served a significant number of students with behavioral disorders (AOTA, 1986). A computer search yielded the names and current (1990) addresses of 121 therapists. To establish a valid group of subjects, each of the 121 therapists was contacted by mail

to confirm that their current caseload included students with behavioral disorders, and whether he or she would be willing to make a commitment to participate in the proposed study. The reader may refer to Appendix C to review the initial contact letter and reply form. Eighty-eight therapists returned the stamped, self-addressed reply card. Fifty-six therapists responded positively to participating in the study, while thirty-two stated they were either no longer serving students with behavioral disorders or they did not wish to be included in the study.

Data Collection

Each subject who agreed to participate in the study was again contacted by mail. An introductory letter, reiterating the words used in the initial contact, and more fully explaining the intent of the study, accompanied the questionnaire. A stamped, self-addressed envelope was enclosed. The respondents were requested to return the questionnaire within two weeks of receipt. A follow-up card was sent twenty-one days after the initial mailing to those subjects who had not responded. See Appendix D for a copy of the introductory letter and follow-up card.

Data Analysis

The data obtained from the study were appropriate for descriptive statistical analysis. Each of the research

questions was addressed through compilation of relative frequencies, percentages and categorization of open-ended responses.

CHAPTER V

RESULTS

Thirty-two of the fifty-six questionnaires sent out were returned. A return rate of 57% was obtained. Twenty-eight (50%) were determined to be completed sufficiently for inclusion in the study. As the questionnaire addressed over 100 variables, the results are presented in an order to facilitate ease of reading. The following order is consistent with the five sections of the survey instrument (see Appendix B): (a) demographic information; (b) screening and referral functions; (c) direct occupational therapy services; (d) consulting and monitoring functions; and (e) therapists' perceptions of acceptance and academic preparation. Tables have been prepared for each section to provide the reader with further explanation of the data obtained.

Demographic Information

Of the 28 occupational therapists who responded, there were 27 females and 1 male. Eleven (39%) of the therapists stated that they worked in northeastern states, 10 (36%) worked in the northern middle of the United States, and 7 (25%) worked in west coast states.

The therapists were asked how long they had been in practice and how long they had been employed in a school-setting. While one therapist had over 35 years, the average was seventeen. Therapists with master's degrees averaged 16 years of school-based experience, while those with bachelor's degrees averaged nine. The mean and median years of school-based practice for both groups of therapists as a school therapist was approximately 12 years. The majority (57%) of the respondents had master's degrees. This condition is unusual in that 80% of all occupational therapists are educated at the bachelor's level (AOTA, 1986). Table 1 presents the results from these questions.

Table 1

Years of Experience and Educational Level in Occupational Therapy

	Frequency of Responses			
	N	Range	Mean	Median
Bachelors Degree	12			
Year 1st Certified		1-35	18	18
Years School-based		1-22	9	9
Masters Degree	16			
Year 1st Certified		6-26	16	16
Years School-based		1-16	16	11

The occupational therapists were asked to identify whether they had prior work experience before becoming school-based, and in what areas they had such experience (see Table 2). Twenty-five (89%) therapists in this study reported having had prior work experience in one or more professional settings.

Table 2

Prior Work Experience By Specialty as Reported by 28

Occupational Therapists

	Frequency of Responses	
	N	%
Pediatric Clinic	9	32.1
Physical Rehabilitation	7	25.0
Mental Health	12	42.8
Other Settings	8	28.5

The most common work experiences were in mental health and pediatric environments. Three (11%) therapists indicated prior work experience in more than one clinical setting. There were also three (11%) therapists who indicated no prior work experience. Due to reported experience in more than one area, the calculated percentages are not additive. Eight (28.5%) therapists indicated prior work experience in what was identified as "other" settings (in particular, work

hardening treatment centers for job injuries, and home health) before becoming school-based. The least common setting for prior work experience was in adult physical rehabilitation. The mean years of prior experience in the respective professional work settings varied from approximately 1 1/4 years to 3 1/2 years. The therapists in the pediatric group averaged the longest duration of work experience prior to becoming school-based.

The therapists were asked to identify how many occupational therapists were either employed or contracted by their respective school system. The number employed ranged from 1 - 30, and the number contracted ranged from 1 - 15. Most (90%) of the therapists who responded to this questionnaire reported that they were employed by the school district rather than working on a contract for services basis. The responses revealed that these occupational therapists were employed along with an average of three other registered occupational therapists.

The therapists were asked to classify the schools in which they provided services to students with behavioral disorders (see Table 3). Seven (25%) therapists reported that they worked in more than one setting, consequently, frequencies are not cumulative. The majority of therapists provided services in suburban schools. Fewer than 1 out of 5 therapists provided occupational therapy in urban schools,

and only three therapists indicated that they provided services in rural schools.

Table 3

Type of School District in Which the 28 Therapists Work

	Frequency of Responses	
	N	%
Independent Rural	3	.07
Special Education Co-op. (all Suburban)	10	26.0
Independent Suburban	19	49.0
Independent Urban	7	18.0

The respondents were asked to identify their immediate supervisor by title (see Table 4). Seventeen (60.7% of the

Table 4

Immediate Supervisor of the 28 Occupational Therapists

	Frequency of Responses	
	N (28)	%
Principal	6	21.4
Spec. Educ. Supervisor	17	60.7
Other	5	17.9

respondents indicated the school district's special education supervisor was their immediate supervisor. In the "other" category the therapists classified their supervisors as physical therapists, other occupational therapists, and a psychologist.

Screening and Program Planning Functions

The therapists were asked to report their frequency of attendance at prereferral/screening meetings and individualized education plan (IEP) meetings during the 1989-90 school year (see Table 5). Fifteen (54%) reported that they attended no prereferral meetings. The remaining 13 therapists averaged 4.6 prereferral meetings during the year. Those that attended prereferral meetings averaged fewer than 2 prereferral meetings for any one single category of handicapping condition during 1989-90. The therapists reported greater participation in IEP meetings, averaging 25 IEP meetings over the academic year. Of the 26 who responded to this question, all reported attending at least 1 IEP meeting. Two subjects did not respond to this question. The range of IEP attendance was from 1 - 79 for the 1989-90 academic year.

The therapists were asked to report the number of students presented within the various categories of handicapping conditions during the prereferral and IEP meetings they attended. They reported that students with

learning disabilities were discussed most often (45%) while students with behavioral disorders were the second (26%) and students with mental retardation were the third (17%) most frequently discussed groups. The remaining students discussed (19%) were categorized as having "other handicapping conditions".

Table 5

Frequency of Attendance at Prereferral and IEP Meetings
1989-90

No. Meetings Range	Prereferral		IEP	
	N (28)	%	N (26)	%
0	15	54	0	-
1 - 5	6	22	5	19
6 - 11	5	18	1	3
12 - 17	0	-	7	27
18 - 22	1	3	2	8
23 - 27	1	3	3	13
28 - 32	-	-	1	3
33 - 37	0	-	0	-
38 - 42	0	-	1	3
43 - 47	0	-	1	3
48 - 52	0	-	3	13
53 or more	0	-	2	8

Table 6

Frequency of Means by Which Occupational Therapists were Included in the Prereferral and IEP Meetings

	Prereferral		IEP	
	N (24)	%	N (26)	%
OT invited case by case	8	33	15	57
OT requests case by case	7	30	2	8
OT is regular member	8	33	7	27
Other	1	4	2	8

Therapists were asked to identify by what process they were included in the prereferral and IEP meetings. Table 6 presents the results from these questions. Of the twenty-eight therapists, 4 did not respond to the prereferral question, and 2 did not respond to the IEP question. Eight (33%) of the responding therapists reported that they were regular members of the prereferral committee and seven (27%) reported that they were regular members of the IEP committee. Eight (33%) stated that they were included in prereferral meetings by invitation, on a case by case basis. Fifteen (57%) stated that they were included in IEP meetings by invitation only. Seven (30%) of the therapists stated they were included in prereferral only when they initiated a specific request to attend. Two (8%) reported that they

attended IEP meetings only when they initiated a request to attend for specific cases.

When asked how they came to be providing services to students with behavioral disorders, thirteen (46%) of the therapists stated they believed they were personally responsible for such students being referred to occupational therapy. They commented that before they began working in their respective school environments, students with behavioral disorders had not been referred to occupational therapy. The other 15 (54%) therapists stated that students with behavioral disorders had traditionally been referred to occupational therapy in their schools.

Direct Occupational Therapy Services

The occupational therapists were asked to provide demographic data regarding the number of students with behavioral disorders who were new referrals during the 1989-90 academic year, the age and gender of such students, and what percentage of their caseload was devoted to this student population. Table 7 summarizes the age and gender data. The data reveal that the majority of occupational therapy services were primarily provided to students between the ages of five and eleven years of age. Though a few therapists were providing services to students with behavioral disorders in the 12 to 22 age ranges, statistical analysis revealed that the average was less than 1 student

per therapist. The data in Table 7 show that services were provided to almost five times as many males as females in the combined age ranges of 5-8 and 9-11 years. In the combined age ranges of 12-14 and 15-17, the ratio of males to females dropped to 1.8 to 1. In both the 15-17 and 18-22 age ranges, more females were provided with occupational therapy services than males.

Table 7

Gender and Age Ranges of Students with Behavioral Disorders Served by Occupational Therapists

Gender	Age Range										Total N
	5-8		9-11		12-14		15-17		18-22		
	N	%	N	%	N	%	N	%	N	%	
Female	26	25	20	18	17	17	28	28	12	12	103
Male	118	38	109	35	58	19	24	7	2	1	311
Total	144	35	129	31	75	18	52	12	14	34	414

Analysis of the data revealed that the therapists averaged 28.5 new students referred for their services during the 1989-90 school year. The median was 20. They averaged 13.9 new students with behavioral disorders, with a median of 4.5. The spread in these two sets of central tendency

measurement reflects the variation in the number of students being served by the therapists surveyed.

In response to a question regarding the education environment of the students being served, 16 (57%) therapists indicated that the majority of students who received their services were placed in self-contained classrooms. Ten (36%) therapists stated that most of their students were in alternative school placements. Two (7%) therapists reported that their services were most often directed toward students who were placed in mainstream classrooms.

The therapists were asked to identify what school personnel were most often directly responsible for students with behavioral disorders being referred to occupational therapy (see Table 8). An analysis of the data revealed that while all the respondents did indicate their most common source of referral, some did not identify a second or third ranking. A comparison of the reported frequencies revealed that the special education teacher was not only identified as the "most frequent source" (29%), but also the most frequently identified source in both the second and third rankings (30% of the total frequencies). The second "most frequent" ranked source was a tie between the IEP committee (25%) and the "other" category (25%). Therapists named themselves, parents, and medical personnel as the "other" referral sources. Looking at all three rankings,

the school psychologist was the second most commonly identified source of referrals (23%), with the IEP committee ranking third overall (19%). The school counselor was infrequently ranked as a first, second or third choice (5%).

Table 8

Frequency of Sources of Referral to Occupational Therapy

Sources	Most Freq.		Second		Third		Total Freq.	
	N	%	N	%	N	%	N	%
IEP Committee	7	25	3	18	1	8	11	19
Principal	-	-	-	-	1	8	1	1
Reg. Ed. Teacher	-	-	1	6	1	8	2	4
School Counselor	1	4	1	6	1	8	3	5
School Psych.	5	17	5	29	3	25	13	23
Spec. Ed. Teacher	8	29	6	35	3	25	17	30
Other	7	25	1	6	2	18	10	18
Total N	28	100	17	100	12	100	57	100

The therapists were asked to identify the three most common reasons that students with behavioral disorders were referred to them for occupational therapy (see Table 9). This question was asked in an open-ended format. Most therapists identified the primary (96%) and secondary (93%) reasons students were referred to them, however, several

(68%) did not indicate a third reason for referral. From the information obtained, categories to group types of responses were identified, and frequency data were recorded. The therapists identified three problem areas in the "most frequent" ranking as primary reasons for referrals. Coordination problems were selected most often (63%). Psychosocial problems were ranked second (26%), and perception problems were ranked third (11%) as primary reasons for referral.

Table 9

Frequency of Reasons Students with Behavioral Disorders Referred to Occupational Therapy

Problem Area	Most Freq.		Second		Third		Total Freq.	
	N(27)	%	N(26)	%	N(19)	%	N(72)	%
Cognition	-	-	2	8	3	17	5	7
Coordination	17	63	6	23	1	5	24	33
Perception	3	11	15	58	5	26	23	32
Psychosocial	7	26	1	3	9	47	17	24
Other	-	-	2	8	1	5	3	4

When comparing the cumulative frequencies of first, second, and third rankings, coordination remained the most frequently identified reason for referral (32%). However, the relative strength of that percentage was diluted.

Perceptual problems emerged as the second overall identified reason for referral (32%), while psychosocial problems placed third (24%).

The therapists were asked to list the three tests or evaluation instruments they used most often to assess students with behavioral disorders (see Table 10). This Table 10

Frequency of Tests Used by Occupational Therapists to Evaluate Students with Behavioral Disorders

Type of Test	Frequency of Responses	
	N	%
Perception	12	18
Function (performance-based)	10	15
Occupational Behavior	5	7
Development	22	33
Sensory Integration	16	24
Gross/Fine Motor	2	3
Total	67	100

question was open-ended. The responses and respective frequencies were grouped for purposes of analysis. Each test identified by a therapist was counted as a response within the respective test grouping. Not all the therapists

identified three tests, some named three tests; all within one category. On the other hand, some therapists named only one test. Each response was added to the cumulative categorical frequency. The most frequently identified category of tests were those which focused on measuring developmental level of functioning (33%). These tests generally provide a global assessment of the areas specifically addressed (e.g., coordination, perception, and functional skills) in the other test categories (Llorens, et al. 1969). The second most common category of testing identified by the therapists was tests that evaluate sensory integration (24%). This type of evaluation focuses on assessing the student's ability to accurately process and integrate neurological sensory input (both internal, reflexive, and external sensation) and identifies where intervention should be focused to mature the sensory integration system (Ayres, 1972). Psychosocial-oriented tests (occupational behavior) were mentioned 5 times (7%) by the therapists.

The therapists were asked to state their three most common occupational therapy methods of intervention and related goals for students with behavioral disorders (see Table 11). The question was open-ended. Categories to group types of responses were identified and the data were recorded.

Table 11

Frequency of Occupational Therapy Goal Statements for
Students with Behavioral Disorders

Method/Specific Goal	Frequency of Responses	
	N	%
Behavioral/ peer acceptance	6	7
Occupational/ living skills	7	8
Psychosocial/ self-concept	25	30
Sensorimotor/ fine-motor skills	17	20
Sensory Integration/ attention span	29	35
Total	84	100

The methodology and goal statements identified by the therapists indicated that they directed most (35%) of their services toward promoting the student's sensory integration. Improvement in psychosocial functioning was the second most frequently cited method/goal. Sensorimotor skill development was ranked as the third most frequent method/goal. Behavioral interventions and everyday living skills were infrequent method/goal statements (7% and 8% respectively).

The therapists were asked to select their primary frame of reference from a list of five accepted occupational

therapy frames of reference (Cronin & Burnell, 1986). The therapists selected a developmental frame of reference most frequently (32%). Psychosocial and neurological frames of reference received second and third rankings (24% and 23%). The remaining therapists (21%) selected cognitive and rehabilitative frames of reference as their primary orientation. A related question focused on theories of practice (see Table 12).

Table 12

Therapists Identification of Their Primary Theory of Practice

Theory	Frequency of Responses	
	N (25)	%
Cognitive Theory	1	4
Developmental Theory	8	32
Occupational Behavior Theory	1	4
Psychoanalytical Theory	1	4
Sensory Integration Theory	14	56

The therapists were asked to select their primary practice theory from a recognized list (Cronin & Burnell, 1986) of practice theories currently used by occupational therapists. In contrast with the first and second most prevalent frames of reference identified (i.e.,

developmental, and psychosocial), 14 (56%) of the 25 therapists who responded to this question, selected the theory of sensory integration (Ayres, 1972) as their primary practice theory. The second most common practice theory selected was developmental (32%).

The therapists were asked to identify the means or methods they used to measure the effectiveness of the occupational therapy services provided to students with behavioral disorders (see Table 13).

Table 13

Frequency of Measures Used to Assess Effect of Occupational Therapy

Outcome Measure	Frequency of Responses	
	N	%
Academic improvement	3	10
Improved motor skills	3	10
Verbal report from teacher	4	13
Verbal report from parent	1	3
Observe class performance	9	29
Re-testing	7	22
Yearly IEP progress report	4	13
Total	31	100

The responses to the open-ended question produced seven categories of types of outcome measure responses. The therapists reported that they find observation of classroom performance to be their most frequent way of measuring the effect of occupational therapy (29% of the responses). The second most common means was to re-evaluate the student using the initial evaluation instruments on which the therapy was based (22%). The yearly IEP report (13%) and reports from teachers (13%) were also mentioned as effectiveness measures. Parental reports were used the least (3%).

The therapists were asked two questions to determine their degree of contact with students who have behavioral disorders. The first question asked the therapists to indicate how often they saw most students with behavioral disorders, and the duration of the sessions. Eleven (39%) of the 28 therapists reported that they saw students with behavioral disorders on a weekly basis. Nine (32%) stated that they saw such students more than once a week, and 2 (7%) reported they saw these students on a daily basis. Six (22%) of the therapists stated that they saw students with behavioral disorders on a bi-weekly (or less) basis. The mean frequency of intervention was weekly. It should be noted that nominal values were assigned to each variable to allow for statistical analysis.

Seven of the therapists did not respond to the question of duration. Of the 21 respondents, eleven (52%) of the therapists selected 30 minutes as the most common duration of each session. The second most frequent duration was 45 minutes (38%).

The therapists were asked to identify the physical environment in which they provided services to students with behavioral disorders (see Table 14). As some of the

Table 14

Frequency of Environment used by Occupational Therapists to Provide Services

Environment	Frequency of Responses					
	Most Freq.		Second	Third	Total Freq.	
	N(28)	%	N(15)	N(6)	N(49)	%
Mainstream	1	4	1	-	3	6
Outside Classroom	16	57	4	-	20	41
Resource Room	1	3	1	1	3	6
Self-Contained	6	22	9	1	16	33
Alternative	4	14	-	3	7	14

therapists worked in more than one school setting, they were asked to rank the frequency of environments in which they provided services. Over half of the therapists (57%) reported they most frequently provided the majority of their

services outside the classroom locale, in a clinic or physical education area. Twenty-two percent stated that they most frequently served students within a self-contained classroom. The third most frequent locale was within an alternative school setting (14%). When the second and third rankings were included, the relative ranks remained the same. In the total frequencies, most services were provided outside the classroom (41%) or in self-contained classes (33%).

The next question to the therapists focused on format of service delivery (see Table 15). The therapists

Table 15

Frequency of Group or Individual Occupational Therapy Interventions

Format	Frequency of Responses	
	N(28)	%
Group therapy only	2	7
Mostly group and some individual	4	14
Group and individual equally	7	25
Mostly individual / some group	14	50
Individual only	1	4
Total	28	100

identified whether or not they served students with behavioral disorders, in groups, individually, or in a combination. Fourteen (50%) of the respondents indicated that they provided mostly individual and some group occupational therapy sessions. Seven (25%) therapists stated that they provided group and individual services equally. Six (21%) reported they provided more group therapy services than individual.

Consulting and Monitoring Functions

The therapists were asked to identify the average number of contacts made, to both parents/guardians and teachers, regarding students with behavioral disorders who were referred to occupational therapy during 1989-90. The 28 responding therapists had an average number of parental contacts of 7.96, with a range from 1 to 50. The number of teacher contacts averaged 34 per therapist, with a range of 4 to 71.

The therapists were also asked to identify the three most frequent purposes of their contacts to parents and teachers. Several of the respondents identified only one or two reasons for contacting parents, while most respondents identified three reasons for contact with teachers. Data obtained from this question appear in Table 16. Contacts with the parent or guardian were made most often (46%) made to provide general information about the student's progress

in therapy. The second most frequent reason for parent/guardian contact (24%) was to facilitate carry over of the occupational therapy program into the home.

Table 16

Frequency of Reasons Given by Occupational Therapists to Contact Parent/Guardians and Teachers

Parent/Guardian			Teacher		
Reason	N	%	Reason	N	%
Gen. Information	17	46	Collaboration	18	40
Home/carryover	9	24	Educ. on OT	8	18
Exercise Prog.	6	16	Behav. Mod. Prog.	5	11
Parent Support	2	5	Carryover/class	4	9
Check Equip.	1	3	Teacher Support	2	5
Behav. Mod.	1	3	Acad. Monitor.	2	5
Extracurr. Act.	1	3	Curric. Modif.	2	5
			Carryover/home	2	5
			Room Modifica.	1	2
Total	37	100		44	100

The therapists also reported making parent/guardian contacts to check on home exercise programs (16%), provide parent/guardian support (5%), equipment use (3%), home behaviors (3%), and extracurricular activities (3%).

The most frequent reported reason for contact with teachers was to share information (40%). The second most frequent reason for teacher contact was to educate them on the role of occupational therapy (18%). The therapists also reported that they contacted teachers to: (a) follow-up on classroom behaviors (11%); (b) check carryover of therapy into the classroom (9%); (c) provide teacher support (5%), conduct academic monitoring (5%), suggest curriculum modifications (5%), inquire about carryover into the home ((5%), and suggest classroom space/seating changes (2%).

Table 17

Frequency of Contacts made by Occupational Therapists with Other School Personnel

Personnel	Frequency of Responses	
	N	%
Psychologist	18	39
Social Worker	12	26
Speech Therapist	8	18
Principal	4	9
Adaptive PE	2	4
Teacher's Aide	2	4
Total	46	100

The therapists were asked to identify other school personnel with whom they were in contact regarding students with behavioral disorders (see Table 17). Several therapists listed more than one frequent contact. The most frequently reported "other school personnel" contact was the psychologist (39%), second most common was the social worker (26%), and third, the speech therapist (18%). The school counselor was not identified by any of the respondents as a person with whom they were in frequent contact regarding students with behavioral disorders.

Perception of School Personnel's Understanding of Occupational Therapy's Role

The therapists were asked to rank their perception of school personnel's understanding of the role of occupational therapy with students who have behavioral disorders. Twenty-four of the 28 therapists responded to this question. They reported they believed the school personnel with whom they worked had at least an adequate (68%) or better (18%) understanding of occupational therapy. Four (14%) of the therapists stated that school personnel did not have an adequate understanding.

Evaluation of Academic Preparation

The therapists were asked to evaluate how well they believed they were prepared academically to serve students

with behavioral disorders. They were provided a Likert-type scale which they used to rate their academic preparation for addressing ten problem areas commonly exhibited by students with behavioral disorders. Twenty-seven therapists responded to this question. Tables 18 and 19 present the results of the therapists' positive and negative ratings of their academic preparation for each of the ten problem areas. The cumulative response percentages in each table were computed to arrive at an overall positive and negative value. The respective N used to calculate the percentage for each problem area was reduced to take into account the number of therapists who reported they did not receive academic preparation in the particular problem area (refer to Table 20 for clarification).

The positive responses frequencies are presented in Table 18. Concentration and perception tied for the greatest percentage of "excellent" academic preparation scores (38%). Coordination, impulsivity, and social skills were the next highest in receiving "excellent" scores (28%, 27%, and 24% respectively). Coordination and perception tied for the largest cumulative percentage (76%), making them the highest ranked area of academic preparation. Concentration and problem-solving were ranked second and third receiving 71.3 % and 70.8% cumulative positive responses. Self-concept and social skills were ranked fourth (69.2%) and fifth (64%) by the therapists.

Table 18

Frequency of Positive Responses Regarding Academic Preparation

	Excellent		Satisfactory		Cumula. %	Rank
	N	%	N	%		
Aggression	4	16.6	4	16.6	33.2	9
Concentration	8	38.0	7	33.3	71.3	2
Coordination	7	28.0	12	48.0	76.0	1
Impulsivity	6	27.2	5	22.7	49.9	8
Perception	8	38.0	8	38.0	76.0	1
Prob. Solving	5	20.8	12	50.0	70.8	3
Self-concept	5	19.2	13	50.0	69.2	4
Sensory Int.	4	16.6	9	37.5	54.1	7
Social Skills	6	24.0	10	40.0	64.0	5
Withdrawn	4	16.6	10	41.6	58.2	6

Table 19 presents the frequency of negative responses. Aggression received the greatest frequency of "poor" academic preparation scores (37.5%), while impulsivity was second (13.6%). Withdrawal and concentration had the next highest number of "poor" scores (12.53% and 9.5% respectively). Aggression received the greatest cumulative negative percentage (66.6%). It was ranked by the therapists as their weakest area of academic preparation.

The therapists ranked impulsivity and perception as the second and third weakest areas of academic preparation (49.9% and 47.5% of cumulative negative percentages).

Table 19

Frequency of Negative Responses Regarding Academic Preparation

	Satisfactory		Poor		Cumula. %	Rank
	N	%	N	%		
Aggression	7	29.1	9	37.5	66.6	1
Concentration	4	19.0	2	9.5	28.5	9
Coordination	5	20.0	1	4.0	24.0	10
Impulsivity	8	36.3	3	13.6	49.9	2
Perception	8	38.0	2	9.5	47.5	3
Prob. Solving	5	20.8	2	8.3	29.1	8
Self-concept	7	26.9	1	3.8	30.7	1
Sensory Int.	9	37.5	2	8.3	45.8	4
Social Skills	7	28.0	2	8.0	36.0	6
Withdrawal	6	25.0	3	12.5	37.3	5

Sensory integration was identified as a problem area in which the therapists believed they were not adequately educated. It was ranked fourth, with a 45.8% cumulative

percentage. Withdrawal ranked fifth overall (37.3%), and social skills sixth (36%) in the cumulative negative percentages.

Table 20 shows the frequency of problem areas reported as not addressed in the therapists' academic preparation.

Table 20

Frequency of Occupational Therapists Reporting No Academic Preparation in the Identified Problem Areas

Problem Area	Frequency of Responses	
	N	%
Aggression	3	11.0
Concentration	6	22.0
Coordination	2	7.0
Impulsivity	5	18.5
Perception	6	22.0
Problem Solving	3	11.0
Self-Concept	1	3.7
Sensory Integration	3	11.0
Social Skills	2	7.0
Withdrawal	3	11.0

Twenty-two percent of the therapists identified perception and concentration as the two most common problem areas not

addressed in their academic preparation. Self-concept received the lowest number (3.7%) of responses from the therapists.

CHAPTER VI

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Summary

The initial nationwide search for occupational therapists who provide services for students with behavioral disorders confirmed that very few therapists are serving this population. One hundred twenty-one therapists were found, through a national occupational therapy databank, who were serving students with behavioral disorders as one of their three most common handicapped populations. This figure is even more significant when one considers the number of self-contained classrooms and alternative schools in existence for this population across the nation.

Fifty-six of the 121 identified therapists agreed to participate in a survey of the practice of occupational therapy with students having behavioral disorders. Twenty-eight of the 32 returned questionnaires were appropriate for data analysis. The data obtained reveal that only a few therapists are providing services to more than a few students with behavioral disorders. The wide numerical ranges in the responses to many of the survey questions,

reveal that conclusions based on mean-type data may be misleading. A conservative analysis of the statistics presented is indicated in that the measures of central tendency and percentages may be skewed by the data reported from a few therapists who serve a substantially greater number of students than the rest of the 28 therapists.

The average length of school-based experience (ten years) of the therapists surveyed, appears consistent with the passage of (PL 94-142) The Education for All Handicapped Children Act (Federal Register, 1975). Prior to 1975, few therapists were employed by public schools and even fewer were serving students with behavioral disorders (Gilfoyle & Hayes, 1979). Of the 28 responding therapists, most (89%) had professional work experience before they began working in the public schools, with almost half of them having had prior work experience in mental health settings (see Table 2). The therapists worked in more than one school setting. Most were regular employees of an independent school district in a suburban city (see Table 3). Their work was most often supervised by the school district's special education supervisor (see Table 4).

The data from this study reveal that few of the therapists had frequent involvement in the preliminary prereferral and/or planning meetings held on the behalf of students with handicapping conditions (see Table 5). One-third of the therapists were included in prereferral

meetings by invitation only, and more than 50% of the therapists stated that they attended individualized education plan (IEP) meetings by invitation only (see Table 6). Almost half of the therapists stated that students with behavioral disorders were referred because of the therapists' initiative and specific interest in the population. The special education teacher was the most frequently cited direct source of referral to occupational therapy (see Table 8). While the school psychologist was often cited by the therapists as a frequent source of referral, the school counselor was not identified by any of the therapists surveyed.

The data reveal that students with behavioral disorders who were referred for occupational therapy typically presented with three primary problem areas: coordination, perception, and psychosocial (see Table 9). It appears that coordination and perception problems were the primary problem areas addressed by the therapists. The evaluation instruments used most often addressed developmental functioning (Llorens et al., 1979), or sensory integration (Ayres, 1972). Few evaluations were used that have a significant psychosocial component (see Table 10). Over half (56%) of the therapists selected the theory of sensory integration as the primary theory guiding their practice (see Table 12). The majority of the remaining therapists selected developmental theory. In contrast, almost

one-third of the therapists identified psychosocial goals as their second most common type of goal statement (see Table 11).

The therapists reported that the students they served were primarily in the elementary age group (66%). They saw approximately three times as many males as females (see Table 7). The therapists averaged fewer than eight contacts with parents over the academic year. Contacts were made, primarily, to pass on general information. Only one out of five contacts were made to assess the home environment or carryover of therapy into the home. Contacts with teachers were also made for information sharing. Explaining occupational therapy was another frequent reason for teacher contact; classroom/home carryover of occupational therapy was mentioned infrequently (see Table 16). The school psychologist was the most frequently contacted "other school professional" (see Table 17).

The therapists reported that they were poorly prepared academically to serve students with problems of aggression, impulsivity, and perceptual deficits (see Table 19). They stated they were the best prepared to address problems of coordination, perception, concentration, and problem-solving (see Table 18). Academic preparation in dealing with self-concept and social skills problems were rated positively.

Discussion

Although this was an exploratory study, consisting of 28 subjects, the results suggest that there may be inconsistencies between the practices of this sample of school-based occupational therapists and hospital-based occupational therapists who serve students with severe behavioral disorders. This statement is supported by the results of this empirical study and the occupational therapy literature as reviewed in this paper.

The occupational therapy literature that focus on treating the school-age population in the psychiatric environment has historically (from the 1940's to the present) emphasized the importance of group tasks, real-world practical competencies, and mastery experiences (e.g., Agrin, 1987; Baker, Gaffney & Trocchi, 1989; Barker & Muir 1969; Clark, Mack & Pennington, 1988; Edelman, 1953; Fergus & Buchanan, 1977; George, Braun & Walker, 1982; Gill, 1976; Gleave, 1947; Klapman & Baker, 1963; Llorens & Rubin, 1962; Reilly, 1962; & Shannon, 1977). While the interventions described in the occupational therapy literature emphasized day-to-day occupational functioning, the activities were holistic; addressing the sensory system naturalistically. The most common goal cited was to improve social skills.

The most frequently reported theory guiding current practice in hospital settings was occupational behavior (Kielhofner & Barris, 1984).

The results of this study support recent statements made by Adelstein et al. (1989) and Florey (1989), that the public schools have failed in the provision of needed occupational therapy services for students with behavioral disorders. They stated that occupational therapy is not made available unless the student has a neurological handicap. They also asserted that the occupational therapy profession has become so infatuated with the neurological frame of reference, that services are no longer holistic. The data from this study points to a conclusion that this may be true. The results reveal that although the therapists overtly identified goal statements addressing psychosocial problems, the majority of therapy time was directed toward sensory integration improvement. The apparent incongruency between the goals of occupational therapy and special education becomes more pronounced in that the data reveal that most of the therapists surveyed (54%), provided services in an individual format. This approach, for an education-related service appears problematic when considered in light of the belief among many special educators that impaired social skills and peer relations are the greatest obstacles in mainstreaming students with behavioral disorders (Schloss, Schloss, Wood &

Kiehl, 1986). Twenty-one percent of the therapists (21%) identified group approaches as their primary mode of service delivery. A few stated they used individual and group formats equally. The interventions used in sensory integration were focused on developing the student's neurological system, not specifically addressing day-to-day psychosocial developmental skills, or occupational behaviors. The results of this study also support Cronin and Burnell (1989) in their assertion that sensory integration is the most common theory of intervention used by public school therapists. The school-based therapists in this study overwhelmingly relied on a neurological approach to meet the occupational therapy needs of students with behavioral disorders. They viewed the behavioral disorder as a manifestation of an immature nervous system (Ayres, 1972).

In summary, this exploratory study raises two essential questions for further analysis. First, are sensory integration interventions the optimal means to meet the needs and goals of special education for students with behavioral disorders? Second, how pervasive is the discrepancy, as indicated by the results of this study, between services provided to students with behavioral disorders by school-based versus hospital-based therapists?

Conclusions

The above results, summary, and discussion allude to several conclusions. The reader is cautioned to keep in mind the exploratory nature of this study. Additionally, the small N of 28 reduces the generalizability of the results. The following conclusions are subject to the parameters of the above caveats.

This study originated from the researcher's desire to study the current practices of occupational therapists who serve students with behavioral disorders in the public school. The results confirmed the previously held belief that occupational therapy was infrequently used as an education-related service for this population. The study also supported the belief that if occupational therapy was provided to students with behavioral disorders, it would be guided by sensory integration theory. There was however, prior to this study, no empirical evidence to support these beliefs. There are several factors which may explain the findings in this study.

It is generally known within the profession that most occupational therapists who work in the public schools have a physical dysfunction orientation. That is, they have a high preference for working with problems of a neurological or physiological nature. This trend among pediatric occupational therapists has been present since the 1960's and preceded the dramatic increase in public school

occupational therapy which began due to the federal law in 1975. Additionally, the majority of therapists who are interested in mental health concerns have tended to stay in the hospital setting. Although the profession professes to have an holistic approach, it is unfortunately more often a concept than a rule. In fact, there is long-standing division between these two groups of therapists. The above factors seem to automatically predispose the type of services that will be provided to students with behavioral disorders in the public schools.

Other factors are also significant. The occupational therapy curriculum has become more and more centered on the neurological interventions. It is easy to understand that students become enticed with the "air" of what they perceive as scientific practice. They may view interventions that deal with everyday behaviors as less than rigorous. Regardless of the fact that the public schools are the number two employer of occupational therapists, curriculums have done little to change their focus. The primary orientation is medical. These factors obviously influence current practices in the schools.

Another explanatory factor is that occupational therapists are not well understood by the schools. Administrators and special educators have little awareness of occupational therapy outside of being an intervention for students with motor problems. Additionally, therapists

don't understand their role in the public schools. This researcher asserts that they often feel less than respected and underappreciated.

There is an historical factor which also effects current practice in the schools. Prior to 1975 the only occupational therapists working in public schools were those employed to help students who had significant medical problems. This legacy has undoubtedly had a profound influence on how schools perceive the role of occupational therapy.

The results of this exploratory study suggest that occupational therapy has been ineffective in clarifying its role to itself and others in the public schools. Additionally, the services that are provided are offered from a narrow orientation, reflecting a medical model, and are provided to a very small range of ages and dysfunctions. It appears that though occupational therapy was identified as an education-related service for all handicapping conditions by Federal law, its relative impact in serving the handicapped population has been minimal.

The primary responsibility for changing this course rests with academic preparation. Before occupational therapy can become an integral part of special education programming, it is incumbent that students be educated in ways which will better enable them to become a valued member of the educational community. Essential to this end will be

a return to the founding principles of holistic occupational therapy which focus on the whole person and his or her ability to carry out life roles. A holistic approach in education and practice would enable the school-based therapist to directly identify and implement interventions that are immediately relevant to the role performance of students with behavioral disorders. This perspective promotes the incorporation of scientific and medical advances into school-based services that are consistent with the philosophical legacy of occupational therapy. It is this researcher's opinion that such changes in preparation and orientation will be necessary for occupational therapy to reflect a contemporary vision of its services for students with handicapping conditions.

Recommendations

This study has provided an exploratory investigation of the practice of occupational therapy with students who have behavioral disorders. The results suggest the following questions be addressed in future research:

1. Why are so few occupational therapists serving students who have behavioral disorders?
2. To what degree have occupational therapists communicated the full scope of interventions they could provide for students with behavioral disorders?
3. Why aren't occupational therapists serving students

with behavioral disorders who do not also present with neurological problems?

4. Are there constraints in the school-setting that would prevent occupational therapists from developing intervention programs that emphasize improvement in adaptive functioning skills and occupational behaviors for this population?

5. What are the reasons for the discrepancy between hospital and school-based practice with students having behavioral disorders?

6. Why do occupational therapists in the school-setting limit their interventions to a sensory integration model when serving students who have behavioral disorders as their primary handicapping condition?

7. Why are occupational therapists serving primarily the lower grades, and not developing adolescent and transitional interventions for this population?

8. Are changes needed in the academic preparation of occupational therapists to better enable them to serve students with behavioral disorders?

Future research addressing specific aspects of the above questions will be necessary before more definitive conclusions and directions can be reached. This study may be an impetus to launch such investigations.

APPENDIX A
REVIEWERS

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APPENDIX B
SURVEY INSTRUMENT

Instructions for Completing the Survey

PLEASE RETURN SURVEY BY JULY 1st.

This questionnaire has been designed to be completed as quickly as possible. The focus is on YOUR everyday practices in serving students with behavior disorders (BD). (The term behavior disorders, as recommended by the Council for Children with Behavior Disorders, is used in lieu of the term serious emotional disturbance). The eligibility criteria contained in PL 94-142 is stated below to clarify which students are to be included in this study.

Criteria for inclusion:

The student exhibits one or more of the following characteristics, over a long period of time, and to a marked degree which adversely affects educational performance:

- a. an inability to learn which cannot be explained by intellectual, sensory, or health factors
- b. an inability to build or maintain satisfactory interpersonal relationships with peers or teachers
- c. inappropriate types of behavior or feelings under normal circumstances
- d. a general pervasive mood of unhappiness or depression or
- e. a tendency to develop physical symptoms or fears associated with personal or school problems.

The term includes children who are schizophrenic. The term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed. Autistic children are not appropriately labeled as seriously emotionally disturbed or behaviorally disordered. (Federal Register, 1981)

Most of the questions ask for checkmarks, rankings, or raw numbers. If a ranking is requested, you should only rank those choices that actually apply to you and your current work with students who have BD as their primary handicapping condition.

Ex: What activities do you find most therapeutic for this group? (Rank from 1 to 4 with "1" being the most frequent)

- | | |
|-------|------------------------|
| __4__ | woodworking |
| __3__ | group cooking |
| __ | individual crafts |
| __1__ | gross motor play |
| __ | drama/role playing |
| __2__ | wilderness experiences |

If you had ranked these activities in the above manner, the interpretation would be that you actively use these four activities in your therapy program and that you consider the gross motor activities to be the most beneficial, wilderness second, etc.)

Other questions ask you to select only one best answer.

Ex: How many students with BD do you see during a typical day?

_____	one to five students with BD daily
<u> x </u>	six to ten students with BD daily
_____	more than ten students with BD daily

If you selected the above answer, the interpretation would be that you usually saw between six and ten students with BD daily.

PLEASE GO AHEAD NOW AND COMPLETE THE QUESTIONNAIRE.

PLEASE RETURN BY JULY 1st.

SCHOOL-BASED OT FOR STUDENTS WITH BEHAVIOR DISORDERS
AS THE PRIMARY HANDICAPPING CONDITION

GENERAL INFORMATION:

1. _____ What year were you first certified as an OT?
2. _____ How many years have you been a school-based OT?
3. What is your level of education in occupational therapy?
 _____ BS/BA
 _____ MOT
 _____ MS/MA
 _____ PhD
4. What is your sex? _____ female; _____ male
5. If you have held previous OT positions, please identify in what treatment area(s)? (Otherwise, go on to # 6.)
 _____ Pediatrics (How long? _____)
 _____ Physical Rehabilitation (How long? _____)
 _____ Mental Health (How long? _____)
 _____ Other _____ (How long? _____)
6. Which of the following terms best describes the school district(s) in which you work? (Rank only those that apply to you, with "1" being the most frequent.
 _____ Urban
 _____ Suburban
 _____ Rural
 _____ Special Education Cooperative
7. How many OTRs are employed by your school district(s)?
 _____ Full-Time OTRs
 _____ Contract OTRs
8. Who is your immediate supervisor? (check only one response)
 _____ School Principal
 _____ Special Education Supervisor
 _____ Special Educator
 _____ Other _____

SCREENING AND REFERRAL FUNCTIONS:

9. If you attended pre-referral/screening meetings (to determine need for special education services) during the 1989-90 year, please respond to the following questions. (Otherwise, go to # 12.)

_____ How many prereferral meetings did you attend?

10. How many students with the following conditions as primary diagnoses were presented at the pre-referral meetings?

_____ Behaviorally Disordered	_____ Multi-Handicapped
_____ Deaf	_____ Other Handicapped
_____ Deaf/Blind	_____ Orthopedically Impaired
_____ Hard of Hearing	_____ Speech Impaired
_____ Learning Disabled	_____ Visually Impaired
_____ Mental Retardation	_____ Other Conditions

11. How were you included in the pre-referral meetings? (Rank only the responses that apply to you, with "1" being the most frequent)

_____ Invited for specific cases
 _____ Requested attendance myself
 _____ Routine committee member
 _____ Other _____

12. If you attended Individualized Educational Plan (IEP) meetings (planning meetings for special education students) during the 1989-90 year, please respond to the following questions. (Otherwise, go on to # 15.)

_____ How many IEP meetings did you attend?

13. How many students with the following conditions as primary diagnoses were presented at the IEP meetings?

_____ Behaviorally Disordered	_____ Multi-Handicapped
_____ Deaf	_____ Other Handicapped
_____ Deaf/Blind	_____ Orthopedically Impaired
_____ Hard of Hearing	_____ Speech Impaired
_____ Learning Disabled	_____ Visually Impaired
_____ Mental Retardation	_____ Other conditions

14. How were you included in the IEP meetings? (Rank only the responses that apply to you, with "1" being the most frequent.)

_____ Invited for specific cases
 _____ Requested attendance myself
 _____ Routine committee member
 _____ Other _____

DIRECT OT SERVICES FOR STUDENTS WITH BEHAVIOR DISORDERS AS THE
PRIMARY HANDICAPPING CONDITION:

15. _____ How many NEW students were referred to YOU in 89-90?
16. _____ How many NEW referrals were students with BD?
17. Of the students with behavior disorders that you served last year, how many did you see in the below age ranges. Please indicate sex within each range.
- | | |
|-------------------|----------------------------------|
| _____ age 5 - 8 | (# _____ females; # _____ males) |
| _____ age 9 - 11 | (# _____ females; # _____ males) |
| _____ age 12 - 14 | (# _____ females; # _____ males) |
| _____ age 15 - 18 | (# _____ females; # _____ males) |
| _____ age 18 - 22 | (# _____ females; # _____ males) |
18. Who most frequently referred students with BD to you? (Rank only those that apply to you, with "1" being the most frequent.)
- _____ IEP Committee
- _____ Principal
- _____ Psychologist
- _____ Regular Education Teacher
- _____ School Counselor
- _____ Special Education Teacher
- _____ Other _____
19. What is the educational environment(s) for the students with BD that were referred to you for OT? (Rank only those that apply to you, with "1" being the most frequent.)
- _____ alternative school setting
- _____ homebound
- _____ mainstream classroom
- _____ self-contained classroom
- _____ other _____
- _____
20. What were the most frequent reasons OT was made a part of the IEP for students with BD? (Rank the items from 1 to 4, with "1" being the most frequent.)
- _____ Coordination/motor problems
- _____ Psychosocial problems
- _____ Cognitive problems
- _____ Perceptual problems
- _____ Other _____
- _____
21. What are your three most common goals for students with BD?
- (1) _____
- (2) _____
- (3) _____

22. What OT frames of reference do you use most often for students with BD? (Rank only those that apply to you, with "1" being the most frequent.)

Cognitive
 Developmental
 Neurological
 Psychosocial
 Rehabilitative
 Other _____

23. What OT practice theory do you use most often for students with BD? (Check only one response)

Cognitive
 Developmental
 Occupational Behavior
 Psychoanalytical
 Sensory Integration
 Other _____

24. What are the most common evaluation instruments/tools you use when you initially evaluate a student with BD. (Please list most common first)

(1) _____
 (2) _____
 (3) _____

25. How do you measure the impact OT has on the academic performance of the student with BD?

26. What is the most common frequency of your direct services for students with BD? (check only one response)

Daily; More than once a week; Weekly;
 Bi-weekly; Monthly; Other

27. _____ What is the most common duration of each OT session for students with BD?

SETTINGS FOR OCCUPATIONAL THERAPY INTERVENTION:

28. In what environment(s) do you most frequently provide services to students with BD? (Rank only those that apply to you, with "1" being the most frequent.)

Mainstream classroom
 Outside of classroom
 Resource classroom
 Special class for students with BD
 Other _____

29. Do you serve students with BD individually or in groups?
(check only one response)
- I provide group services only
 I provide mostly group services but do some individual
 I provide group and individual about equally
 I provide mostly individual but occasionally group
 I provide individual services only
30. If you include home programs for students with BD, please describe the program. (Otherwise, go on to # 30.)

(attach description if necessary)

CONSULTING/MONITORING FUNCTIONS:

31. _____ What was the average number of professional contacts made to parent/guardian (by phone, mail or in person) for each student with BD you served during 1989-90?
32. What were the three most common purposes of your contacts with the parent/guardian?
- (1) _____
- (2) _____
- (3) _____
33. _____ What was the average number of professional contacts made to teachers (by phone, mail or in person) for each student with BD you served during 1989-90?
34. What were the three most common purposes of your contacts with the teachers?
- (1) _____
- (2) _____
- (3) _____
35. Identify other school personnel you have met with during the 1989-90 year regarding the students with BD you served.
- _____
- _____
36. How well do you think the special educators with whom you have worked understand the role of OT for students with BD?
(check only one response)
- excellent understanding
 adequate understanding
 inadequate understanding
 very poor understanding

37. How well prepared were you in your formal OT education to address the problems that students with BD exhibit? (Rate each of the problems listed below using the following scale.)

- 1 - excellent preparation
- 2 - satisfactory preparation
- 3 - less than satisfactory preparation
- 4 - poor preparation
- 5 - not addressed in my coursework

(Use the scale at the bottom of the previous page to rate your academic preparation on each of the below problems associated with BD)

- _____ Aggressive/acting out
- _____ Concentration/attention deficits
- _____ Coordination problems
- _____ Impulsiveness
- _____ Perceptual problems
- _____ Problem-solving difficulties
- _____ Self-concept problems
- _____ Sensory integration deficits
- _____ Social skills problems
- _____ Withdrawn/internal focus

38. How did you become involved in serving students with BD?

Additional comments:

Please forward this survey in the enclosed envelope to:

Sally Schultz, M.Ed., OTR
2101 Brugge Court
Plano, Texas 75025

Your assistance in this research project is extremely valuable as there has been NO widespread research conducted on the contribution occupational therapy makes to the student with behavior disorders. Your input is VITAL.

With sincerest regards,

Please send me a copy of the results:

PLEASE RETURN BY JULY 1st

APPENDIX C
INITIAL CONTACT

Dear :

I am writing to ask for your participation in a survey of occupational therapists in public schools who serve students with emotional disturbance or behavior disorders (ED/BD). Only those therapists who, according to the 1985 AOTA Member Data Survey, see a substantial number of students with ED/BD are being surveyed. As both an occupational therapy educator and a doctoral candidate in special education, I have come to see the critical need for this research project. To date, there has been no analysis of the services that OTs provide this population.

The questionnaire would be mailed to you. Most of the questions can be completed with simple checkmarks, and the entire survey should take less than thirty minutes.

I am eager to hear from you. Your unique experiences are vital to the study. Please, take a moment right now, fill out the enclosed card, and drop it in the mail.

With my sincerest appreciation,

Sally Schultz, M.Ed., OTR
2101 Brugge Court
Plano, Texas 75025

Enclosure

SURVEY: OT SERVICES FOR STUDENTS WITH ED/BD

_____ YES. I see students with ED/BD and am willing to complete the survey

Was the address used the best one to send you the survey?

_____ Yes

_____ No, change address to:

_____ NO. I will not be able to complete the survey.

APPENDIX D
SECOND CONTACT

June 20, 1990

Dear Colleague:

As you may recall, I contacted you during the fall semester and requested your participation in a study I am conducting on the practice of occupational therapy with students who have behavioral and/or emotional disorders. I am most appreciative that you have agreed to participate in this research. The data accumulated in this survey will provide an in-depth analysis of what occupational therapists are doing on a day-to-day basis with these special education students.

You are one of 54 therapists (out of the 121 contacted) who have agreed to be involved in this research. Your willingness reflects your sincere interest in this group of handicapped students. As I mentioned in my earlier communication, the data obtained from this survey will provide information that has not been tapped by any prior or on-going research regarding occupational therapy in the schools. I anticipate presenting the results at the AOTA conference in 1991. If you would like a copy of the results, please include your name and address on the final page of the enclosed questionnaire. A stamped self-addressed envelope has been provided.

Please go ahead right now, take a few minutes, and complete the questionnaire. I have enclosed a stick of gum to "sweeten" the process. You will probably finish the survey before the flavor is gone. I would like to have the questionnaire returned by July 1st. Thank you so very much for taking the time to complete this.

Sincerely yours,

Sally Schultz, MEd, MOT, OTR

Enclosure

HELP!!! HELP!!! HELP!!!!

Dear _____

I haven't received the survey from you on OT with BD/ED students. YES, I KNOW how little spare time you have. Please take the few minutes necessary.

How 'bout right now? Over lunch perhaps?

YOUR INPUT IS CRITICAL!

Do you need another copy of the questionnaire?
I'll give you a call in a couple of days.

Thanking you in advance,

Sally Schultz, OTR

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