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GRADUATE COLLEGE

A MODEL OF PSYCHOSOCIAL MATURITY FOR PHYSICALLY HANDICAPPED CHILDREN

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

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BY

TERRI MARIE GALLMEIER

Norman, Oklahoma

1978

A MODEL OF PSYCHOSOCIAL MATURITY FOR

PHYSICALLY HANDICAPPED CHILDREN

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A MODEL OF PSYCHOSOCIAL MATURITY FOR PHYSICALLY HANDICAPPED CHILDREN

CHAPTER I

INTRODUCTION

Traditionally, "with minor exceptions, mankind's attitudes toward its handicapped population can be characterized by overwhelming prejudice" (Lori Case v. State of California, 1973, p. 2a). For example, the recent history of treatment for children with physical handicaps has often included isolation from mainstream society in the form of special classes, institutional management, or no educational services at all.

Recently, however, the attitude toward treatment of persons with physical handicaps has changed. Vining, Accardo, Rubenstein, Farrell, and Roizen (1976) emphasize that the goal of habilitation of handicapped persons is maximization of potential and integration into society. Apparently these sentiments are shared by special educators and others concerned with the rights of the handicapped, since there is now a trend toward increased integration at all levels of society, including the public schools and the job market (Abeson & Zettel, 1976).

The Federal Government has even increased its role in the provision of equal rights for the handicapped. Public Law (P.L) 94-142,

the Education for All Handicapped Children Act of 1975, and Section 504 of the Vocational Rehabilitation Act of 1973 (P.L. 93-112) made discrimination of the handicapped in the public schools or in any program or activity receiving federal financial assistance, a violation of federal law.

In considering integration of the physically handicapped, it must be recognized that a child's emotional development, behavior, and reaction to his/her handicap may be more significant in determining whether he/she will be able to remain in the community and achieve a degree of independent functioning than the extent of the handicap itself (Freeman, 1967). Loring (1975) states that:

> in a highly competitive world where success is judged by achievement, economic status and very often conformity to a highly complex set of social attainments and values, the handicapped child has to learn not only to accept the limitations placed upon him by his handicap, but also how to measure up to all the demands which society places upon him (p. 57).

Therefore, the process of socialization, "whereby a person acquires sensitivity to social stimuli and learns to get along with, and to behave, like others in his group or culture" (McNeil, 1969, p. 8) is particularly important to the handicapped if integration into mainstream society is to be possible. And with the recognition that the psychological aspects of disability may be more handicapping than the physical aspects comes the realization that a psychological look at disability problems is imperative (Wright, 1960).

The study of the social-psychological adjustment of the physically handicapped is in the domain of somatopsychology, the study of some of the relationships that bind physique and behavior. These somatopsychological relationships deal with "those variations in physique that

affect the psychological situation of a person by influencing the effectiveness of his body as a tool for actions or by serving as a stimulus to himself or others" (Barker et al., 1953, p. 1). Emphasis is placed upon both psychological and sociological factors in understanding the behavior of the physically handicapped. Wright (1960) states that "the way in which one feels and behaves about many things depends in greater or smaller measure upon one's relationship to other persons...and the ways of behaving prescribed by society" (p. 3). The body is regarded as a value-impregnated stimulus to the self and others. Rarely is a disabled person responded to as a person who has psychological properties beyond the disability; rather, he/she is identified with the disability and reacted to in terms of whatever the disability means to the other person (Meyerson, 1971). In turn, the primary source of self concept and personal values of the handicapped is interpersonal relations, particularly evaluations by others (Shontz, 1970).

Central to this interpersonal theory of somatopsychological relationships is the distinction made between disability and handicap (Barker, Wright, Meyerson, & Gonick, 1953; Wright, 1960; Meyerson, 1971). A disability is a condition having a medical or objective aspect whereas a handicap "is the cumulative result of the obstacles which disability interposes between the individual and his maximum functional level" (Hamilton, 1950, p. 17). These obstacles are often social in nature, therefore a handicap must be evaluated in terms of the demands of the situation in which the person finds himself. A physical attribute is a physical handicap only when it is seen as a significant barrier to the accomplishment of particular goals. In addition, a physical attribute may become handi-

capping not because it is physically limiting but because it adversely affects social relationships. Bartel and Guskin (1971) state:

> A persons' bodily or behavioral condition becomes a handicap only to the extent that society, other people, or the person himself define his condition as distinctive and undesirable. This definition consists of verbal labeling, distinctive interpersonal reactions, and/or special treatment techniques, all of which imply either unattractiveness or incompetence or both (p. 110).

Thus, handicap is a social condition created by society.[1]

Somatopsychological research has produced no substantial evidence that persons with physical disability differ as a group in their general or overall adjustment, however it is recognized that a physical disability does introduce psychologically significant variables into the process of adjustment. Wright (1960) notes that the somatopsychological connection between physique and behavior is not direct but is mediated by intervening variables, such as attitudes toward disabilities. Because of these intervening variables persons with similar handicaps may behave quite differently. In fact, contrary to formerly held assumptions, recent research findings do not indicate that particular personality characteristics are associated with particular types of physical disabilities. Thus the individual differences among handicapped persons are as significant as the characteristics of the group as a whole.

With the trend toward increased handicap integration, greater emphasis must be placed upon understanding the process of psychosocial development in handicapped children and those variables affecting adjustment. Greenberger and Sorensen (1974) recognize the potential role of the schools in fostering personal and social growth of nonhandicapped children, and certainly the same potential exists both in special and

regular schools for facilitating the handicapped child's psychosocial adjustment. Since preschool handicapped children do not tend to socialize with peer neighborhood children because of limitations in ambulation, parent's overprotectiveness, or the rejection of other children due to their being different, the classroom is often the primary opportunity for them to socialize and be socialized.

However, in the past the psychosocial development of the handicapped child has not received major emphasis in the schools. Education for the handicapped has stressed developing speech and language skills and the three R's (Battle, 1974) similar to the emphasis on academic performance of nonhandicapped children. Greenberger and Sorensen (1974) suggest that the emphasis on academic performance in the schools is due in part to the fact that academic progress can be readily measured by existing achievement tests. They state that the "preeminent position of academic achievement in educational assessment is due less to a good theory of academic achievement than to the existence of standardized instruments to assess a wide range of achievement" (p. 330). Similarly, work with handicapped children even outside the classroom, has tended to focus on the single, most obvious dysfunctions such as gross motor disability or speech defects as they are more easily assessed. What is needed then is a model of nonacademic objectives for handicapped children and a tool for assessing children's progress toward these goals.

A model of psychosocial maturity for nonhandicapped children has been proposed by Greenberger and Sorensen (1974) in which measurable attitudes and dispositions are specified. In addition, the Psychosocial Maturity Inventory (PMI) for assessing nonhandicapped children between the

ages of eleven and eighteen has been devised (Greenberger, Josselson, Knerr, & Knerr, 1975).

Their model takes into account both the psychological and sociological views of the person; the requirements of society as well as the healthy development of the individual. Three general dimensions of maturity are outlined which are considered to be relevant in all societies: (a) the capacity to function adequately on one's own (Individual Adequacy); (b) the capacity to interact with others (Interpersonal Adequacy); and (c) the capacity to contribute to social cohesion (Social Adequacy). These are 'universal' categories which represent general types of demands made by all societies on individuals. In addition, culture specific attributes are proposed which enable the individual to meet the general demands of his/her particular society. Three attributes thought to be relevant to adequate functioning in this society, are suggested for each universal category. They are: self-reliance, identity, and work orientation (Individual Adequacy); communication skills, enlightened trust, knowledge of major roles (Interpersonal Adequacy); and social commitment, openness to sociopolicical change, and tolerance of individual and cultural differences (Social Adequacy).

Since handicapped children must meet the same demands of society as nonhandicapped children, evaluation of their psychosocial maturity in terms of the universal dimensions of the nonhandicapped model seems appropriate. However, it is recognized that a physical disability affects all aspects of the child's growth and development. He/she is prevented from taking part in the normal course of human interaction because of the physiological limitations inherent in his/her condition as well as the psychological and social limitations on the part of the child himself/her-

self and others with whom he/she interacts; so that, the 'normal' process of socialization is severely disrupted. Therefore, it is suggested that the specific attributes which will enable handicapped persons to meet the general demands of society differ from those deemed necessary for non-handicapped persons.

Purposes of the Study

Since there is a trend toward increased integration of the handicapped into mainstream society, a greater emphasis should be placed upon the psychosocial development of physically handicapped children. Greenberger and Sorensen (1974) recognize the vital role the schools could play in fostering psychosocial growth in nonhandicapped children and have thus proposed a model of nonacademic objectives. It is the primary purpose of the present study to adapt the nonhandicapped model of psychosocial maturity to physically handicapped children. Specific attributes which will enable physically handicapped persons to meet the general demands of society will be defined.

Greenberger et al.(1975) has devised the Psychosocial Maturity Inventory (PMI) for measuring progress toward the nonacademic objectives outlined in their model. A second purpose of the present study is to devise a similar instrument for assessing the psychosocial maturity of physically handicapped children. The empirical data will be factor analyzed to determine the validity of the psychosocial maturity construct as applied to physically handicapped children.

CHAPTER II

REVIEW OF LITERATURE

Much of the research into the relationship of physical disability and personality has been descriptive in nature and based on the assumptions that persons with physical disabilities have more adjustment problems than nonhandicapped persons; that certain types of disabilities are associated with specific personality types; and that the extent to which disability affects personality is proportional to the severity of the disability. However, Barker and Wright (1954) state that there is no substantial evidence that persons with an impaired physique differ as a group in their overall adjustment. They consider the great overlap in the level of adjustment of physically handicapped and nonhandicapped groups at least as significant as the relatively small margin of difference found in some studies.

For example, Cruickshank and Dolphin (1949) compared the scores of crippled and non-crippled children, grades 4-12, on the Raths test of emotional need, and found no significant differences in the mean scores of the two groups on the eight areas of emotional need included in the test. Similarly, in a study of the general adjustment of 50 hospitalized children with scoliosis and 30 hospitalized children with osteomyelitis, Kammerer (1940) found that the mean score of crippled children

on standardized personality tests did not differ significantly from that of the physically normal groups upon which the tests were standardized. In addition, Shere (1957), in her study of 30 twin pairs (one twin had cerebral palsy, the other did not), found that the condition of cerebral palsy does not necessarily cause social and emotional maladjustment.

Additional studies indicate that there is no difference between handicapped and nonhandicapped highschool students on introversion-extroversion (Nagge & Sayler, 1933); that the goal-setting behavior of handicapped and nonhandicapped children does not differ (Heisler, 1951); that personality and social and vocational adjustment are not greatly dependent on physical normality (Lowman & Seidenfeld, 1947); that cultural background and personal-social relations in the home may affect adjustment more than crippling does (Gates, 1946); that there is no difference between the personality attributes or adjustment of sighted and visually impaired children (Underberg, 1961); that there is no difference in the depth of psychological disturbance of handicapped and nonhandicapped adolescents needing professional help (Wenar, 1958); and that there is no direct relationship between blindness and personal or social maladjustment (Raskin, 1962).

Barker and Wright (1954) also report that there is no clear evidence of an association between types of physical disability and particular personality characteristics or that the effect of disability on personality is proportional to the severity of the handicap. However, Wright (1960) later emphasizes that although consistent group trends with respect to personality and adjustment have not been found, studies of individuals convincingly indicate that physical disability has a profound

effect on the person's life.

Following his recent survey of the literature, Shontz (1970) reached the same conclusions as Barker and Wright. He notes that even though past assumptions about the relationship between personality and disability prevail, there is still no evidence to indicate that specific disabilities are associated with specific personalities or that types or degrees of disability constitute sufficient causes of psychological maladjustment.

Similarly, Connor, Rusalem, & Cruickshank (1971) in their study of the psychological effect of crippling conclude that at this point in psychological research, "it must be conceded that physically disabled children as a group do not appear to differ qualitatively in adjustment from other children" (p. 320).

In addition, Cruickshank and Bice (1955) found that even in disabilities involving gross neural lesions, such as cerebral palsy, individuals do not exhibit common personality characteristics. Cruickshank, Hallahan, & Bice (1976) emphasize that specific emotional reactions are not typical of specific medical classifications. They state that, "emotions are the product of learning, not of medical classifications" (p. 124).

Similarly, Freeman (1967) in his study of the emotional reactions of handicapped children, concludes that there is no reason to believe that a specific personality type or reaction pattern is inevitable for a child with a particular handicap. He suggests that multiple factors are operative. Other authors (Podeanu-Czehofsky, 1975; Battle, 1974) agree that there are a number of factors in addition to the physical

handicap that affect the child's adjustment and that even though adjustment problems exist among the handicapped, the problems are not necessarily directly related to the handicap itself.

One of the factors assumed to affect the adjustment of the physically handicapped is the reaction of parents to their child's handicap. Although Shontz (1962, 1970) and Meyerson (1971) note that there is a paucity of experimental research as to the effect parental reactions have on handicapped children, there have been a number of studies describing what the parent's reactions are.

For example, Boles (1959) studied 60 mothers of cerebral palsied children and 60 matched mothers of nonhandicapped children and found the mothers of cerebral palsied children to be more anxious, guilty, overprotective, unrealistic, maritally conflicted, and socially withdrawn than mothers of nonhandicapped children.

Similarly, Battle (1974) notes that parental reactions to their handicapped child tend to be extreme, and may range from oversolicitude to rejection. In addition, parents tend to apply different behavior standards to their handicapped and nonhandicapped children, thus resulting in intense sibling rivalries. Podeanu-Czehofsky (1975) reached similar conclusions in her study of 65 families of children with physical handicaps. She found that 52 (80%) of the families had problems stemming from parental rejection, excessive spoiling, and/or sibling cruelty. However, Wright (1960) notes that overprotection appears to occur more frequently than overt rejection and "genuinely positive attachments of parents to their disabled children are not infrequent" (p.377).

Freeman (1967) emphasizes the importance of the mother-child

relationship to the process of early socialization of the handicapped child and notes that in many cases this relationship is seriously disrupted. For example, Freedman, Fox-Kalenda, and Brown (1970) found in their study of the first 18 months of life of a baby multihandicapped due to maternal rubella, that a handicapping condition can greatly disturb the mother-child relationship. The mother they studied had had successful experiences in rearing her first three sons and therefore it was assumed she was able to operate effectively in the mother-child relationship. However, they found that the mother cared for her handicapped child in a perfunctory manner, doing much for the child, but very little with the child. Similarly, Shere and Kastenbaum (1968) investigated mother-child interaction in a group of severely involved, nonambulatory, nonverbal cerebral palsied children and found that the mothers, often without realizing it, fostered passivity in their children.

Richardson (1969) studied the reactions of both parents to their handicapped child, and found that both parents tended to be preoccupied with the child's bodily appearance and functions and therefore avoided a more human relationship with the child.

Another factor which researchers in somatopsychology assume affects the adjustment of the physically handicapped, is the attitude of the public toward handicapped persons. Therefore, a number of studies describing the public's attitudes have been carried out.

For example, Billings (1963) studied the attitudes of 54 first, third, and sixth grade nonhandicapped children toward the crippled. He used two projective techniques, one requiring a written story in response to a picture stimulus and the other a picture completion test. He found

that the attitudes of nonhandicapped children toward the crippled were significantly less favorable than their attitudes toward the noncrippled, with an increase by grade in their "unfavorableness".

Connor et al. (1971) notes that negative attitudes toward handicapped persons are often engendered merely by identifying an individual as exceptional. For example, Combs and Harper (1967) found in their study of teachers reactions to handicapped children, that teachers reacted more negatively to descriptions of cerebral palsied children than they did to the same descriptions presented without the disability label. Similarly, Jaffe (1967) states that a disability as a stimulus is accorded more favorable attitudes when it appears in the context of a handicapped person's other traits.

A number of studies indicate that nonhandicapped persons have difficulty interacting with the handicapped. Kleck (1968) compared the reactions of nondisabled persons to a person with a simulated leg amputation acting as an interviewer, with their reactions to a nondisabled interviewer. He found that there was greater physiological arousal (GSR) when interacting with the amputee than when interacting with a nondisabled interviewer; shorter answers were given to questions from the amputee than from the nondisabled; and the person interviewed expressed more frequent conformity to the interviewer's beliefs when the interviewer was an amputee. The results suggest that there is greater anxiety and less naturalness when interacting with a disabled person.

In another study, Jones (1968) investigated the influence of the presence of a simulated blind person on the performance of other persons on a learning task. He found that although there was no observable in-

fluence on the learning task, subjects said their performance was impaired as a result of interaction with the blind person. Also, Yuker (1965) notes that nondisabled individuals with negative attitudes toward disability tend to avoid interactions with members of the disabled group and even if such nondisabled individuals are helped to accept their disabled peers, the quality of the acceptance is superficial.

In addition, Richardson (1969) found that nonhandicapped children who initiate contact with handicapped children tend to be more isolated, have less general social experience, and have little knowledge of the values of their peers. He also notes that handicapped persons do not receive accurate or spontaneous feedback from others, who feel that they must be especially considerate of the feelings of someone who is handicapped.

Several researchers have found that attitudes toward the handicapped are relatively uniform regardless of age and/or socioeconomic status. For example, Richardson, Goodman, Hastorf, and Dornbusch (1961) studied the reactions of boys and girls, 10 and 11 years of age, with and without physical handicaps, and from a variety of ethnic groups, toward a series of drawings of children who were identical in all respects except for the presence or absence of a physical handicap. The children were asked to rank the drawings in terms of which child they liked best, next best, etc. The results indicate uniformity in the hierarchy of preferences which the children exhibited, with those disabilities that are functionally more impairing the least liked. The authors suggest that such uniformity of children's reactions to physical handicaps is possibly a result of a deprecatory evaluation of persons with physical disabilities apparent in our culture.

In addition, Jones and Sisk (1967) found that nonhandicapped children evidence consistent and negative perceptions of orthopedic disability by age four years. And, Gellman (1959) observed that prejudice toward the disabled exists at all socioeconomic levels in all regions of the United States.

CHAPTER III

FORMULATION OF THE MODEL

Greenberger and Sorensen (1974) define maturity as "an ideal end product of development and socialization" (p. 331). Sociological maturity is the product of "those processes by which the individual, born with behavior potentialities of a very wide range, is led to confine his actual behavior to a much narrower range that conforms to the ways of a given society or subgroup" (p. 331-2). Psychological maturity refers to the achievement of constructive attitudes toward self, others, and society. Psychosocial maturity then denotes an integration of sociological and psychological maturity. Therefore, a concept of psychosocial maturity should take into account what society requires individuals to become as well as what individuals in general should become.

In constructing a model of psychosocial maturity for physically handicapped children, it is recognized that these children must measure up to all the demands which society places upon them; namely, (1) the capacity to function adequately on one's own (Individual Adequacy), (2) the capacity to interact with others (Interpersonal Adequacy), and (3) the capacity to contribute to social cohesion (Social Adequacy). Though it could be argued that society's expectations for the handicapped are different than those for the mainstream population, successful integration

of a minority group such as the handicapped implies an adherence to the general societal demands of the majority.

However, the socialization process of handicapped children is severely disrupted. School is often the first opportunity for them to socialize and be socialized by the mainstream. Therefore, since they are not placed in schools, they frequently lag far behind their non-handicapped peers in acquired social skills as well as psychological maturity.

In addition, handicapped children in working toward any type of goal, academic or nonacademic, must contend not only with those developmental hurdles all children face in growing to maturity but also those obstacles specifically related to physical handicap. These obstacles may be varied, ranging from architectural barriers to social ostracism.

Therefore, though psychosocial maturity as defined by Greenberger and Sorensen seems a viable goal for handicapped children, it must be recognized that the process by which they grow to meet the general demands of society differs from that of nonhandicapped children. Thus, a model of nonacademic goals for physically handicapped school children must allow for variations in the developmental process.

Based on a review of the relevant literature, a model of psychosocial maturity for physically handicapped children is proposed. Specific attributes for defining the three dimensions of psychosocial maturity are presented in Table 1. The model is based on the assumption that physically handicapped children do not differ from nonhandicapped children in their potential for achieving psychosocial maturity. However, it is also assumed that a physical disability has a profound effect on the individual

Table 1

A Model of Psychosocial Maturity for Physically Handicapped Children[a]

Individual Adequacy	Interpersonal Adequacy	Social Adequacy
Self Acceptance	Communication Skills	Social Commitment
Acceptance of one's disability as nondevaluating	Skill in sending or encoding messages	Willingness to cooperate in the pursuit of group goals
Self esteem	Skill in receiving or decoding messages	Concern for the welfare of others
Identity	Ability to initiate communication	Tolerance of Individual and Cultural Differences
Balance between emotional independence and physical dependence	Ability to express feelings	Willingness to interact with individuals and groups who differ from self
Reduced discrepancy between goals and ability to achieve goals	Social Understanding	Belief in the rights of individuals and groups who differ from the norm
Clarity of self concept	Ability to differentiate between reality and personal expectations	Knowledge of Major Roles
Internalized values	Ability to anticipate and cope with the diverse reactions of others	Identification of significant role models
Work Orientation	Affiliation with Others	Awareness of obligations inherent in current definitions of major roles
Feelings of competence	A sense of belonging within the family unit	
Sense of responsibility	Ability to play and have fun with peers	
Capacity to experience pleasure in work or task performance	Ability to establish friendships	
	Acceptance of handicapped group membership	

[a]Adapted from the Greenberger and Sorensen Model of Psychosocial Maturity (1974).

child and must be considered in any model for fostering psychosocial growth.

It should be noted that a number of children with physical disabilities may also be mentally handicapped. Though those children too may be integrated into the mainstream to varying degrees, the following model applies only to those physically handicapped children with normal intelligence.

Individual Adequacy

Self Acceptance

It is felt that self acceptance for a physically handicapped child is manifested by:

1. Acceptance of one's disability as nondevaluating
2. Self esteem

In a society in which persons with physical disabilities are discriminated against and looked down upon on the basis of their physical disability alone, it is vital that a child recognize that he/she has individual strengths despite his/her physical weaknesses. Therefore, accepting one's disability as nondevaluating, is basic to developing feelings of individual adequacy.

Wright (1960) suggests that physical disabilities are often perceived as "spreading" to other physical aspects of the person. For example, because a blind person can't see, it is sometimes assumed that he/she can't hear. Or it is taken for granted that a physically handicapped child is also mentally handicapped. Similarly, the effects of physical disability may "spread" to social abilities and interactions so that the evaluation of the total person is affected by a single characteristic.

Therefore, containing disability affects by recognizing that a single physical aspect of a person need not effect their total functioning is a vital step toward self acceptance.

A physically handicapped child who is self-accepting has learned to value those aspects of himself/herself over which he/she has control, such as personality traits, and place less value on physical achievement. He/she does not feel devalued because he/she falls below the standards of physical normality, but rather defines his/her self-worth in those areas in which he/she can achieve.

Acceptance of the physical disability does not imply that the child prefers a disabled physique to a normal one. Certainly, a physical disability will still be seen as an inconvenience and nuisance even by the self accepting person. However, the recognition that a physical disability does not necessarily make one a disabled person will enable the child to de-emphasize his/her physique and focus on his/her strengths and competencies. Subsequently, success and thus the opportunity to gain self-esteem is possible. Self-esteem is defined as a general evaluation by an individual of himself/herself as a worthy or unworthy person. A single attribute such as physique may affect such a self-evaluation so that a realistic perspective as to the importance of that attribute in relation to other attributes is essential.

Identity

Identity is included in the Greenberger and Sorensen model as a specific attribute of individual adequacy. They state that "individuals who know who they are, what they believe, what they want - and who have a sense of their worth as persons - will be better able to function

adequately on their own than individuals without a clear and stable identity" (p. 343). It is felt that their position applies to both handicapped and nonhandicapped persons and therefore the 'identity' attribute has been included in the physically handicapped model. However, since the process of forming an identity may differ with physically handicapped children, the components of identity have been modified and are as follows:

1. Balance between emotional independence and physical dependence.
2. Reduced discrepancy between goals and ability to achieve goals.
3. Clarity of self concept.
4. Internalized values.

Battle (1974) states that a child must achieve independence in order to live a satisfying adult life. Parents of nonhandicapped children typically reinforce independent behavior as their child gets older. However, it is not uncommon for parents of handicapped children to foster dependency behavior by overprotecting or overindulging their children. Consequently, handicapped children tend to rely on the protectiveness of other people, and thereby prolong their dependency. It is recognized that for many children with disabilities, complete physical independence is not possible and yet the "spread" of physical dependence into the areas of emotional and social adjustment can be contained. Therefore, it is felt that a primary step toward achieving a sense of identity for the physically handicapped child is maintaining a balance between realistic physical dependence and emotional independence.

Though physically handicapped children are not necessarily more frustrated as a group than their nonhandicapped peers, certainly they are more frequently placed in frustrating situations with which they must

cope. A frustrating situation is defined as:

> any situation in which an obstacle - physical, social, or conceptual, personal or environmental - prevents the satisfaction of a desire ... It includes only those situations where the subject himself accepts the obstacle as impassable, the solution as impossible (Barker, 1938, p. 146).

The potential for frustration will be greatly reduced as children with disabilities accept the realities of their physical limitations and learn to set attainable goals for themselves. As long as there is a discrepancy between their goals and their ability to achieve those goals, children with disabilities will be continually faced with frustrating situations in which the possibility for realizing success is thwarted. Since consideration of life goals is an important step in the formation of an identity, it is necessary for the discrepancy between what is desired and what is attainable to be reduced early in the process. It is likewise important that the handicapped child not be pressured into overcompensating for physical inabilities by making unrealistic demands upon himself/herself in other areas, such as academic achievement. Though it is essential that parents, teachers, and other professionals assist children with physical disabilities in discovering and building upon their strengths, they should not be made to feel that they must make up for their physical incapabilities.

Increasing clarity of self-concept and internalizing of values are components of identity in the Greenberger and Sorensen model. Both of these components are considered important aspects of the handicapped child's identity formation and have been included herein. It is necessary to recognize that school age children are in the process of forming an identity, but have not as yet attained it (Greenberger & Sorensen, 1974).

Thus, these components do not mean that a child has either achieved self-concept stability or established a personal set of values, but is rather in the process of clarifying both.

Work Orientation

Greenberger and Sorensen (1974) note that since all individuals must conduct the daily informal work of living and that since work is a major vehicle through which adults attain self-sufficiency, work orientation is an indicator of individual adequacy. Work orientation is described as (a) general task or work skills; (b) standards of competent task performance; and (c) capacity to experience pleasure in work.

Though a work orientation is necessary if persons with disabilities are to be integrated into the mainstream, it is felt that most school age children with physical disability will lag far behind their peers in developing the traits described by Greenberger and Sorensen. As a result of parental overprotection and overindulgence, physical limitations, environmental restrictions, and limited preschool experiences, many children with disabilities have not mastered the activities of daily living by the time they enter school. Since the major emphasis in their preschool years has most likely been on physical management, for which they are often dependent on others, physically handicapped children may not have identified their general task or work skills or set any standards of competence for themselves. Although these are certainly traits worth encouraging in children with disabilities, it is felt that the primary manifestations of work orientation at the school age stage of their development are:

1. Feelings of competence
2. Sense of responsibility
3. Capacity to experience pleasure in work or task performance

Since preschool children with disabilities spend a great deal of time attempting to overcome their physical weaknesses whether through physical therapy or mastering those developmental milestones which come more naturally for nonhandicapped children, school is often the first opportunity for them to explore those areas in which they can experience a real sense of competence. Certainly, seeing younger siblings or relatives accomplishing physical tasks beyond the capacity of the handicapped child himself/herself is discouraging. However, experiencing competence in the school environment should motivate the child with a disability to explore those areas in which he/she can develop general skills within the realm of the physical limitations.

Parents often make few demands on their physically handicapped child. Even their standards of discipline may differ from those imposed on the nonhandicapped children in the family. Consequently, the child with a disability has rarely had to assume any responsibility for his/her behavior or had to perform tasks through which the importance of reliability and dependability can be learned. Therefore, the school situation in which standards, deadlines, duties, and expectations are imposed on the child is the primary opportunity for him/her to develop a sense of responsibility. It is felt that encouraging the child to assume responsibility is an important step toward developing a work orientation at this stage.

Interpersonal Adequacy

The ability to interact adequately with others is the second general dimension of psychosocial maturity as proposed by Greenberger and Sorensen. In regard to the physically handicapped, Wright (1960) states

that "the way in which one feels and behaves about many things depends in greater or smaller measure upon one's relationship to other persons..." (p. 3). And yet Battle (1974) notes that as a result of functional restriction on physical activity, deprivation of social experience, and the psychological impact of the handicap, physically handicapped school children have not acquired the interpersonal skills characteristic of their nonhandicapped peers. Consequently, the school can play a vital role in fostering the development of interpersonal skills in children with disabilities. Certainly, interpersonal adequacy is in great part a function of individual adequacy, particularly, self acceptance and identity. However, specific attributes of interpersonal adequacy have been defined with the assumption that progress toward individual adequacy will in turn enhance interpersonal functioning.

It is suggested that communication skills, social understanding, and affiliation with others contribute to the effective interpersonal functioning of the physically handicapped.

Communication Skills

Greenberger and Sorensen (1974) state that effective interpersonal relationships are contingent upon a person's ability to convey facts, opinions, feelings, and ideas so that they can be understood and, conversely, the ability to understand the communication of others. Thus, skill in encoding and decoding messages is of prime importance to both handicapped and nonhandicapped persons. They also note that both verbal and nonverbal skills in sending or receiving messages are necessary in this culture, with verbal communication the typical means of conveying information and nonverbal communication a means of conveying affect. However,

physically handicapped persons are at times unable to achieve proficiency at both verbal and nonverbal communication as a result of their disabling condition (e.g., speech problems associated with cerebral palsy or hearing impaired; difficulty in decoding nonverbal cues inherent in visually impaired condition) so that alternate means of communication are necessary.

Therefore, those aspects necessary for the physically handicapped to achieve communication skill have been modified from the nonhandicapped model and include:

1. Skill in sending or encoding messages
2. Skill in receiving or decoding messages
3. Ability to initiate communication
4. Ability to express feelings

An important role of those professionals working with children with disabilities is to foster the development of an effective means of communicating information, especially if there is a need for an alternative to speech. In addition, Richardson (1969) notes that persons with disabilities do not receive accurate or spontaneous feedback from others, who feel that they must be especially considerate or careful of the handicapped persons' feelings. Consequently, it is difficult for the handicapped child to decode messages, to learn what others think of him/her, to learn appropriate behavior, and thereby develop interpersonal skills. Thus, teachers are faced with the responsibility of facilitating interaction between handicapped and nonhandicapped children by fostering appropriate communication skills in both groups.

Another aspect of communication skill that is vital to handicapped children is the ability to initiate communication. Freeman (1967)

states that "dependency, passivity, and persisting immature patterns" (p. 276) of the poorly socialized handicapped child make peer-group acceptance difficult, so that handicapped children are quite often rejected in a social situation. In addition, Richardson (1969) found that the non-handicapped child who is likely to initiate contact with a handicapped child is more likely isolated, has less general social experience, and has not learned the values of his peers, thereby making the interaction of little benefit to the handicapped child in terms of learning appropriate interpersonal skills. Therefore, it is suggested that one means of fostering the development of communication skills in children with disabilities is to teach them to initiate communication with others so that the handicapped child assumes more responsibility for engaging in positive peer interactions.

Due to limited interpersonal experiences with peers, inaccurate feedback from others, and overindulgence by parents, children with disabilities frequently have difficulty expressing their emotions appropriately. Outbursts of poorly controlled aggression are not uncommon, and as stated above have an adverse effect on peer group acceptance. Therefore, teaching children with disabilities to express their feelings appropriately is essential to the achievement of interpersonal adequacy.

Social Understanding

The physically handicapped persons' ability to interact adequately with others will be enhanced if they can accurately perceive and comprehend the nature and significance of their interpersonal experience. Thus, social understanding is manifested by the:

1. Ability to differentiate between reality and personal expectations

2. Ability to anticipate and cope with the diverse reactions of others

Despite the fact that handicapped children are frequently sheltered from the mainstream during their preschool years, they are rarely so isolated that they do not learn about the negative values associated with physical disabilities or the depreciation of value of the handicapped person in society. Certainly, segregation in the schools and/or rejection by peers upon school entry tends to confirm the child's earlier perceptions. Such confirmation can result in the child developing expectations as to how others will react to him/her and subsequently cloud his/her perceptions of future interactions (Bruner, 1951). Therefore, it is essential for handicapped children to learn to differentiate between how they expect persons to react to them and how in fact individuals are reacting to them.

Meyerson (1971) notes that the physically handicapped person is frequently faced with psychologically new situations because of the social stimulus value of a disabled physique. Disability has many meanings to others and typically the handicapped person is reacted to in terms of whatever the disability means to the other person. Although the nonhandicapped person may be well meaning he/she often does not know how to behave toward another whom he/she perceives to be different. It is felt that preparing physically handicapped children for the variety of reactions they might encounter from others and teaching them means of coping with such reactions, will enhance their interpersonal functioning in new situations. The ability to anticipate and cope with the diverse reactions of others may reduce the 'newness' of many social interactions.

Affiliation with Others

Richardson (1964) notes that affiliation with others is necessary for adequate socialization, thus it has been included as the third attribute of Interpersonal Adequacy. Factors indicating that a physically handicapped child has achieved an affiliation with others include:

1. A sense of belonging within the family unit
2. Ability to play and have fun with peers
3. Ability to establish friendships
4. Acceptance of handicapped group membership

Family relationships are markedly affected by the presence of a handicapped child. Intense sibling rivalry may arise because parents do not apply the same standards to their handicapped and nonhandicapped children. In addition, parental reactions toward their handicapped child tend to be more extreme than toward their other children and may range from oversolicitude to rejection. Yet Lancaster-Gaye (1972) states that the need to be accepted by their family is of primary importance to physically handicapped persons. Certainly the basis for establishing interpersonal adequacy in the mainstream is interpersonal functioning within the family. Therefore, those children with disabilities who have been integrated into the family unit with a minimum of special treatment and a realistic number of expectations will develop a sense of belonging as important members of an intimate community. Identification with the family will in turn tend to generalize to the child's relationship with peers and the community as a whole.

In addition to family affiliation, the opportunity and ability to play become increasingly important during the preschool years. Play

enables the child to master anxiety, fears, and passivity and to learn imitative patterns (Freeman, 1967; Battle, 1974). However, the opportunity to socialize with peers is usually limited for physically handicapped children. Consequently, they enter school with few of those social skills nonhandicapped children typically learn much younger by playing. Therefore, developing those skills that will enable physically handicapped children to laugh, play, and have fun with peers is crucial at this stage if they are to be able to affiliate with others. Subsequently, as the school setting provides handicapped children the opportunity to acquire those social skills necessary for interpersonal functioning and as the handicapped child develops greater feelings of individual adequacy because of his/her new skills, the basis for forming friendships will be established.

A major result of self acceptance for physically handicapped persons is identification with the handicapped group. Those persons who have not accepted their disability as nondevaluating tend to dissociate themselves from the disabled group. Wright (1960) states that "accepting one's disability and oneself as a person with a disability does mean that belonging only to the majority is not all-important, for in belonging to the minority as well one belongs to humanity, a group that knows no majority-minority boundaries" (p. 48). In addition, accepting oneself as a person with a disability implies a certain feeling of kinship with others who have the disability, even strangers.

Social Adequacy

The third general dimension of psychosocial maturity is social adequacy. "In the sociological model of maturity, mature individuals

are ones who enhance the integration of a larger social system" (Greenberger and Sorensen, 1974, p. 347). Certainly, individual and interpersonal functioning are significant also at the social system level. However, social commitment, tolerance of individual and cultural differences, and knowledge of major roles are considered the primary attributes of social adequacy at the school age stage of development of the physically handicapped.

Social Commitment

Greenberger and Sorenson suggest that social cohesion depends on the existence of a social system which meets the needs of people and promises better resolutions of problems of living than individuals on their own could attain. Such a system requires that its members be committed to its perpetuation. Certainly, it is doubtful that school age children feel a strong commitment to the present or future stability of the social system. In fact, physically handicapped children up to the time of school entry are usually isolated from the mainstream and basically unaware of the functions of society at large. Battle (1974) notes that handicapped children are extremely delayed in their development of independent attitudes in which they realize that they are not the center of the universe, that other persons are important. Consequently, attitudes that indicate a predisposition to develop a sense of social commitment are considered the best indicators of social adequacy at the school age stage.

It is felt that physically handicapped children manifest social commitment by a:

1. Willingness to cooperate in the pursuit of group goals
2. Concern for the welfare of others

Tolerance of Individual and Cultural Differences

In a heterogeneous society, the tolerance of individual and cultural differences contributes to social cohesion. Tolerance is manifested by the:

1. Willingness to interact with individuals and groups who differ from self
2. Belief in the rights of individuals and groups who differ from the norm

Handicapped children are frequently subjected to intolerance as evidenced by segregation in the schools, isolation from the mainstream, and rejection by both peers and adults. Certainly, a change in attitude within the nonhandicapped population is desirable. However, such changes are slow and in the meantime handicapped children must be encouraged to develop their own sense of tolerance. Responding to the intolerance of the majority with more intolerance does nothing to further the cause of integration. Thus handicapped persons must be willing to come face to face in both work and play with those people who differ from them as individuals or in their subgroup membership. In addition, handicapped persons must be tolerant of each other. Thus, it is apparent that acceptance of group membership and affiliation with other handicapped persons will contribute to both interpersonal and social adequacy.

As a minority group, handicapped persons must recognize not only their rights as members of a democratic society, but also the rights of other groups whether defined by race, ethnicity, occupation, religious affiliation, or other characteristics.

Knowledge of Major Roles

Greenberger and Sorensen consider knowledge of major roles a

dimension of interpersonal adequacy but acknowledge its importance to adequate functioning on the social system level. It is felt that integration of handicapped persons into the mainstream will be facilitated if they are aware of the expectations of society in terms of role performance. Therefore, knowledge of major roles has been included as a component of social adequacy in the handicapped model.

Knowledge of roles involves:

1. Identification of significant role models
2. Awareness of obligations inherent in current definitions of major roles.

One of the main ways a child learns about roles is through imitative play. And yet the physically handicapped child is frequently prevented from role-playing because of his/her physical limitations. Therefore, much of what is learned about role performance is through observation or vicarious learning and such opportunities may have been limited during the preschool years. Thus, it is important that handicapped children identify significant role models within the school setting so that they can learn the social norms attached to certain roles. In addition, since the roles of the handicapped and the nonhandicapped differ in many respects, as well as overlap in some areas, the identification of role models in both groups is desirable.

CHAPTER IV

CONSTRUCTION AND VALIDATION OF THE PSYCHOSOCIAL MATURITY SCALE FOR CHILDREN WITH DISABILITIES

The measurement of psychological processes in physically handicapped children is a complex problem. Most of the devices used to ascertain the psychological picture of the physically handicapped have been developed on nonhandicapped populations. And yet a basic assumption underlying psychological assessment is that the subjects being tested have been exposed to comparable, but not necessarily identical, acculturation (Newland, 1971). Therefore, since there is considerable evidence that the experiences of physically handicapped children have often been limited prior to school entry, the use of a psychological test such as the PMI (Greenberger et al., 1975) devised for nonhandicapped children seems inappropriate. Thus, the Psychosocial Maturity Scale for Children with Disabilities (PMS-CD) was devised to assess the progress of handicapped children toward the nonacademic objectives outlined in the psychosocial maturity model.

The adaptation of standardized tests to assess handicapped children is not uncommon (Cruickshank et al., 1975). Typically, either the testing procedures or the test items themselves are modified to accommodate the individual child. However, such modifications are often done with no

regard for the major psychological and statistical problems involved (Newland, 1971). Therefore, it was felt that instead of adapting the Psychosocial Maturity Inventory (Greenberger et al., 1975) to individual handicapped children, a new instrument designed for and normed on physically handicapped children would be more useful as a criterion measure of psychosocial maturity. The PMS-CD is based on a theoretical structure adapted from the nonhandicapped model and therefore assessed areas of development similar to the PMI. However, since the variations in development resulting from physical disability have been considered, it is felt that the PMS-CD will give a more accurate measure of progress toward achieving nonacademic objectives than unsystematic modifications of the PMI.

Item Selection

The initial pool of items consisted of 120 short, simple declarative statements of attitude. The items were divided into nine subscales, with approximately 13 items each. The original items were written to reflect the conceptual framework of psychosocial maturity outlined in the model, particularly the specific aspects of the three general dimensions. Each of the subscales represents one of the specific attributes of psychosocial maturity.

The original list of items was reviewed by three graduate students, two psychologists, and a psychometrist, experienced in testing physically handicapped children, and each item judged on the basis of its content validity and clarity. In addition, the 120 items were reviewed by a reading specialist to determine if the vocabulary was appropriate to the age levels being tested.

Description of the PMS-CD Test Kit

The test kit consisted of the final form of items, answer sheets, four answer cards, two Braille cue cards, and directions for administering the PMS-CD (see Appendix B).

Of the 120 original items, the 90 items judged to best measure the subscale content and be understandable to the age levels being tested, were included in the final instrument (see Appendix A). Table 2 shows the number of items per subscale included in the final revision of the PMS-CD.

Table 2

Number of Items per Subscale of the PMS-CD

Subscales	No. of Items
I. Self Acceptance	11
II. Identity	11
III. Work Orientation	10
IV. Communication Skills	10
V. Social Understanding	9
VI. Affiliation with Others	10
VII. Social Commitment	9
VIII. Tolerance of Individual and Cultural Differences	10
IX. Knowledge of Major Roles	10

The four PMS-CD answer cards represented each of the 4-point scale response options and were labeled "agree a lot", "agree", "disagree", and "disagree a lot". The answer cards measured 9 x 12 inches and were bright yellow with black block lettering for maximum visibility, so that even visually impaired children could use them.

In addition, grade one and grade two Braille cue cards were included in the test kit. Each card had all four response options printed on it.

Procedures for Administering the PMS-CD

The PMS-CD was designed to be administered so that a minimum of modifications for the different types of physically handicapped children would be necessary. The instrument is administered orally to individual children. The examiner reads a statement of attitude to which the child responds by pointing to one of the four answer cards which are placed before him/her at the beginning of the testing situation.

Totally blind children are given a Braille cue card and asked to respond verbally. The examiner records the child's responses by subscale on a separate answer sheet.

Administration of the PMS-CD does not require that the child be able to read printed material or write his/her answers as in paper-pencil tests, see pictures or figures as in some projective tests, respond verbally, or manipulate objects. In fact, the PMS-CD could be administered to the hearing impaired in much the same manner as for other groups perhaps with the use of sign language. Therefore, it is felt that the administration of the PMS-CD was standardized to the maximum degree possible considering the diversity inherent in the physically handicapped group.

Scoring the PMS-CD

The direction of the response indicating maturity was

predetermined for each item of the PMS-CD and is so indicated on the test form (see Appendix A). The successive responses are scored 4, 3, 2, 1, with a high score indicating the most mature response. The items are scored by subscale. The number of points obtained for each item within a subscale are added to determine the individual subscale scores. The sum of the nine subscale scores is the total measure of psychosocial maturity obtained on the PMS-CD.

Pilot Study

A pilot study was conducted to determine if there were any problems in administering the PMS-CD that needed to be alleviated before the instrument was administered to a larger sample. Six physically handicapped children, age nine to sixteen and including three cerebral palsied, two visually impaired, and one blind child, were administered the PMS-CD by one of two examiners.

The pilot study was conducted to determine:

1. if the children understood the directions for responding to each item.
2. if the children understood the meaning of each item.
3. if any of the vocabulary was beyond the children's level of comprehension.
4. if the children could comprehend the meanings of the four response options, particularly the subtle difference of degree implied in "agree" and "agree a lot"; "disagree" and "disagree a lot".
5. if the children were able to read and use the answer cards.
6. if the amount of time needed to complete the test was within the limits of the children's attention span.

Neither examiner experienced any difficulty in the administration

of the PMS-CD. Both agreed that the children tested were able to understand the directions for responding to the items as well as the content and vocabulary of the 90 statements. Both examiners found that administration of the PMS-CD took a shorter time (approximately 20-25 minutes) than had been anticipated and was well within the limits of the children's attention span. Consequently, no modifications in the administration procedures of the PMS-CD were made.

Validation of the PMS-CD

Subjects

Ninety physically handicapped children, 50 males and 40 females, between the ages of nine and sixteen were used in the sample. The children represented a range of physically disabling conditions and had been diagnosed by a physician as having cerebral palsy, muscular dystrophy, visual impairment, meningomyelocele, diabetes mellitus, scoliosis, asthma, or spina bifida. The breakdown of the subjects by age, disability and gender is presented in Table 3. The subjects were obtained through a number of sources including the Oklahoma Cerebral Palsy Center, United Cerebral Palsy of Oklahoma City, Muscular Dystrophy Association of Oklahome City, Moore Public Schools, Parkview School for the Blind, Oklahoma City Children's Hospital, Noble Public Schools, and the Oklahoma League for the Blind.

Materials

The Psychosocial Maturity Scale for Children with Disabilities (PMS-CD) for measuring the nine attributes of the psychosocial maturity model was used in the study. The instrument consists of nine subscales

and a total of ninety items (see Appendix A for a complete list of the items by subscale). The PMS-CD test kit includes the test form, answer sheets, grade one and grade two Braille cue cards, and four yellow, 9 x 12 inch answer cards.

Table 3

Number of Physically Handicapped Children in Sample by Age, Disability, and Gender

		Age								
Disability		9	10	11	12	13	14	15	16	Total
Cerebral Palsy	M	6	1	0	3	2	3	2	2	27
	F	2	1	0	1	1	1	1	1	
Visually Impaired	M	2	1	3	1	2	5	2	1	31
	F	0	2	3	1	3	1	2	2	
Muscular Dystrophy	M	0	1	1	0	0	0	1	0	11
	F	1	2	1	0	1	1	0	2	
Diabetes Mellitus	M	0	0	1	1	0	1	0	0	3
	F	0	0	0	0	0	0	0	0	
Meningomyelocele	M	0	2	0	0	1	1	0	2	12
	F	1	0	1	1	0	2	1	0	
Asthma	M	0	0	0	1	0	0	0	0	1
	F	0	0	0	0	0	0	0	0	
Scoliosis	M	0	0	0	0	0	0	0	0	2
	F	0	0	0	1	1	0	0	0	
Spina Bifida	M	0	0	0	0	0	0	1	0	3
	F	2	0	0	0	0	0	0	0	
Total		14	10	10	10	11	15	10	10	

Procedure

The PMS-CD was individually administered by one of two examiners in one of the cooperating agencies or in the child's home. Parental

permission for testing was obtained for each child.

The ninety PMS-CD answer sheets were scored upon completion of the total testing procedure.

Statistical Analysis

To determine if the empirical data lend support to the theoretical model of psychosocial maturity, the PMS-CD subscale scores were factor analyzed using a principal components analysis. BMD-P (1977) program P4M for Factor Analysis was employed with a varimax criterion for factor rotation imposed.

In addition, the reliability of each subscale was determined based on the coefficient alpha formula (Anastasi, 1976) for internal consistency. Item-to-scale correlations were computed to determine those items to be discarded in refining the PMS-CD so as to maximize the internal consistency of each subscale (see Appendix C for presentation of item-to-subscale correlations).

To determine the concurrent validity of the PMS-CD, teacher ratings of maturity were obtained for 17 cerebral palsied children. The teacher was given a list of children's names in her class and asked to rate each one of them on the following scale:

Not Mature $\underline{\quad 1 \quad}$ $\underline{\quad 2 \quad}$ $\underline{\quad 3 \quad}$ $\underline{\quad 4 \quad}$ $\underline{\quad 5 \quad}$ Very Mature

The children's total PMS-CD score was then correlated with their teacher's rating.

Results

Total scores on the PMS-CD ranged from 161 to 317, with 360 the maximum number of points possible. The mean and standard deviation of

each subscale is presented in Table 4.

The results of the principal components analysis of the PMS-CD subscales did not support the theoretical model of three distinct factors of psychosocial maturity. Rather, a two factor solution was obtained.

Table 4

Means and Standard Deviations of

the PMS-CD Subscales

Subscales	Points Possible	M	SD
Self Acceptance	44	31.9	4.6
Identity	44	32.1	4.9
Work Orientation	40	29.0	4.9
Communication Skills	40	25.0	4.4
Social Understanding	36	23.4	3.2
Affiliation with Others	40	28.6	5.3
Social Commitment	36	27.1	4.5
Tolerance	40	32.5	4.5
Knowledge of Major Roles	40	29.7	5.1

The first factor was defined by the three Social Adequacy subscales, Tolerance of Individual and Cultural Differences, Social Commitment and Knowledge of Major Roles, and one Individual Adequacy subscale, Self Acceptance. The second factor was most clearly defined by the three Interpersonal Adequacy subscales, Communication Skills, Social Understanding and Affiliation with

Others, and one Individual Adequacy subscale, Identity. The Work Orientation subscale emerged on both factors with loadings of 0.549 and 0.611, respectively.

The rotated factor loadings of the nine subscales are presented in Table 5. The correlation matrix of PMS-CD subscales can be found in Appendix D.

The reliability coefficients calculated on the PMS-CD subscales indicate that homogeneity is adequate in all but the Social Understanding subscale. The reliability coefficients for each of the PMS-CD subscales are presented in Table 6.

Finally, the estimate of the concurrent validity of the PMS-CD was substantial. The correlation of teacher's ratings of maturity and total PMS-CD scores was .68, which was significant at the .05 level.

Table 5

Rotated Factor Loadings of PMS-CD Subscales

	Factor 1	Factor 2
Self Acceptance	0.722	0.425
Identity	0.489	0.631
Work Orientation	0.549	0.611
Communication Skills	-0.103	0.890
Social Understanding	0.350	0.730
Affiliation with Others	0.464	0.630
Social Commitment	0.826	0.271
Tolerance	0.907	-0.020
Knowledge of Major Roles	0.748	0.313
Variance Explained by Factor	3.475	2.846

Table 6

Reliability Coefficients of

the PMS-CD Subscales

Subscales	r
Self Acceptance	.71
Identity	.73
Work Orientation	.75
Communication Skills	.69
Social Understanding	.45
Affiliation with Others	.81
Social Commitment	.78
Tolerance	.76
Knowledge of Major Roles	.76

CHAPTER V

DISCUSSION

In the present study, a model of psychosocial maturity proposed by Greenberger and Sorensen (1974) was adapted for physically handicapped children. Three general dimensions of maturity were presented, including (a) the capacity to function adequately on one's own (Individual Adequacy); (b) the capacity to interact with others (Interpersonal Adequacy); and (c) the capacity to contribute to social cohesion (Social Adequacy). In addition, specific attributes which define the three general dimensions were suggested.

Secondly, the Psychosocial Maturity Scale for Children with Disabilities (PMS-CD) was devised for measuring handicapped children's progress toward achieving the nonacademic goals included in the model. Steps toward validating and refining the instrument were also undertaken.

The results of a principal components analysis of the PMS-CD subscales yielded a two factor solution and therefore did not support the theoretical model of three distinct factors of psychosocial maturity. However, support for the integrity of the Social Adequacy factor was obtained, with the three subscales defining the general dimensions in the model loading substantially on Factor 1. The Self Acceptance subscale (Individual Adequacy) also accounted for a significant portion of the variance in Factor 1.

Factor 2 was most clearly defined by the three Interpersonal Adequacy subscales, with Identity (Individual Adequacy) accounting for and additional portion of the variance. No clear-cut Individual Adequacy factor was identified by the analysis. Apparently, those three subscales encompass both Social and Interpersonal Adequacy components.

The results indicate that Social and Interpersonal Adequacy account for the main portion of the variance of individual's scores on the PMS-CD, and suggest that perhaps a two factor construct of psychosocial maturity exists, with the Individual Adequacy dimension adding to the complexity of the Social and Interpersonal Adequacy factors.

Though further investigation of the PMS-CD is warranted before any conclusions as to the factor structure of psychosocial maturity can be drawn, possible explanations for the two factor solution which emerged from the analysis are suggested.

The interpersonal theory of somatopsychology emphasizes the social nature of handicap. A physical attribute is handicapping not because it is physically limiting but because it adversely affects social relationships. Therefore, perhaps the two factor solution reflects handicapped children's social condition whereby the nature of their social relationships account for the varying levels of maturity more than how they feel about themselves and their physical disability (Individual Adequacy).

A related explanation for the two factor solution involves the experiental deprivation so often characteristic of handicapped children's early development. Since achieving maturity on both the Social and Interpersonal Adequacy dimensions involves a substantial degree of socialization

within the mainstream perhaps the results reflect the impact of varying degrees of social isolation. Certainly, the extreme range of parental reactions to handicapped children reported in the literature, cause considerable discrepancies among handicapped children's exposure to the mainstream.

It is interesting to note that Greenberger et al. (1975) reported a two factor solution to a principal components analysis of the Psychosocial Maturity Inventory (PIM). In their analysis, Social Adequacy and Individual Adequacy emerged as Factors 1 and 2, respectively. Since it is recognized that the handicapped and nonhandicapped model differed in regard to the specific attributes of the general dimensions, and the children tested in the respective samples were drawn from slightly different age ranges, no conclusions about how handicapped and nonhandicapped children compare in terms of their psychosocial maturity can be made. However, in view of the discrepancies between the results of Greenberger and the present study, further investigation of the factors accounting for the variability in both groups could provide useful information about the differences and similarities of handicapped and nonhandicapped children.

Some support for the concurrent validity of the PMS-CD was obtained from the significant correlation of teacher ratings of maturity and total psychosocial maturity score. However, additional support for the validity of the PMS-CD is needed before it is used as a criterion measure in comparative studies and/or experimental investigation of the factors affecting psychosocial development among the handicapped.

Although reliability estimates of the nine subscales were adequate in all but the Social Understanding subscale, some revision of the PMS-CD

is suggested prior to further attempts at validation. First, the item-to-subscale correlations revealed a number of items that contributed nothing (r is nonsignificant at the .05 level) to the overall reliability of the respective subscales. These items should be discarded for future administrations of the PMS-CD so as to maximize the internal consistency of the individual subscales. In addition, an analysis of the item-to-item intercorrelations is suggested to determine those items that do not correlate with other items in the subscale, at least at the .05 level of significance, and could therefore be discarded in an effort to increase subscale homogeneity. It is felt that the low reliability of the Social Understanding subscale may be due to flaws in the operationalization of the concept and thus will require more extensive revision than simple item deletion.

Following such revisions, further attempts to validate the PMS-CD are suggested. In particular, criterion-related validation is needed in which behavioral correlates of the PMS-CD subscales are defined. Then behavioral ratings of handicapped children can be obtained from teachers, principals, counselors, etc.and correlated with PMS-CD subscale scores. Such information would be useful in further attempts to determine if there is empirical support for the theoretical structure of psychosocial maturity.

A limitation of the present study is that an analysis by item was not possible due to the small sample size. The principal components analysis of the PMS-CD by subscales made it difficult to draw any conclusions as to the validity of a three factor structure. Consequently, further investigation in which the PMS-CD is administered to a substanti-

ally large sample and factored by items is warranted if any more definitive support for the theoretical model is to be obtained.

It is concluded that the present results are tentative and thus despite the two factor solution, the plausibility of a three factor model of psychosocial maturity should be explored further. Therefore, no revision in the model for handicapped children is suggested at this time. Pending further validation of the PMS-CD, it is hoped that the model of psychosocial maturity might serve as a guideline for teachers in their attempts to facilitate the social integration of the handicapped into regular school environments. At present, there is considerable support in the literature for the conceptualization of the specific attributes necessary for handicapped children to achieve maturity on the three general dimensions of the nonhandicapped model. And certainly, the present results suggest that the prospect of measuring handicapped children's progress toward achieving the nonacademic goals outlined in the model is promising.

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FOOTNOTES

[1] In our society in which segregation, special treatment, and labeling of children with disabilities prevails, it is felt that these children are indeed 'handicapped' according to Bartel and Guskin's definition. Therefore, the terms 'handicapped' and 'children with disabilities' will be used interchangeably in the present text. The use of 'disabled children' will be avoided as it implies that a specific physical attribute has rendered the child disabled in all areas of functioning.

APPENDIX

APPENDIX A

PMS-CD

I. Self acceptance

1. I can't do anything very well. (-)
2. The other kids I know are better at everything than I am. (-)
3. I would be happier if I didn't have certain limitations. (-)
4. There are some things I can do as well as other kids. (+)
5. There are a lot of things about myself that I'm proud of. (+)
6. I feel good about myself. (+)
7. I am not afraid to be myself. (+)
8. People should try to be good at everything. (-)
9. My limitations never really bother me. (-)
10. I accept the fact that I'm good at some things and not so good at others. (+)
11. It's more important for a person to do well in sports than to be a good student. (-)

II. Identity

12. People should ask others for help whenever they need it. (+)
13. I can't seem to do anything for myself. (-)
14. Most of the time I try to take care of myself. (+)
15. A lot of the time, I act like something I'm not. (-)
16. I never get to do the things I really want to do. (-)

17. There are certain things I want to accomplish no matter what. (-)

18. A lot of the time I wish I were someone else. (-)

19. I'm not sure who the 'real me' is. (-)

20. I feel confident about m y future. (+)

21. I like to make my own decisions. (+)

22. I'm always myself no matter who I'm with. (+)

III. Work Orientation

23. I usually forget to do my homework. (-)

24. I usually turn my assignments in late. (-)

25. I like to get to class on time. (+)

26. I don't do my homework if there is a good program on television. (-)

27. I have a hard time doing anything that takes a long time. (-)

28. I usually don't finish the projects that I start. (-)

29. I only do my assignments so I'll get a good grade. (-)

30. I am a lot of help to my parents at times. (+)

31. People can depend on me to get the job done. (+)

32. Hard work can sometimes be fun. (+)

IV. Communication Skills

33. I have trouble putting my thoughts into words. (-)

34. Most people understand what I'm trying to say. (+)

35. I usually understand what other people are trying to say. (+)

36. I have a hard time talking to people I don't know very well. (-)

37. I have a hard time getting other people's attention. (-)

38. I usually don't understand the teacher's instructions. (-)

39. I often wish I could express my feelings better. (-)

40. I don't know what to do when I get upset. (-)

41. I usually understand what people want from me. (+)

42. It's easy for me to start a conversation with someone I don't know very well. (+)

V. Social Understanding

43. Most people won't tell you their true feelings. (-)

44. I know that most kids don't like me even though they are nice to me. (-)

45. I can tell if someone is going to like me even before I meet him. (-)

46. If a person is really nice to me, then I know that he likes me. (+)

47. Some people just don't know how to act around me. (+)

48. People usually act toward me the way that I act toward them. (+)

49. I worry about how people will act around me. (-)

50. I don't get upset if people are uncomfortable around me. (+)

51. All people seem to act the same way around me. (-)

VI. Affiliation with Others

52. I often feel nervous at home. (-)

53. I feel very close to my family. (+)

54. I have trouble making friends. (-)

55. Most of the time, I would rather play by myself than be with others. (-)

56. I trust the people in my family completely. (+)

57. I feel like I'm different than my friends and all the people I meet. (-)

58. I have a lot of friends. (+)

59. I'm an important part of my family. (+)

60. Sometimes I feel like I don't belong in school. (-)

61. I don't want friends who look like me. (-)

VII. Social Commitment

62. I would rather work for my own reward than participate in a group project. (-)

63. I would be willing to give money to the poor so that they could have a better life. (+)

64. I worry about the poor, hungry children in the world. (+)

65. I don't spend much time helping others get what they want because then I wouldn't have time to get what I want. (-)

66. Everyone should look out for himself and not worry too much about others. (-)

67. People should not get involved if their neighbors are in trouble and need help. (-)

68. I am happy when I cooperate with others. (+)

69. I would like to do something so that all people could have a better life. (+)

70. When someone needs me, I always try to help. (+)

VIII. Tolerance of Individual and Cultural Differences

71. I would not want a person of a different skin color living next door to me. (-)

72. I would make friends with someone who goes to a different church than I do. (+)

73. I feel comfortable with all kinds of people. (+)

74. I think people of different skin color can be friends. (+)

75. I only make friends with people who have the same beliefs as I do. (-)

76. I could learn a lot from a person who was born in another country. (+)

77. I would not mind working on a school project with a person whose skin was a different color than mine. (+)

78. I am willing to listen to ideas that differ from my own. (+)

79. I wouldn't want a blind (crippled) person for a friend. (-)

80. You can tell what a person is like just by looking at him. (-)

IX. Knowledge of Major Roles

81. Children with special problems shouldn't have to work very hard in school. (-)

82. Teachers should be willing to work with all children. (+)

83. When I get mad at my family, my teacher should help me to feel better. (-)

84. I know what I want to be when I grow up. (+)

85. There just aren't any adults who I want to be like. (-)

86. You can't expect handicapped kids to take care of themselves. (-)

87. Parents sometimes have to tell teachers how to handle kids. (-)

88. If a teacher is late to class, then it's okay for kids to be late too. (-)

89. Parents should let kids make all their own decisions. (-)

90. My teacher should help me when I don't understand something. (+)

APPENDIX B

DIRECTIONS FOR ADMINISTERING THE PMS-CD

I. Administering to children using yellow answer cards

Place yellow answer cards in chronological order in front of the child with card #1 to the child's left. Ask the child to read each of the cards to you. After determining that the child can read the cards then read the following statement to him/her:

'Please listen very carefully to my instructions. I am going to read some statements to you and I want to know how you feel about them. You can let me know how you feel by pointing to one of the cards in front of you. The first card says "agree a lot", etc. (point to and read each card). If I read a statement that you agree with, point to card #2. But if you agree a whole lot, then you should point to card #1.' (same instructions for disagree.)

'Remember now, after I read a statement, you point to the card that best describes how you feel about that statement. This is not a test. There are no right or wrong answers. Any way that you answer is okay, but it is very important that you answer honestly. No one will see your answers but me.'

'Do you understand the directions? Let's practice. Now suppose I say to you "I like T.V.", which card would you point to?' (Most

children will answer positively, but confirm with the child that you interpret his/her answer the way that he/she meant.)

'Suppose I say, "I like to go to bed very, very early", which card would you point to?' (Most children will answer negatively, but again confirm with the child that you interpret his/her answer the way that he/she meant.)

'I think you understand, so let's begin.'

Read each statement to the child, anunciating clearly, but with a minimum of inflection. Record the child's answer on the separate answer sheet after he/she responds. Repeat any statement the child asks to hear again. If the child asks for clarification of an item, say to him/her, 'Now listen very carefully' and reread the item in question. Do not attempt to interpret any of the items for the child.

II. Administering to children using Braille cards

Hand the child the grade two Braille card (most children of this age read grade two) and ask him/her to tell you what the card says. If the child cannot read grade two Braille, then let him/her try reading the grade one card. After determining that the child can read one of the two cards, read the following statement to him/her:

'Please listen very carefully to my instructions. I am going to read some statements to you and I want to know how you feel about them. You can let me know how you feel by choosing one of the four answers on the card I gave to you, and telling me which answer best describes how you feel. If I read a statement that you agree with, you should choose #2. But if you agree <u>a whole lot</u>, then you should choose #1.' (same

instructions for disagree.)

'Remember now, after I read a statement, you choose the answer that best describes how you feel about that statement. This not a test. There are no right or wrong answers. Any way that you answer is okay, but it is very important that you answer honestly. No one will see your answers but me.'

'Do you understand the directions? Let's practice. Now suppose I say to you "I like T.V.", which answer would you choose?' (Most children will answer positively, but confirm with the child that you interpret his/her answer the way that he/she meant.)

'Suppose I say, "I like to go to bed very, very early", which answer would you choose?' (Most children will answer negatively, but again confirm with the child that you interpret his/her answer the way that he/she meant.)

'I think you understand, so let's begin.'

Read each statement to the child, anunciating clearly, but with a minimum of inflection. Record the child's answer on the separate answer sheet after he/she responds. Repeat any statement the child asks to hear again. If the child asks for clarification of an item, say to him/her, 'Now listen very carefully' and reread the item in question. Do not attempt to interpret any of the items for the child.

APPENDIX C

PMS-CD ITEM TO SUBSCALE CORRELATIONS

	Item No.										
Subscales	1	2	3	4	5	6	7	8	9	10	11
SA	.65	.62	.39	.66	.67	.62	.62	.32	.06	.62	.59
ID	.61	.63	.48	.49	.61	.23	.63	.61	.54	.47	.49
WO	.54	.69	.54	.42	.40	.69	.33	.57	.55	.58	
CS	.69	.31	.51	.72	.56	.62	.17	.50	.32	.54	
SU	.57	.65	.31	.37	.14	.40	.48	.33	.45		
Aff	.60	.63	.52	.68	.63	.43	.56	.71	.57	.65	
SC	.47	.70	.68	.65	.55	.60	.68	.59	.54		
Tol	.65	.52	.48	.59	.56	.54	.61	.63	.62	.37	
Rs	.72	.52	.65	.55	.61	.64	.19	.51	.57	.46	

APPENDIX D

INTERCORRELATIONS OF PMS-CD SUBSCALES

	SA	ID	WO	CS	SU	Aff	SC	Tol	Rs
SA	1.000								
ID	0.674	1.000							
WO	0.665	0.538	1.000						
CS	0.287	0.435	0.487	1.000					
SU	0.460	0.548	0.550	0.504	1.000				
Aff	0.568	0.602	0.539	0.395	0.616	1.000			
SC	0.658	0.549	0.604	0.201	0.468	0.506	1.000		
Tol	0.585	0.404	0.437	-0.033	0.340	0.426	0.667	1.000	
Rs	0.545	0.464	0.611	0.273	0.512	0.446	0.651	0.638	1.000