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ABSTRACT

The report on preliminary administration of the AEBLE (Assessment of Environmental Barriers to Leisure Experiences) instrument to 18 orthopedically impaired children reveals five factors (all but the family support) to be considered problems: community reaction resources, architectural barriers, accessible and available transportation, community support services, and caregiver support. Tables with statistical data are given. The manual for AEBLE utilization presents the rationale and description of the instrument, administration procedures, estimated time of administration, general instructions, instructions for scoring, interpretation of the instrument, and AEBLE development. The AEBLE interview guide and instructions contain profile sheets for each of the six factors, a description of the AEBLE plan, and sample forms. (SB)

ASSESSMENT OF ENVIRONMENTAL
BARRIERS TO LEISURE:
A LITERATURE REVIEW

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Introduction

This review of literature represents a synthesis of literature regarding environmental barriers to leisure functioning. The specific purpose of this review is to identify the relevant literature concerning the leisure functioning of handicapped children. This report represents the first step in the development of the Assessment of Environmental Barriers to Leisure Experiences assessment instrument.

A large amount of literature exists describing the physical barriers in the environment such as architectural barriers. Additional information regarding the social or human barriers was found in the fields of psychology, sociology, education, and recreation.

The primary focus of this literature was to identify barriers in the environment which would affect the leisure functioning of orthopedically impaired children. Environmental barriers were separated into three categories: physical, human, and organizational/political. The physical environment was further divided into several subcategories: built or man-made, ambient, socio-communicative, and temporal. The human environment includes living arrangements, individual differences, and role of individuals. The organization/ political environment is comprised of service delivery systems, policy and regulations, and economic status. The chapters contain a general discussion of the barriers

as well as implications for the orthopedically impaired.

The empirical research addresses many obvious as well as subtle barriers within the environment, from architectural designs to attitudes of service providers. The literature suggests that an awareness of existing barriers will facilitate integration of the handicapped into the mainstream of life.

SECTION I

PHYSICAL ENVIRONMENT

Introduction

This chapter contains a review of current literature
dealing with the physical environment as it pertains to
mobility barriers. The physical environment is composed of
the following subcategories: built, natural, ambient,
socio-communicative, and temporal. These aspects of the
total physical environment contain barriers that prevents
or restricts free interchange or movement by individuals
attempting to use certain facilities (Servedio, 1979).

Built Environment

The movement to achieve a barrier free physical environ-
ment is on the rise now due to social legislative forces
(McGaughey, 1976). This means that those who are responsible
for design and implementation of building, parks, playgrounds,
roads, etc., will have to combine their resources in order
to provide adequate accessibility to all populations. This
section deals with man-made buildings, roads, bridges,
equipment, playgrounds, parks, and the barriers of each
section.

Buildings, public and private, constitute a large
problem in accessibility to the handicapped. It is impera-
tive that existing facilities be modified to eliminate
mobility barriers (i.e., ramps, elevators, toilet accessi-
bility, wider doors, etc.). Proposed facilities need to

be examined carefully beforehand to modify any barrier that has been overlooked by the architect. Stephens (1978) states that in order to achieve this, "architects, construction companies, and facility professionals should work together to provide a better facility for all populations."

Accessible buildings help to increase a person's self-worth due to the interaction with others and with the environment (Gordon, 1973; Stephens, 1978). If a person is unable to attend functions located in a particular building, there can be no cognitive or social growth for that person in that particular activity/function. The damage to the self-concept and effective social behavior must be fully considered in determining policies and standards on barrier free design (McGaughey, 1976; Stephens, 1978).

The main barriers in buildings discussed in the literature were narrow entranceways, stairs, protruding thresholds, revolving doors, inadequate lighting, inaccessible toilets, telephones, drinking fountains, etc. Even the building location can have a detrimental effect due to the idea of segregation and alienation for the handicapped child (Stephens, 1978).

Many buildings have a sterile atmosphere which makes it seem more institutional in nature. Other buildings have a "child-like" atmosphere which can promote a loss of self-worth for the handicapped person (Stephens, 1978).

A building should be psychologically accessible for those who utilize it in addition to being physically accessible.

Playgrounds provide an excellent outlet for all children. There are often many physical barriers which exclude handicapped children from participating in activities. More emphasis is being placed on the integration of handicapped children into the playground environment. This includes creating an atmosphere for cognitive growth, social integration, and skill development (Ware & Lance, 1978; Richter, 1978).

The designs for these barrier free playgrounds are extremely creative and innovative. Even swings, see-saws, and climbing bars are now being designed for the handicapped. Also sand boxes, foam, wading streams and pools, and grass hills are created for total accessibility. Playgrounds can be accessible with the addition of ramps and railings or the removal of stairs and narrow passages.

Playgrounds provide opportunities for the development of skills which creates interest in new activities and endeavors; therefore, developing more strength physically, mentally, and emotionally.

The designers of a city playground in New York City felt that handicapped children coul be motivated to walk if they had a place they wanted to walk to (Gordon, 1973). The designers then created a "mainstreamed" playground with increasingly difficult approaches and exits which are

accessible at different levels of mobility.

Playground designs have become very innovative in the past decade. The sterile atmosphere of the older play areas which had inaccessible equipment has forced the designers today to create an atmosphere which will foster both cognitive and affective growth. This can create a stimulating environment for all those involved.

Parks and public outdoor recreational areas may be made accessible by using the same designs and principles used in making buildings barrier free (Buch, 1979). Existing areas can be modified for accessibility by constructing ramps, paving trails, adding railings on trails, toilet facilities, and picnic areas.

Many city parks are programming activities to include the handicapped now. Programs should contain items requiring the use of all senses, especially touch, taste, and smell. Many parks are providing sensitivity sessions with visitors in order to educate them to nature and their environment (Vandervoort, 1977).

Planning makes a park non-exclusive when designed for the handicapped initially. Many new parks have "soft" concrete trails which make them more accessible by wheelchairs. They have special rest areas with benches of wheelchair areas for nature studies or just pure relaxation. Braille signs are now evident along with tape-recorded information stations on trails which aid the visually

impaired enjoy the activities to a much greater degree
(Campbell, 1977).

There is a correlation between the built environment
and the natural environment. The presence or lack of
facilities in the natural environment can create barriers
for the handicapped person. The absence of accessible rest-
rooms is one barrier. This is often a large deterrent for
the handicapped in natural settings. The entrance-ways,
picnic areas, parking areas, lack of ramps all can contain
barriers for the handicapped person.

Man-made trails which are too narrow can be inaccessible
for a wheelchair. Railings or small ledges should be pro-
vided for protection, but it should not obstruct the view
for the individual (Park, 1974). The surface of a trail
can also become a barrier due to the surfacing texture that
is used. Federal regulations on man-made improvements have
given impetus for incorporating the needs of the physically
handicapped into outdoor recreational facilities and
programs, enabling many handicapped individuals to participate
more actively (West, 1981).

Natural Environment

The natural environment provides for growth and develop-
ment of the handicapped by nourishing exploration and
constructive free play. With more accessible parks providing
interesting trails and recreation spots, the handicapped can
gain in cognitive and emotional growth while being integrated
with non-handicapped peers.

The environment offers so many barriers that cannot be totally eliminated. Terrain can be too steep or too rugged for easy movement on crutches. Soft sanded areas, such as beaches, make an area nearly inaccessible for those on crutches or in wheelchairs (Trends, 1974). Grass can be a huge obstacle for the handicapped person if the ground is moist or sandy. It can also be slippery for a wheelchair. Other ground cover can have the same effect as grass, preventing or hindering the mobility of the handicapped person. Trees and their shedding foilage can be quite hazardous to the wheelchair occupant (Stone, 1971). The density of trees can also become a barrier for the handicapped person. If the growth is too thick, a wheelchair occupant cannot have access to that wooded area. The height of the growth is also important. The higher the foilage, the easier it will be for a wheelchair to enter the area. The root structure can act as a barrier for a wheelchair as it can prevent access to an area.

Ponds and lakes can be inaccessible to the fisherman or swimmer in a wheelchair due to the lack of proper ramps or moist ground surrounding that area. If the ground is muddy or too soft, the handicapped person will not be able to get close enough for fishing or swimming.

Ambient Environment

Our man-made environments are often deficient in the ambient qualities. This includes temperature, amount of

light, noise level, color, and texture (Compton, 1975).

Kahn (1975) suggested that a physical setting either supports or hinders goal-directed activity. Thus, the environment can act as a catalyst for supporting activity by being a well-designed, enriched place. A study of student behavior in an open classroom setting showed that changes in student behavior did occur when the physical setting was altered (Weinstein, 1977; Stephens, 1978).

Temperature is an important variable to the physical environment. Improper temperature adjustment can hinder the learning processes of the learner. The exact temperature recommended by the American Society of Heating, Refrigerating, and Air Conditioning Engineers is 71 degrees in summer and 68 degrees in winter (Griffit & Veitch, 1971; Goulette, 1980). The effects of temperature on people and their performance levels stress the importance of planning and providing for more conclusive conditions in the physical environment. Excessive temperatures have been attributed to more accidents, slower learning achievement, and more negative social inter-actions (Griffitt & Veitch, 1981). Studies suggest that a broad class of social-affective behaviors can be affected by environmental temperature and can have an affect on the psychological well-being of individuals (Griffitt & Veitch, 1971; Robbins, DeWalt, & Pelto, 1972).

Noise level is also important in the physical environ-ment. Sounds not acceptable are considered to be noise,

or annoying sounds (D'Aprile, 1971). The amount of noise affects our attention and can be annoying, fatiguing, and frustrating, thus affecting cognitive and social interaction. A study by Zaks, Wolfe and Cameron (1969) found an association between exposure to large amount of sound and lessened health conditions. Even the background hum of heating and air conditioning units can be distracting to the occupants of that facility.

The handicapped person can be greatly affected by noise level. If there is a hearing deficiency, provisions have to be made to integrate that person into the mainstream of activities.

There are basically three categories of the effects of noise on people: damage to hearing which results from a high intensity sound, interference with speech communication when noise is above normal levels, and annoyance to high intensity sounds which can affect cognitive and affective functioning (D'Aprile, 1971).

The amount of light is crucial in the physical environment. It has been reported that well-lighted rooms have promoted better performance. The recommended system is indirect lighting which is reflected from the, ceiling using high density reflectors (Goulette, 1971). This reduces the amount of glare on the occupants. Glare causes discomfort, interference with vision, and eye fatigue. Studies have shown that the number of windows and the

amount of natural light have a psychological impact on people (Karmel, 1965). People tend to feel more at ease and open when windows are available.

The visually impaired person can be greatly affected by the amount of light present in the environment. It is imperative that buildings have well-lighted rooms, hallways, and exits for the visually impaired person. These attributes allow the visually impaired person to function more independently.

Color has a significant psychological effect on the behavior of people. The right choice of wall, ceiling, and floor colors is essential for greater cognitive and social growth (Papadatos, 1973). There are many variables which determine the correct color schemes of a building or room. The dimension of the room and the type of natural and artificial light can be vital in choosing colors. Also, the furniture, which has been selected and the number of openings in the wall space, is an important variable. The use of the room is also important in determining the choice of color (Papadatos, 1973). Color can act as a visual focal point for areas such as drinking fountains, exits, and hallways.

A strong association has been found to exist between emotional tone and color use. Yellows, oranges, greens and blues were considered "happy" colors while reds, browns, and blacks were "sad" (Cimbalo, Beck & Sendziak, 1978). It might be suggested, then, to design a color scheme toward

a more positive area for occupants which could result in stimulating productivity, reducing absenteeism, and promoting more positive feelings of the occupants.

This could have a great impact on the handicapped population. Many institutions and day care facilities often use drab greens and beiges which provide no emotional stimulation at all. Facilities, especially a recreational type, could be colorful and attractive which would aid in promoting more positive participation from all those involved.

Visual perceptual skills have been identified as an important aspect in the educational development of children. Educators advocate direct teaching visual perception to young children, especially in the area of art. Those with handicapping conditions need special attention in the development of texture. This special population can have a greater difficulty with visual perceptions so greater care should be taken when teaching this area.

The ambient qualities can have a great effect on the handicapped population. They are indeed very essential in both the cognitive and affective domains. Therefore, the man-made environment should be a well-designed, enriching environment.

Socio-Communicative

Inadequate language skills and limitations in speech abilities constitutes a major deterrent to the social,

emotional, and vocational adjustment for children
(Schiefelbusch, Copeland, & Smith, 1967). If the environ-
ment gives a child little reason to communicate, he may not
actualize his potential to speak. This may be the greatest
barrier toward the actualization of language skills to a
child (Haviland, 1972). Robinson and Robinson (1977) found
that in oral communication, the listerner's needs should be
taken into account if communication is to be effective.
Therefore, the child needs to be taught to become aware of
the listerner and to adapt to those needs in order to have
effective verbal communication. Semmel, Sitko, and Kreider
(1973) found that "expansive" teachers in teaching verbal
communication skills showed more gains than "restrictive"
teachers. Thus, teacher influence plays a major role in
acquiring communication skills. As a result, a barrier may
exist if inadequate teaching methods are utilized.

Parental involvement is also considered a vital part
in acquiring communication skills (Hetrick, 1979). With the
involvement of the child's family, the additional instruction
can be quite effective in the enhancing of the child in
communication ability. This has been a large barrier in
the past because parents were not always responsive in
learning facilitative communication skills and in spending
time in tutoring the child.

High noise levels were also cited as a barrier to proper
speech communication (Haviland, 1972; Zabel, 1979). When

high noise levels are present, the child is required to
speak in excess and can become annoyed, fatigued and irritable.
Thus, speech communication can be limited or rejected
completely as a result.

Expressive Language

The successful handling of social interactions depends
partly upon an ability to perceive and interpret the motives
and the intentions of other. Facial expressions play a
major role in mediating verbal communication and is probably
the most valuable source of information concerning emotion
or affect (Ekman, Friesen, & Ellsworth, 1972).

Teaching children to recognize and identify types of
emotions in facial expressions has been steadily increasing
during the past decade. It plays a major role in the communica-
tion process. Odum and Lemond (1972) have found that the
ability to recognize emotions in facial expressions tends
to increase with the chronological age of children.
Therefore, affective education should be an integral part
of the curriculum for children. Teachers should teach
emotion recognition so that the child is aware of his/her
personal emotions as well as the feelings of others. With
these skills, the child becomes a much better communicator.

Body Language

Knowledge and understanding body language is as equally
important as understanding facial expressions. The dimension
of warmth in the nonverbal behavior of a counselor has a

significant influence on the people with whom they inter-
acted (Bayes, 1972; Sobelman, 1973). Teachers, parents,
and counselors have a certain amount of influence upon
children through the use of body language.

Eye contact is one of the more obvious of the nonverbal
dimensions of communication (Brown & Parks, 1972). Eye
contact is an indication of interpersonal intimacy between
client and counselor. Studies have revealed that clients
interact more readily when the counselor utilized a greater
degree of eye contact.

Gestures are equally as important in nonverbal
communication skills. Research has found that certain body
movements can be associated with certain types of emotional
reactions. Head and leg movements occur when anger is
felt, leg movements are prevalent during times of depression,
and lower body gestures are exhibited during times of intense
emotions, and speech seems to be ineffectual (Sainsbure,
1955, Ditman, 1962, Ekman, 1965).

Educating a child to be aware of body gestures is
necessary in order to achieve proper communication skills.
With this knowledge, the child can be more aware of his/her
personal emotions as well as the feelings of the person he/
she is attempting to communicate with.

Proxemics (distance, touching, orientation) are yet
another aspect of nonverbal communication. Distance
between speakers is crucial in communication. If violated,

negative feelings can arise (Hall, 1959). Mehrabian (1968)
found that closer distances tended to communicate a more
positive attitude with a forward lean of the torso while
backward leans and larger distances were more negative in
nature. The child needs to become aware of culturally accepted
distance as a communication skill. Teachers and other
influential people should also be made aware of this aspect
of body language in order to provide a more positive
communicative environment for the child. Thus, the child
is provided with a more comprehensive learning experience.

Temporal Environment

Studies have shown that there are disturbances in time-
understanding of learning disordered children (Myklebust
& Johnston, 1962; de Hirsch, 1963; Bryant, 1965). Little
evidence is available to describe the nature of the disrup-
tion. Children with serious learning problems have less
mastery of cognitive and perceptual aspects of time-
understanding (Forer & Keogh, 1971). Therefore, problems
with time-understanding may result in increased educational
and social-behavioral problems for children with learning
disorders.

The basic concept of time understanding is difficult
for all children to master. Teachers and counselors must be
able to develop new techniques in order to help the child
perceive it correctly. The nature and extent of the

problems involved of time-understanding must be considered
with each individual child. This can be a barrier as it
takes time and energy to work on an individual basis.

Children are able to understand temporal cyclic order
before they understand recurrance (Friedman, 1977). Temporal cyclic order is defined as seasons of the year,
days of the week, and months of the year. Recurrance is
defined as occurances which are ordered according to an
asymmetrical relation-priority in time.

In addition, Friedman (1977) found that the use of
concrete materials may allow a more adequate assessment of
the time concepts of those children who are unable to construct
verbal representation of the relationships between events.
This should be a consideration of teachers and counselors
when developing programs.

Another component of the temporal environment is space.
This concept contains both the physical space and the personal
space surrounding an individual. Personal space is defined
as that area immediately surrounding an individual which
he/she usually does not like to be penetrated (Dosey &
Meisels, 1969). Personal space may function as a "protective
screen" which minimizes the impact of threatening interpersonal
transactions (Sanders, 1976; Edney & Uhlig, 1977). The level
of threat is a critical determinant in the observed relationship.

In examining individual and small group territories, Edney and Uhlig (1977) found that persons feel a stronger ownership of the immediate environment when alone than when in a group. This suggests that individuals in a group might feel less responsibility for the maintenance and defense of a shared territory than would a sole occupant.

In a similar study, Taylor and Stough (1978) found that territorial cognition displayed primary and secondary territory role-structuring properties. Primary territories are private places where the owner has exclusive rights to use the space. Secondary territories are semi-public places where a person interacts with acquaintances and friends on a regular basis. Urban subjects were less likely to socialize with their neighbors in nearby outdoor spaces as were suburban subjects. This can be of importance when considering barriers in secondary territories.

Summary

There are several factors in the physical environment which become potential barriers in regards to the handi-capped child. These factors include the built, natural, ambient, communicative, and temporal environments.

In order for the handicapped child to fully participate in leisure opportunities, park and recreation facilitators and personnel need to become cognizant of these potential barriers. Leisure enables the handicapped child to develop social and emotional skills and fortify his or her

own self worth. The removal of existing barriers will encourage the handicapped child to participate in many recreation activities (King, 1974).

The development of communication skills also facilitates the integration of the handicapped children with their non-handicapped peers. Adequate communication skills encourage the handicapped child to engage in activities with his peers. This process also supports the development of social and emotional skills.

Temporal factors include an understanding of time relationships, both linear and cyclical, as well as spatial conditions within the environment. These aspects are a critical part of a child's everyday life. A more positive environment can be created for the orthopedically impaired child with the reduction of present barriers.

Ambient environmental elements are noise levels, lighting, color, and temperature. Each of these elements contributes to a stimulating or boring environment. These elements work as a system to encourage activity within a specified boundary.

All of these factors of the physical environment affect the leisure behavior of the handicapped child. Removal of barriers provides the opportunity for growth in the cognitive, affective, and social domains. Recreational opportunites are as important to handicapped children as they are for others (Mace, 1980). Only now are many of the barriers being removed.

SECTION II

HUMAN ENVIRONMENT

Introduction

The human environment contains the areas of living
arrangements, individual differences, and roles of indivi-
duals. Living arrangements will be discussed in terms of
family living and institutional living. Individual differences
includes educational, physical, and psychological differences.
The roles individuals engage in are discussed as either
assumed or ascribed.

There are numerous living arrangements existing in
today's society. Family arrangements vary from communal
living to the traditional formal family structures.
Institutional living includes the traditional formal large
facilities to the newer concepts of group homes and inde-
pendent living arrangements. The roles of the individual
are determined by society. An individual assumes a role
such as therapist or is ascribed by role by social
requirements.

This chapter will present an indepth discussion of the
human environment as well as discuss the implications of
human environmental barriers on the leisure functioning of
orthopedically impaired children.

Living Arrangements

In today's society, there has evolved a multitude of living arrangements which can have an influence on the social, emotional and psychological development on entire families as well as the individuals within the families. These living arrangements are the result of societal adaptation to changing cultural norms and values (Cogswell, 1975; Marotz-Baden, Adams, Bueche, Munro, & Munro, 1979; Powell, 1979) The primary living arrangements which affect the life of a dependent child is his or her family (Lyon, 1975).

Family structure has been approached from traditional, ecological, and variant viewpoints. The traditional definition of a family has centered around the middle-class blue-collar family (Marotz-Baden, et.al., 1979). The traditional family concept has been described as "characterized by households of husband, wife, and children living apart from both sets of parents (grandparents) with the male as the breadwinner and the female as the homemaker" (Sussman, 1971, quoted in Cogswell, 1975, p. 392). This traditional view also characterizes the family as secluded loners, barricaded and protected from societal pressures and influences (Powell, 1979). The societal influences have cast the traditional family in the role of self-sufficient and independent organisms with little contact with the external world (Keniston, 1977).

This approach to the family cannot be generalized to minority groups or low income populations (Powell, 1979; Keefe, Padilla, & Carlos, 1979). Mexican-American families are typically large and multigenerational, extending both linearly and laterally including grandparents, aunts, uncles, and cousins (Keefe, et.al. 1979). For the low income black population, the concept of family includes personal friends and neighbors who provide primary emotional support (Powell, 1979). Finally, the traditional view of the family has been upheld by provisions of legal marriage. The husband is the head of the household and as such is responsible for the financial welfare of his family, and the wife is responsible for domestic service including maintenance of the home and child rearing (Cogswell, 1975).

The traditional view, while not being cast aside, has been classified as one of eight variations of family structure in American society. The remaining seven include: 1) dydadic nuclear, 2) single parent, 3) three generation, 4) old age couples, 5) institutional, 6) foster, and 7) kin networks (Marotz-Baden, et.al., 1979). In addition recognition was given to emerging experimental family structures such as communal, unmarried parent and unmarried couple with children (Marotz-Baden, et.al., 1979). Only two of these family structures would not have a direct effect on the development of a young child: old age couples, and institutional.

Another, perhaps more positive view of the family is
the ecological approach. This view examines family structure
from a systems viewpoint. The family is described as an
open system whose exchanges with the environment reinforce
family functioning and influence familial beliefs (Powell,
1979). The influences include emotional, and material
support for family practices, and socialization of the
family into environmental norms (Powell, 1979).

Most of these approaches to examining family structures
include in their definition the presence of children. For
many families, having children stems from societal norms
and pressures. The child is embedded in the family system
which in turn is embedded in society (Powell, 1979). The
family is the most powerful source of support for the child
in developing and enhancing his or her sense of self-worth
and functional ability (Lyon, 1975). The child's behavior
and development are directly influenced by parental inter-
actions with society which encourages or discourages particular
types of parent-child relationships (Powell, 1975).

The impact of a child on a family causes many adjust-
ments to be made to accomodate a new member. These adjust-
ments are compounded when a child with a handicap is born
and becomes the responsibilities of unprepared parents. The
family remains the primary support for the child, but
additional support comes from outside the family in the
areas of medical, educational, and social support.

The handicapped child forces a restructuring of the values
and practices of a family in the areas of family management,
transactions and development (Hersch, 1970). There are
additional effects on marital interaction, and if there are
non-handicapped siblings, there are effects on the inter-
action between them and their parents (Hersch, 1970).
The siblings develop concerns about dealing with their
parents, showing their feeling about their relationship
with their parents, parental expectations of themselves
and expectations of their relationship with the handicapped
sibling (Murphy, 1978). The siblings also are forced to
recognize the difficulties in developing and maintaining
relationships outside the family in the area of friendships
and social life (Murphy, 1980).

Institutional Arrangements

For many people, alternatives to family living arrange-
ments are found in the service system of institutions. The
concept of an institution can be broadly defined to include
residential facilities, including the nuclear family,
providing care for a group of people (Throne, 1979). This
broad definition includes group homes, foster homes, and
public institutions such as state mental hospitals and
state schools for the mentally retarded. An institution
as characterized by Wolfensberger (1971) is an environment
that aims at a low common denominator among its residents,
larger congregations of people than are found in communities,

a reduced autonomy and increased regimentation of residents,
and tendency to be physically located under one roof or
on a single campus.

Historically, institutions were developed to house the
undesirable elements of society away from the mainstream of
life (Thurman & Thiele, 1973). This housing process served
two purposes: one, to protect certain elements of society,
such as the retarded, physically handicapped, and mentally
ill, from ridicule, injury, and humiliation at the hands
of the public; and two, to protect the normal people of
society from unpredictable behavioral outbursts by those
undesirable elements (Wolfensberger, 1971a). As such,
these institutions tended to be geographically and psycho-
logically isolated away from surrounding communities (Rowland
& Patterson, 1972).

Services at institutions for the retarded were
traditionally developed following a medical model approach
(Haviland, 1972; Thurman & Thiele, 1973; Throne, 1979).
Programs were primarily medical, excluding psycho-behavioral
strategies and ignoring all areas of human development
(Wolfensberger, 1971b, Haviland, 1972, Thurman & Thiele, 1973).

The environment of an institution for the retarded is
a reflection of the prevailing attitudes of the society at
large and the staff of caregivers. The term 'retardation'
many times invokes feelings of pity, sorrow, and fear in
normal people towards the retarded (Wolfensberger, 1971a).

These feelings in turn generate actions of protection, comforting, providing for, and taking care of the retarded (Perske, 1972). As a result, very little expectation is placed upon residents to participate in their life and society (Rowland & Patterson, 1972). Typical moderately-to-profoundly retarded residents will spend a vast majority of their waking time never leaving their wards (Daily, Allen, Chinsky, & Veit, 1974). There are several documented consequences of institutionalized living. Public institutions begin to function as surrogate parent/authority figures (Rowland & Patterson, 1972). Institutions, without regard to the ability of involvement on the part of the resident, begin to handle all of the functions of living for the residents. Few options are left for residents in developing their skills (Perske, 1972). The measured intelligence of institutionalized residents decreases over a period of time (Thurman & Thiele, 1973). This phenomenon may be attributed to the lack of stimulation found in most public institutions (Haviland, 1972). The lack of stimulation stems from several areas. First, the removal of normal risks in life which are necessary for normal growth and development (Perske, 1972). Second, the absence of qualitative interactions between staff and clients (Blindert, 1974). Third, the lack of training provided for attendants and aides working with residents (Daily, et.al., 1974).

A recent trend to combat these trends in large public
institutions has been the development of group homes and foster
homes located within local communities (Throne, 1979). The
group home is a highly specialized small family sized unit
(Wolfensberger, 1971b). They are usually established to pro-
vide a transition residence for institutionalized persons who
are moving back into the mainstream of society. These group
homes allow clients to experience a greater degree of
autonomy than they would experience in the institution (Meyer, 1973).
A group home gives the retarded a sence of dignity, privacy and
motivation for community involvement while expecting a higher
degree of normalized behavior from the client (Wolfensberger, 1971b;
Shapiro, 1973).

Individual Differences

Differences between children can be discussed in terms
of a number of traits including physical, psychological,
social, cognitive and cultural. In many service delivery
systems, particularly education and rehabilitation,
individual differences are important in designing and implement-
ing treatment programs. An awareness of differences ensures
that children and adults receive services based upon their
needs instead of a set of global, generic needs.

At very early ages, differences can be detected in infants
which are predictorsof motor competency and cognitive skills
(Matheny & Brown, 1971; Collard, 1971). The development of

institutionalized infants depends upon the opportunities
presented to them both motorically and perceptually (Collard,
1971). In a study comparing institutionalized infants with
home-reared infants, the home-reared infants displayed a
greater amount of development in social, imitative, and motor
skills than the institutionalized infants (Collard, 1971).
Further examination of the data showed that there was a
distinct advantage in favor of higher-status home-reared.
children. These infants from higher status homes displayed
a wider range of play schemas and performed better on tests
than those from lower-status homes (Collard, 1981). Infants
who displayed early signs of placidity, persistancy at tasks
and a control of impulsiveness are more likely to have more
adequate cognitive development than those infants without
these characteristics (Matheny & Brown, 1971).

As young children grow they become aware of several
differences in themselves and others. Young children become
aware of physical differences in other children and begin to
select friends on the physical characteristics of others
(Lerner & Korn, 1972; Kleck, Richardson & Ronald, 1974).
Distinctive physical characteristics of children are reliably
related to social acceptance. Using pictures of individuals
as a stimulus to social preference, Kleck, et.al., 1974, said that,
"such overt characteristics as obesity and physical handicap
are associated with a relatively low level of social
acceptance." In a follow up study in a summer camp for boys,

it was found that the visibly handicapped boys were least
preferred as playmates and members of a group (Richardson,
Ronald & Kleck, 1974). Additionally, Richardson et.al.,
noted that behavior of the visibly handicapped peers as well
as physical characteristics were important in peer evaluation
(1974). For non-handicapped people, the type of body build
stereotype can have an influence on both the social selection
process and psychic of the individual(Lerner & Korn, 1972).
Factors that affect the preferences of body build stereotypes
include the age and self-concept of the individual. Using
three age groups of subjects, classified as chubby and average
body build, Lerner and Korn (1972) found that across all age
groups, the chubby subjects viewed themselves as more characteristic
of average and slim body build stereotypes. Additionally,
both chubby and average subjects viewed the endomorph body type
as unfavorable and the mesomorph body type as favorable
(Lerner & Korn, 1972).

In the educational and social arena, additional factors
begin to accentuate individual differences. Lower-class and
culturally different children tend to fare less well than middle-
and upper-class children (Benowitz & Rosenfield, 1972; Feldman,
1973). Mexican-American children from home environments where
traditional Mexican values are emphasized perform significantly
lower on tests of field dependence (Figuero & Gallegos, 1978).
Students from low income families tend to function on a lower
conceptual level than middle-class children (Levine, 1971).

Performance in the classroom is a function of the capabilities,
interests, and motivation of the child. The type of external
rewards used to motivate children has varying degrees of success
with different levels of children. Material rewards were found
to have more affect on the learning of lower-class children
than the traditional social rewards and incentives (Benowitz
& Rosenfield, 1972).

Within the social system, children begin to encounter the
element of competition. It is an understood phenomenon that
occurs whenever individuals or groups need play as an important
part in coping with society. The elements of competition
begin to emerge in children as early as 4½ years (Toda, Shino-
tsuka, McClintock, and Steck, 1978). As children grow older,
the number of competitive choices made increases (Toda, et.al.,
1978). Clenenyer (1974) comparing the competitive behavior of
children from different levels of income, found that
lower-income children display more competitive behavior between
them than the middle-class children. This could be attributed
to the environment in which lower-income children live, one of
survival and supremacy on the streets (Figueroa & Gallegos,
1978).

Roles of Individuals

There are a number of roles that both children and adults
are placed in on the basis of societal expectations. At any
one time a child may be placed in the role of student, friend,
peer, role model, son, daughter, and so on. These roles are

dependent upon and a function of the situation in which the
child is placed. Role-taking ability has been associated
with the capacity of an individual to coordinate his or her
behavior sequences as well as the behavior sequences of
others (Afflect, 1975; Fifer, 1980). Additionally, role-
taking ability involves the making of accurate assessments
of others' intentions and the appraisal of the effect of one's
behavior (Affleck, 1976).

The goal of social role-taking is perhaps inextricably
linked to interpersonal competence and the ability to accomplish
interpersonal tasks. The growth of interpersonal competence
is directly associated with role-taking ability (Weinstein, 1969).
In a study designed to measure the role-taking of mentally
retarded children, Affleck (1975) found a significant
relationship between the ability to assume a social role and
mental age and intelligence quotient. It was also determined
that no signficiant relationship was found between social
role-taking ability and sex (Affleck, 1975; Afflect, 1976).
Further study by Affleck (1976) found that the tactics
preferred by children with role-taking ability differed
from both in intensity and quality (Kilman, Albert, Sotile,
1975).

Perhaps the most joyous occasion for families is the
arrival of a newborn infant. This arrival causes a dramatic
change in the structure of the family as well as altering
the roles of each individual within the family unit

(Murphy, 1970; Fotheringham and Creal, 1974; Anderson,

Schlothman & Weinger, 1975). The parent assumes the role of

primary care-giver, nuturer, protector, provider, and a

host of other roles related to a family. When a handicapped

child is born into a family, the role of the parent

drastically changes (Meadow & Meadow, 1970: Murphy, 1970;

Hersch, 1970). These families face problems on a day-to-

day basis ranging from day care to social pressures

(Dunlap & Hollinsworth, 1977).

The role of the parent of a handicapped child expands to

include teaching tasks and providing emotional support as

the child matures and develops (Meadow & Meadow, 1970). An

example of a teaching role for the parent would be learning

ways to help their child learn motor skills. When a parent

assumes the role of emotional support, he or she is helping

the child deal with feelings of guilt, sorrow, anger, as well

as success and happiness (Meadow & Meadow, 1970; Murphy, 1974;

Hersch, 1980).

Adults who are not members of the immediate family or

are not a member of the family's social environment assume

roles from educator, counselor, psychologist, to therapist

or doctor. The school serves as a principal influence in a

child's life from about the age of six years to approximately

sixteen (Cowen & Lorion, 1975; Pogebin & Retish, 1976). The

role of the school system is to influence a child's personal

and educational growth (Cown & Lorion, 1976). This role has

been assumed by the education system through a systematic process of default. Society has placed an increasing responsibility on the school system to not only educate their children in the three R's, but also in government, societal responsibility, and to some, patriotism. Whenever there arises problems in society, one of the first areas often singled out as responsible is the school system (Pogrebin & Retish, 1976). The importance of the educational systems role cannot be lessened even though the system is the focus of possibly unwarranted criticism.

In an attempt to redefine the role of the school mental health professional, a Primary Mental Health Program (PMHP) was developed in the city school system of New York. School mental health services had been traditionally defined as identifying and repairing individually dysfunctioning children (Cowen, 1973; Cowen & Larion, 1976). As a result, school mental health services were largely pathology directed and focused on the problem oriented few rather than on the system serving these few. The professional then was primarily engaged in diagnostic or remedial work with children. The PMHP professionals spend most of their time in upgrading the knowledge and skills of those who have educative contact with children (Cowen, Lorion, Kraus & Dorr, 1974; Cowen and Lorion, 1976). The role of the school mental health professional can be described as a proactive, health-oriented delivery system, directed towards the majortiy of students (Gottlieb & Gottlieb, 1971).

Doctors and therapists assume supportive functions or roles when dealing with parents and children. Many times, physicians act in isolation without regard to the input of others in the care and diagnosis of children. There is a growing awareness among physicians that their role not only includes evaluation of the body's various systems which affect a child's progress when dysfunctioning (Holman, 1972). There exists between a general practitioner, parent and teacher, a system of mutual cooperation which enhances the growth and development of child (Holman, 1972; Meadows & Meadows, 1975).

Therapists play an important role in the life of a child. The type of relationship established between them can influence the degree of benefit from the interaction. The primary method in which a client relates to the external world can influence how the therapists deal with clients (Kerr, 1970; Kilman, Albert, Sotile, 1975). A therapist's role can be defined as structured or unstructured (Kilman, et.al., 1975). In their study, Kilman, et.al., found significant differences in therapists structure and locus of control of internal and external clients (1975). External subjects displayed a greater shift in behavior than internal subjects in a structured setting. Conversely, internal subjects demonstrated a greater shift in behavior than external subjects in unstructured situations (Kilman, et.al., 1975). This would appear to indicate that internal subjects are

more resistant to structured settings while external subjects are more resistant to unstructured situations.

Regardless of the role of the adult or child, attitudes and beliefs of the service provider can affect the role of the recipient (Kerr, 1970). Because of the disability, handicapped individuals are frequently placed in an inferior position (Richardson, et.al., 1974; Matthews, 1980). As a result, the disabled person may have further difficulties in adjusting to the role of being a handicapped or disabled individual (Sitter, 1969). It is the role of physicians, parents, therapists and educators to assist the disabled, handicapped, and the non-handicapped in adjusting to the demands of society (Holman, 1972; Kilman et.al., 1975; Kerr, 1980; Meadow and Meadow, 1980).

Implications for The Orthopedically Impaired

Both family and institutionalized living arrangements have possible effects on handicapped children in today's society. As a primary environment, both living arrangements provide the basis for learning behavior to be practiced in society (Paton, 1970). Children from families where emotional closeness is an integral component of family life tend to find experiences outside the home rich, exciting, and challenging (Paton, 1970). Handicapped children from similar home environments will have a better chance of coping in society outside the home. If a family environment displays a fragmented, disoriented approach of coping, children will

experience a higher level of anxiety and negative attitudes than the children from other homes (Paton, 1970). The social behaviors of disturbed children are influenced greatly by the environment and at times will display a particular type of behavior with one type of setting or another (Price, 1975).

Institutional living can have an affect on all aspects of human development. As with family living, there is a specific type of behavior, which over a period of time, is associated with institutional living (Wolfensberger, 1971a). The amount of interaction between staff members and clients provides a basis of modeling socially appropriate behaviors. However, because a handicapping condition is physically manifested, attendants' reduced expectation encourages clients to remain dependent instead of developing independence. A large amount of risk is removed from the lives of handicapped individuals to prevent them from experiencing psychological or physical injury (Perske, 1972).

The impact of having a visible handicap can negatively influence the non-handicapped child when interacting with the handicapped child (Richardson, et.al., 1974). Disabled children not only need to have interaction with non-handicapped peers, they also need the opportunities to develop their leisure skills in the presence of their non-handicapped peers (Evans, 1975).

The recreation professional would need to provide recreation opportunities in which the stereotype of the handicapped child can be discarded. These opportunities would meet the needs of the handicapped child in a less

stressful environment (King, 1970).

The lack of physical mobility would require the recreator
to include the handicapped child in activities in which the
lack of mobility would not be accentuated. The recreator
would need to be especially aware of excluding the handi-
capped child from such activities as relay races, circle games,
and the like because of the handicapped child being in a
wheelchair. Adaption of activities that would facilitate
inclusion of the handicapped child would be the practice in-
stead of the exception. The individual differences in
handicapped children can be used to broaden the scope and
depth of leisure activities and are a resource not to be
wasted.

The orthopedically impaired child is also forced into
many different roles. He or she is referred to as a student,
client, patient, or subject in a research experiment. As
a student, the orthopedically impaired child may be enrolled
in a special classroom designed to meet his or her needs in
school. This segregation often times serves to increase
the differentness of the child (Kerr, 1970). The ability
of the child to assume the various roles required by the variety
of settings will be affected by those around him or her and
their ability to perceive the child as a capable individual.
The orthopedically impaired child will be able to do as much
or as little as he or she is able based upon the knowledge
and expectations of those around him or her (Kerr, 1970;
Afflect, 1975; Afflect, 1976).

The therapist, physician, or educator have a direct influence on the attitude of the orthopedically impaired child concerning his or her capabilities. Through a process of education, therapy, and in some cases preventative medicine, an orthopedically impaired child will be able to overcome many of the limitations imposed on him by a protective and comforting environment (Perske, 1970; Kerr, 1970)

Summary

In order for the orthopedically impaired to participate fully in recreation experiences, it is necessary to determine the extent of family or institutional involvement in their lives. Families with strong beliefs regarding the development of a child's independence, recognizing the extent of limitations possibly imposed by an orthopedic impairment, will facilitate the development of their child in all areas of human potential. Families unable to deal with the reality of caring for an orthopedically impaired child will tend to restrict the development of the child, emotionally, physically, and psychologically.

Similarily, the prevailing attitudes of an institution will either foster or inhibit the expansion of recreation experiences for their residents. Allowing for 'normal' risks to be taken by orthopediclly impaired children provides the opportunity to discover new talents and skills that otherwise would not have been discovered.

Individual differences manifest themselves in a variety
of areas. External influences such as lower-income level,
institutionalized living, and culture differences, influence
how children acquire academic, social, and affective skills.
Choices of playmates and companions are initially made on
the basis of physical appearance and body-build type. How-
ever after prolonged contact these differences become less
of a factor as the behavior or others gains importance in
the selection of companions. The professional recreator needs
to examine the extent of differences in cognitive, social,
physical and affective abilities and programs such that
the differences are minimized, and the abilities are maximized.

There are several roles for adults and the orthopedically
impaired child to assume during interaction with each other.
The role of the adults include parent, physician, educator,
therapist, and diagnostician. Each of these roles has a
responsibility in meeting the needs of the orthopedically
impaired child. Parents assist the child in learning new
skills and coping with the emotions of being different
(Meadow & Meadow, 1980). The physician is responsible for
helping the child maintain as healthy a body as possible,
physically, psychologically, and medically (Holman, 1972).
The educator helps the child identify the environment around
him or her and to discover ways of overcoming certain
limitations to his or her development. The therapist has a very
similar role, be they physical, speech, occupational, or

psychological therapists.

The orthopedically impaired child assumes a variety of roles primarily because of the special needs associated with his or her disability. In each role, a different interaction style is required. In some cases, the child may be a passive recipient while, in others, the child may be a cooperative, active partner.

For all the adults involved with a child it is important that they:

> Think of no child as dull or subnormal, do not set a limit on the child's ability. The truth is that the possibilities of the human mind and body are boundless and if limits exist, one should never think of them. (Fitzgerald, 1954, quoted in Dixon, 1972, p. 231).

SECTION III

ORGANIZATIONAL/POLITICAL ENVIRONMENT

Introduction

The organizational/political environment is comprised of the following areas; service delivery systems, policies and regulations, and economic status. Service delivery systems include the educational, health, and the leisure service systems. Policies and regulations include those formulated at local, state, and federal levels. It also includes policies and regulations used and enforced in service agencies. Economic status refers to the level of income produced by a family. It also refers to poverty levels and the various definitions used in its description.

Service Delivery Systems

There are a number of service delivery systems designed to meet the needs of members of society. It can be postulated that with the proliferation of specialized service providers within both the commercial, and public sectors, that society has become service oriented. The public sector has witnessed a rapid increase in the number and diversity of social services since the beginning of the Johnson administration (Crompton & Howard, 1980). The social service systems include education, public health, and leisure facilities.

A primary public service delivery system encountered
by members of society is the educational system. Since
the passage of the mandatory education laws in the early
part of the twentieth century, public education has been
the first encounter with social institutions for a vast maj-
ority of the American population (Rosenthal & Jacobson, 1966;
Boaz, 1971; Retish, 1973).   Traditionally, the educational
system has been given the responsibility to develop sound
moral, academic ability, and motivation for upward economic
mobility (Pogrebin & Retish, 1976). Cohen (1966) states:

> The school system represents the major
> American value system, which stresses verbal
> fluency, academic intelligence, high levels of
> aspiration, drive for achievement, capacity of
> attainment of long range goals, the ability
> to postpone gratification, cleanliness, neatness,
> and respect for the importance of manners.

It is in the school system that the child first encounters
the beliefs of others. Individual differences, academic,
social, physical, cultural and moral, have a direct influence
on the child's acceptance by peers and teachers (Pogrebin
& Retish, 1976). The education system provides children
from lower-income families with the means to achieving more
in society and avoiding the stigma of poverty (Pogrebin &
Retish, 1976).

The health services field has also become of primary
importance to post-industrial societies. With the tre-
mendous advances made within the medical field, societies
are expecting better health care and longer life spans (Fry, 1973).

Health needs can be defined as "the inherent human requirements
that must be met in order for an individual to experience a
sense of physical, psychological, and social well-being"
(Mosey, 1973). There are a number of professions that comprise
the health service system. Chiefly among these are medical
doctors and therapists: There are several types of medical
doctors but for the most part, they can be classified as
general specialists, super-specialists, and national
specialists (Fry, 1973). In the United States, medical care
has not become socialized and, as such, the availability
and accessibility of quality health care depends upon locality,
income, and social status (Fry, 1973). To fill the gap in
quality medical services, many communities have public
hospitals, public health agencies, and neighborhood clinics.
For those unable to afford medical care, the cost is born
by the local taxpayers. Additionally for elderly people
and dependents of disabled people, the federal government
makes available Medicare and Medicaide. Despite the
inherent problems with these systems, they are an attempt
to meet the needs of a highly technical nation.

Therapists include occupational, physical, speech, and
psychological. The therapists function in either a
reactive (treatment), or proactive (preventative)
environment (King, 1970; Mosey, 1973). In a treatment
setting, a therapist is concerned with bringing about a pre-
determined change in their clients' repertoire of behaviors
(Mosey, 1973). The characteristics of a treatment setting

include an orientation to correcting physical or psycho-
social pathology, the enhancement of learning skills,
prescribing treatment for a period of time, and rehabilitating
the client into society (Evans, 1975; Prial, 1976). A
preventative environment is characterized by working on
growth of the client at his or her own pace, assistance in
dealing with current physical or psychological dysfunction,
and an orientation to the present (Mosey, 1973). In a
proactive role, the therapist would attempt to directly
satisfy health needs, work as a member of a team of pro-
fessionals and act as an educator and advocate within the
community (Mosey, 1973; Fry, 1973; Prial, 1976).

Leisure Service Delivery Systems

In the field of recreation, the leisure needs of society
are met in a variety of ways. The public parks and recrea-
tion agencies for the most part serve the needs of the healthy,
non-disabled member of a community. Programs are planned
according to a number of factors such as demand, cost,
availability or facilities and many times, the time of the
year (Crompton & Howard, 1980). For those individuals who
are not receiving recreation and leisure services because
of a handicap or disability, their needs are met by therapeutic
recreators. The attitude of recreators plays an important role
in designing and implementing services for the disabled
(King, 1970). There are three roles commonly ascribed to a
therapeutic recreator: therapist, educator/facilitator,
and recreator/advocate (Gunn & Peterson, 1977; Compton &
Witt, 1979).

The disabled or handicapped person has many more barriers
to overcome than his or her non-handicapped peers. These
include architectural, financial, transportation, and health
(King, 1970). With the passage of the Vocational Rehabilita-
tion Act of 1973, specifically Section 504, architectural
barrires are becoming less of a hindrance, but they have yet
to be entirely eliminated. Being handic-pped does not
necessarily mean having to live in a totally financially
dependent state. However, because of a handicap, certain
costs do increase because of a need for specialized equipment
as means of transportation. Finding a job which can be
accomplished successfully by a handicapped person is
difficult (King, 1970; Prial, 1976).

Policies and Regulations

The social service agencies operating within the American
society do so with the approval of federal, state and local
governments. The practice of regulation serves to protect
both the consumer of services and the provider of services
from negligence. There are regulations and policies which
affect the educational system, state school systems, medical
systems, and rehabilitation services.

The federal government regulates educational services,
through the passage of laws and acts designed to safeguard
the educational rights of children. Recent acts include
the Elementary and Secondary School Act of 1965 (ESEA)

and the Education of All Handicapped Children Act of 1973
(P.L. 94-142). The most important tile of the ESEA is
Title I (Murphy, 1977). The ESEA was reform-oriented and
as such attempted to stimulate innovation, strengthen the state's
powers, link research with schools, and make the problem of the
poor the number one education priority (Murphy, 1977). The
act provides controls for each level of government. While
the federal government controlled the allotment of funds
and adherence to criteria, the local governments had the authority
of approval of projects requesting federal assistance.

The Education of All Handicapped Children's Act
(P.L. 94-142) sought to expand the consciousness of education
to include all handicapped children. The thrust of this law
was to mandate public schools to provide educational service
to handicapped children in the "least restrict environment".
P.L. 94-142 outlined the scope of services to be provided,
the procedure used for applying for funds, the rights of the
parents and child, and an appeals process if parents felt
that their child was not receiving appropriate services.

Similarily, in the rehabilitation field, a significant
piece of legislation was passed with the enactment of the
Rehabilitation Act of 1973 (P.L. 94-112). In addition to
requiring individual rehabilitation plans written for each
client, it also contained the important stipulation in
Section 504 of equal access to buildings and facilities for

all handicapped individuals (Lavor & Duncan, 1976). The aims
of rehabilitation services include: medical aid, vocational
rehabilitation of the disabled, placement of clients into re-
numerative employment, placing clients in a position of free
mobility, and enrichment in the community and achievement of
the general right of pursuit of happiness (Greer, Jenkins &
Flint, 1975).

Policies and regulations relating to the care of
institutionalized individuals are formulated and regulated by
the Accreditation Council for Facilities for Mentally
Retarded (ACFMR) (Crosby, 1973). Accreditation seems to have
two major purposes: setting appropriate levels of service
and determining compliance to established standards (Crosby,
1973). There were a number of standards established by
the ACFMR to measure educational services. These standards
include: equal access to educational services by all residents,
the use of individualized education plans, the use of appro-
priate programs, sufficient availability of qualified personnel
and staff, for development of the teaching staff (Crosby, 1973).
Similar standards can be found in the 1973 Joint Commission
for the Accreditation of Hospitals, Manual for Standards for
Community Agencies.

The recreation agency in many communities has a regulatory
body that has been mandated by local law (Bannon, 1973). In
many park and recreation agencies the relationship between a
park board and the director is one of mutual cooperation. The

board represents the public goals and values and determines,
to some extent, the scope of recreation programs (Bannon, 1973).

The task of the director, being a practitioner, is to
assume all responsibilities-for-policies designated and to
apply these policies in the most effective manner.

Economic Status

There is a growing awareness that in this country there
are a substantial number of people who exist in one form or
another at or below the so-called poverty level. During the
early 1960's and continuing through the present, the existence
of substantial poverty has been a public policy (Newton, 1977).
The public concern for the social condition has been dealt
with primarily in the government sector through the creation
of legislation promoting services for these people who are
categorized by one definition. The same situation plagues
the issue of poverty. Depending on the perspective of the
researcher of social agency, poverty has been defined as being
below a specified level of income, the lower end of the
economic scale, such as the lower 10-20%, and as a subjective
feeling of the individual regarding the inadequacies of the
resource available (Bouma, 1976).

The most commonly used definition of poverty refers to
a specific income level of which an individual or family
does not exceed, means that an individual or family is living
in poverty (Bouma, 1976; Garfinkel & Haveman, 1976). The

significance of this definition lies in the fact that it
is the one used by the federal government in its allocation
of resources (money) for governmentally-supported programs
(Bouma, 1976). The Bureau of Labor Statistics each year
develops a mock budget for low, median and high income
brackets. This budget is geared towards a low-income family
of four and is estimated for families living in rental hous-
ing without air conditioning, performing more services for
itself, and utilizing free recreation facilities within the
community (Cobas, 1978).

A second definition stresses the point of relative
income deprivation. Those people having incomes at the
lower end of the economic scale would be considered poor
and in the poverty zone (Bouma, 1976). This figure would
be comprised of individuals who may not be classified as being
within the poverty range according to the previous definition.
The lower 10-20%, regardless of how much an individual's
income was, would be considered as living in the poverty
zone (Bouma, 1976). This figure would be comprised of
individuals who may not be classified as being within poverty
range according to the previous definition. The lower
10-20%, regardless of how much an individual's income was,
would be considered as living in poverty. Theoretically a
person making $5,000 a year could be at the lower end of
the economic spectrum.

A third definition deals with the individuals perspective
of his economic situation. If the individual feels he or she

has an inability to reconcile their wants and needs with what
they have, that individual may consider himself or herself
to be living in poverty (Bouma, 1976). This definition
uses the psychology of the individual in determining the
poverty level. Using this definition, many people who need
very little and want very little would not be considered as
poverty stricken simply because that individual has reconciled
his or her wants with what he or she has.

Finally, another definition uses the earning capacity of
individuals to determine the poverty level. Earnings capacity
is defined as "the ability of a living unit to generate its
physical and human capital at capacity" (Garfinkel &
Haveman, 1976). The important concept in this definition
is capacity. It is implied that a family has a maximum earn-
ing capacity which can be measured. At a specified level
below the maximum earnings capacity, a family would fall
into the poverty category. The impact of using the relative
income deprivation, subjective individual perception, or
earnings capacity definition for defining poverty would be
to increase the number of people living in poverty and
therefore eligible for federal assistance (Bouma, 1976;
Garfinkel & Haveman, 1976; Newton, 1977).

It has been suggested that there are very different
values and goals for lower-class people. During a year-
long field study with families defined as living in poverty,
Newton (1977) found that poor people do perceive and act in
accordance with marginal costs and returns. They make the

most of what they have. Their behavior is a function of distinctly different goals, and they behave rationally in their best interests (Newton, 1977).

Implications for Leisure

Regulation by federal government has not yet penetrated the field of parks and recreation in the programming area. However, on other levels, there are several applicable laws which affect recreation areas. First, if a facility is applying for federal funds, that facility must comply with such regulations as Affirmative Action, Equal Opportunity Employment Commission, and Section 504 of P.L. 93-112. The regulations affect the hiring, training, and promotion of handicapped individuals as well as making public facilities accessible to the handicapped and disabled.

The Education for All Handicapped Children's Act (P.L. 940142) outlines under ancillary services the provision of leisure education services to special education children. This will provide the recreation profession with an opportunity to develop a service system which can function within the education system. An early familiarization with the leisure service field will provide the handicapped child with a wider range of available services as he or she grows up.

Regardless of the definition of poverty one chooses to adopt, the effect on leisure will largely be the same. As pointed out earlier, three of the four definitions would

dramatically increase the number of people existing below the poverty line. Only the lower-lower class individuals would remain eligible for federal assistance, leaving the remainder to assume second jobs to maintain their standard of living.

The leisure of this class of people would be affected primarily by a lack of unobligated time, free from the chores necessary to maintain their families. The use of free public recreation facilities would be a major source of recreation activities (Cobas, 1978). In addition, leisure time would be spent helping care for the home, family, and friends through the activities such as shopping, canning, and growing gardens (Newton, 1978).

Implications for the Handicapped

For the handicapped, the various service delivery systems are forced to choose a means of meeting their needs without creating a feeling of dependency on the part of the disabled and avoid causing further stigmatizing and classifying on the part of the non-handicapped individuals in society (Boyd & Hartnett, 1974; Evans, 1975). Good medical care is a function of society's attitude, medical schools' attitude, and the attitude of the disabled (Fry, 1973). The responsibility of meeting the health needs of the disabled and handicapped arises from the patient, the health care facility, and the community environment (Mosey, 1973). In a comprehensive

recreation service system, handicapped individuals would be able to choose from a variety of leisure activities that would include non-handicapped individuals (Boyd & Hartnet, 1974; Lord & Hutchinson, 1979). In addition, recreation services would provide a continuum of services for all ages of individuals and include specialists from not only recreation but physical education, art and dance as well as other specific activity areas (Boyd & Hartnett, 1974)..

The education system has already begun to meet the needs of the disabled. Their services range from preschool years through age 18, in some states from birth through 25. Special education public schools traditionally focuses on correcting or minimizing the consequences of the handicapped. Special education teachers focus on developing appropriate social, cognitive, and motor skills necessary to function in the education system as well as in society at large (Gotts, 1975).

The passage of laws such as P.L. 94-142 and P.L. 94-112 Section 504, signal the change of service delivery systems. The handicapped not only are demanding equal opportunities in practically every area of life, they are insisting on the development of recreation programs that allow them to develop what abilities they have (King, 1970). Recreation programs in the inner city as well as in the suburban areas will be forced into designing and implementing programs that handicapped people can participate in without being isolated.

Facilities will be required to have modifications
which will ensure easy access by handicapped individuals in
wheelchairs or using other forms of ambulatory assistance.

Additional implications will have handicapped-teamed
professionals as part of the service delivery team. Members
of the community who have a disability or handicap will be
included in the planning process of community agencies. The
handicapped will become a contributor to the development of
leisure services as well as a consumer of these services.

Economic status has a direct affect on the availability
of a wide range of services for the handicapped. The cost of
prosthetic devices such as crutches, wheelchairs, walkers,
and artificial limbs make their accessibility to the handicapped
limited (King, 1970). Many handicapped individuals who
lack transportation have to rely on friends or public trans-
portation such as taxis, buses, or trains. If these means of
transportation do not provide direct travel to and from
leisure activities, the handicapped individual is likely to
remain at home (King, 1970).

For a handicapped child, the problem of recreation and
leisure is compounded, especially if the child resides within
an inner-city neighborhood. Recreation, particularly
therapeutic recreation, is almost non-existent in inner city
recreation facilities (Evans, 1975). The principal reason
is that the directors of these centers are so unfamiliar
with special populations, that they do not offer any programs

for handicapped children (Evans, 1975).

An additional implication is that once recreation programs are made available to the handicapped child, there may be no means of transportation available because of the cost involved. Lower-income families rarely if ever have discretionary income to use for unnecessary items as bus or taxi fare (King, 1970).

Summary

The handicapped individual is forced to deal with many service systems in order to meet his or her needs. As a young child the disabled child is confronted with adapting to a world which requires a variety of skills. The special education classroom provides the first service system which begins to assist the child in acquiring, developing and mastering these skills. During the child's educational career in public schools, additional help may be provided in the areas of speech therapy, physical therapy, and occuaptional therapy. The type and intensity of ancillary therapeutic services required are based upon the level of the child's ability and the type of environment in which the services are required (Mosey, 1973).

Recreation services for the disabled also depend upon the abilities of the client and the type of setting the client is living in (Gunn & Peterson, 1977). The role of the leisure service delivery system is to provide the disabled

with opportunities to develop interests and abilities which will
help them overcome boredom, a lack of stimulation, and dis-
courage isolation from the community (King, 1970). King (1970)
states the rights of the handicapped quite succinctly:

> A disabled person has the same human needs
> as a nondisabled person and therefore should have
> an opportunity to make the best possible use of
> whatever abilities he has and should have the
> chance to offer these abilities to the rest of
> his or her non-disabled peers (p.20).

The majority of legislation passed involved the concen-
trated efforts of effective lobbying groups. The handicapped
and disabled have effectively worked with the concerned
organizations to pass laws which guarantee their rights in
basic human services such as education, rehabilitation, and
recreation. The federal government will have to continue
to use their influence to encourage the development and
expansion of leisure services for the handicapped.

There are four definitions of poverty used by various
agencies in the social service field. The federal government
uses a definition based on a lack of income to determine the
poverty level. Those individuals falling below the poverty
line are eligible for a wide variety of income supplements
ranging from food stamps to rent subsidies. Three other
definitions; relative income deprivation, subjective perception
of the individual, and earnings capacity, would all increase
the number of people considered as poverty stricken. Those
individuals who are considered to be poverty stricken would
experience a lack of free time in which to have leisure
because they are forced to work longer hours, more jobs, and at

lower wages to meet their basic needs. Children who have an orthopedic impairment and have parents who are living below the poverty level have additional limitations because of the cost of prosthetic devices may be beyond the means of their families. These children have to rely on the resources of their families to provide adequate leisure activities for them.

> Handicapped youngsters have the same need to express themselves freely in wholesome, non-threatening environments as their non-handicapped peers. (Evans, 1975).

In order for these children to have the opportunity to express themselves, the environmental barriers must be assessed and ameliorated by concerned practitioners in the allied health field.

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PRELIMINARY ADMINISTRATION OF
AEBLE INSTRUMENT

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Introduction

The AEBLE instrument was administered to eighteen orthopedically impaired children in the City of Ft. Worth, Texas. Included in this sample were thirteen males and nine females. The disabilities represented included muscular dystrophy (6), cerebral palsy (5), spinal cord injury (2), spina bifida (2), asteogenesis imperfecta, rod myopathy and one unidentified disability.

The AEBLE instrument is composed of six factors, each measuring a specific type of environmental barrier. The six factors are: 1) Community Recreation Resource, 2) Architectural Barriers, 3) Accessible and Available Transporation, 4) Family Support, 5) Community Support Services, and 6) Caregiver Support. Each factor has five statements which attempt to measure various aspects of the environment. Each questions is rated as: usually a problem (3), something of a problem (2) or not a problem (1). The highest score possible on any factor is 15 and the lowest possible score is 5. The range of scores were divided into three categories: a significant problem was 12-15, somewhat of a problem was 8-11, and not a problem was 5-7.

Results

The preliminary data reveals that Factor 5 was considered a significant problem for 12 of the 18 subjects, Factor 1 was considered a significant problem for 10 of the 18 subjects, and Factor 2 was considered a significant problem for 8 of the 18 subjects.

Factors 2 and 3 were considered somewhat of a problem for 9 of the 18 subjects. Factors 5 and 6 were considered somewhat of a problem for 6 of the eighteen subjects.

Factor 4 was consistently rated as not a problem. Only one subject rated this factor as somewhat of a problem. Eight of the subjects rated

Factor 6 as not a problem and seven rated Factor 3 as not a problem.

Factor Results (NOTE: see Appendix for tables)

Factor 1. Community Recreation Resources

The overall scores for Factor 1 ranged from 6 to 14. The mean score was 10.66 with a standard deviation of 2.54.

Statement number 1 had a mean score of 2.33 with the mode being 3. Statement number 2 had a mean of 2.22 also with a mode of 3. Statement number 3 had a mean of 2.0 and was bimodal with 3 and 1 being the most frequent scores. Statement number 4 had a mean of 2.61 and also had a mode of 3. Statement number 5 had a mean of 1.50 with a mode of 1.

Factor 2. Architectural Barriers

The scores for Factor 2 ranged from 7 to 18. The mean score was 11.05 with a standard deviation of 2.60.

Statement number 1 had a mean score of 2.33 with a mode of 3. Statement number 2 had a mean score of 2.77 with a mode of 3. Statement number 3 had a mean score of 1.72 with a mode of 1. Statement number 4 had a mean of 2.0 with all scores occurring the same number of times. Statement number 5 had a mean of 2.27 and also had a mode of 3.

Factor 3. Accessible and Available Transportation

The range of scores for Factor 3 went from 5 to 15 with a mean of 8.77 and a standard deviation of 2.67.

Statement number one had a mean score of 2.5 and a mode of 3. Statements 2 through 5 were rated relatively low with mean scores of 1.66, 1.88, 1.33, and 1.38 respectively. All four statements had a mode of 1.

Factor 4. Family Support

The scores for Factor 4 ranged from 5 to 11 with a mean score of 6.27 and a standard deviation of 1.36. All five statements had modes of 1. The mean scores respectively were 1.27, 1.77, 1.44, 1.0, and 1.05.

Factor 5. Community Support Services

The scores for Factor 5 ranged from 9 to 15, with a mean of 12.50 and a standard deviation of 1.85. All five statements had a mode of 3.0 and the mean scores were 2.38, 2.77, 2.61, 2.33, and 2.38 respectively.

Factor 6. Caregiver Support

The scores for Factor 6 ranged from 5 to 12 with a mean score of 8.0 and a standard deviation of 2.40. Statement number 1 had a mean score of 2.0 and a mode of 2. Statements 2 through 5 had mean scores of 1.05, 1.38, 1.77, and 1.77. All four statements had a mode of 1.

Summary

Five of the six factors appear to be considered problems for orthopedically impaired children. Factor 1, community recreation resources and Factor 5, community support services appear to be significant problems. Factor 4, Family Support, appeared to be a problem for only one child while the remaining seventeen rated this as not a problem.

The statements for both Factors 4 and 6 should be reviewed for revision or deletion since most of these statements had a mode of 1. An additional consideration would be score all questions considered not applicable to the child as 1, not a problem. This will allow each Factor to receive a score based on all five statements.

APPENDIX

Tables of Results Per Factor

Factor 1

Community Recreation Resources

Statements

Subjects	1	2	3	4	5	Total
1	3	3	3	3	1	13
2	2	3	3	3	2	13
3	1	3	1	3	1	9
4	3	3	3	3	1	13
5	3	1	3	2	3	12
6	3	3	3	3	1	13
7	3	3	3	3	2	14
8	2	2	2	3	2	14
9	2	3	1	1	1	8
10	3	3	3	3	1	13
11	3	3	2	3	1	12
12	2	2	1	3	1	9
13	3	1	1	1	3	9
14	3	2	2	3	2	12
15	1	1	1	3	1	7
16	2	1	1	1	1	6
17	2	2	2	3	1	10
18	1	1	1	3	1	7
Total	42	40	36	47	27	192
$\bar{X}$	2.33	2.22	2.0	2.61	1.5	10.66
SD						2.54
MODE	3	3	3,1	3	1	13.00

Factor 2

Architectural Barriers

Statements

Subjects	1	2	3	4	5	Total
1	3	3	1	2	2	11
2	3	3	2	2	2	12
3	3	3	3	3	3	15
4	3	3	1	3	3	13
5	2	3	1	1	1	8
6	3	3	1	1	2	10
7	3	3	3	3	3	15
8	3	3	1	2	2	11
9	3	3	1	1	3	8
10	3	3	1	1	2	10
11	3	3	2	2	2	12
12	3	3	2	3	3	14
13	1	3	1	1	1	7
14	3	3	3	2	3	14
15	1	2	1	3	3	10
16	1	2	3	1	1	8
17	2	3	3	3	2	13
18	1	1	1	2	3	8
Total	42	50	31	36	41	199
X	2.33	2.77	1.72	2.0	2.27	11.05
SD						2.60
MODE	3	3	1	1,2,3	3	8.0

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Factor 3

Transportation

Statements

Subjects	1	2	3	4	5	Total
1	3	1	3	1	1	9
2	3	1	3	1	1	9
3	3	1	3	1	1	9
4	3	3	3	1	1	11
5	1	3	1	1	1	7
6	3	1	2	1	1	8
7	3	1	1	1	1	7
8	3	3	2	3	3	14
9	3	1	1	1	1	7
10	3	1	1	1	3	9
11	3	3	3	3	3	15
12	3	3	3	1	1	11
13	1	1	1	3	2	8
14	3	3	2	1	1	10
15	1	1	1	1	1	5
16	2	1	1	1	1	6
17	3	1	1	1	1	7
18	1	1	2	1	1	6
Total	45	30	34	24	25	158
X	2.5	1.66	1.88	1.33	1.38	8.77
SD						2.67
MODE	3	1	1	1	1	9.00

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Factor 4

Family Support

Statements

Subjects	1	2	3	4	5	Total
1	2	2	1	1	1	7
2	1	2	2	1	1	7
3	1	2	1	1	1	6
4	1	1	3	1	1	7
5	1	1	1	1	1	5
6	1	2	1	1	1	6
7	1	1	2	1	1	6
8	1	1	1	1	1	5
9	1	1	2	1	1	6
10	1	2	1	1	1	6
11	1	1	2	1	1	6
12	1	1	1	1	1	5
13	3	3	3	1	1	11
14	1	2	1	1	1	6
15	3	1	1	1	1	7
16	1	1	1	1	1	5
17	1	1	1	1	2	6
18	3	2	1	1	1	6
Total	23	32	26	18	19	113
X	1.27	1.77	1.44	1.0	1.05	6.27
SD						1.36
MODE	1	1	1	1	1	6.0

Factor 5

Community Support Services

Statements

Subjects	1	2	3	4	5	Total
1	2	3	3	3	1	12
2	2	2	3	2	2	11
3	2	3	3	2	1	11
4	3	3	2	3	3	14
5	1	2	1	3	2	9
6	3	3	3	3	3	15
7	3	3	3	2	2	13
8	2	2	3	2	2	11
9	3	3	3	1	3	13
10	3	3	3	3	3	15
11	2	2	3	1	2	10
12	3	3	1	2	3	12
13	3	3	3	3	3	15
14	1	3	3	3	3	13
15	3	3	3	3	2	14
16	3	3	2	3	3	14
17	2	3	3	2	3	13
18	2	3	2	1	2	10
Total	43	50	47	42	43	225
X	2.38	2.77	2.61	2.33	2.38	12.50
SD						1.85
MODE	3	3	3	3	3	13.00

Factor 6

Caregiver Support

Statements

Subjects	1	2	3	4	5	Total
1	2	1	1	2	2	8
2	2	1	1	2	2	8
3	2	1	1	2	1	7
4	2	1	1	1	1	6
5	1	1	1	1	1	5
6	2	1	1	1	2	7
7	2	1	1	2	2	8
8	2	1	1	1	3	8
9	3	1	1	1	2	8
10	3	1	1	3	1	9
11	2	2	2	3	3	12
12	3	1	2	2	3	11
13	3	1	3	3	1	11
14	3	1	3	3	3	13
15	1	1	1	1	1	5
16	1	1	1	1	1	5
17	1	1	2	2	1	7
18	1	1	1	1	2	6
Total	36	19	25	32	32	144
X	2.0	1.05	1.38	1.77	1.77	8.0
SD						2.40
MODE	2	1	1	1	1	8.0

MANUAL FOR UTILIZATION OF THE
"ASSESSMENT OF ENVIRONMENTAL
BARRIERS TO LEISURE EXPERIENCES"
INSTRUMENT

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PREFACE

There are a variety of factors that can impede participation in and enjoyment of leisure experiences for orthopedically impaired children and youth. The following case study illustrates the importance of assessing and overcoming environmental barriers to leisure for these individuals. It illustrates the value and potential utilization of the AEBLE Planning Guide.

Ernie is an eleven-year old who has been in a wheelchair since he was two because of a spinal chord injury. He resides with his family in an urban setting.

Ernie's teacher wants to determine the barriers which impede his participation in recreation activities. By utilizing the AEBLE instrument, she finds that Ernie doesn't attend community recreation centers cause they do not offer activities for handicapped children.

Ernie's teacher also discovers that even if programs were available, Ernie would be unable to enter the recreation center without great difficulty due to the revolving doors at the entrance. Once inside, many of the appliances and activites would remain inaccessible because of structural properties of the building, i.e., high tables, low clearance of the sinks, and high water fountains.

In addition, Ernie's parents are afraid for his safety and they tend to discourage him from becoming involved in any kind of recreation activities.

By utilizing the AEBLE Instrument, the teacher can pinpoint the significant barriers that Ernie encounters when attempting to participate in recreational activities. Using the AEBLE Profile Sheet, she is able to determine what are the most critical environmental factors that need to be dealt with.

From this information, the teacher proceeds to the AEBLE Planning Guide. On this form, the teacher lists the goals that need to be accomplished to aid Ernie in overcoming particular problem areas. For each listed goal, several strategies and responsibilities are suggested. For example, a recreation leader might be responsible for helping Ernie overcome barriers at the local recreation center while the teacher and Ernie are working with Ernie's parents to be more accepting of his independence. The teacher develops these strategies and responsibilities in order to attain the goals that must be achieved before these barriers are eliminated from Ernie's environment.

opportunity to develop social, physical, and cognitive skills, the opportunity to develop self-confidence and self-esteem, and the opportunity to develop a sense of self-worth which will contribute to an individual's personal development as well as their being a contributing member of society.

There are a number of leisure assessment instruments which are designed to determine the strengths and/or weaknesses of individuals as well as assess their leisure interests (Hubert, 1969; Overs, 1974; McKechnie, 1974). These instruments primarily focus their attention on characteristics of the individual. It is assumed that re-mediation of these deficits will lead to improved leisure functioning.

The AEBLE instrument, on the other hand, attempts to assess factors in the environment which prevent the ortho-pedically impaired individual from participating in leisure activities. Utilization of the AEBLE instrument will avoid placing all responsibility for failure to participate on respondent characteristics and yield an understanding of the role of environmental barriers to recreation and leisure participation. Together with assessment instruments that focus on characteristics of the child, the AEBLE instrument can help give a balanced picture of critical constraints that impinge on leisure participation.*

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*Within the context of the discussion of the AEBLE instrument, the terms recreation and leisure are thought to be synonymous and are used interchangeably.

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The AEBLE instrument, on the other hand, attempts to assess factors in the environment which prevent the orthopedically impaired individual from participating in leisure activities. Utilization of the AEBLE instrument will avoid placing all responsibility for failure to participate on respondent characteristics and yield an understanding of the role of environmental barriers to recreation and leisure participation. Together with assessment instruments that focus on characteristics of the child, the AEBLE instrument can help give a balanced picture of critical constraints that impinge on leisure participation.*

_____

*Within the context of the discussion of the AEBLE instrument, the terms recreation and leisure are thought to be synonymous and are used interchangeably.

THE AEBLE INSTRUMENT

The AEBLE instrument assesses the impact of six factors on recreation and leisure functioning. (See Footnote 1). These six factors are:

1. Community recreation resources for orthopedically impaired children.

2. Architectural barriers in the design of buildings used for recreation programs.

3. Family support for the child to participate in recreation programs.

4. Ancillary support services within the community which encourages participation in recreation activities.

5. Caregiver support for the child's leisure and recreation needs.

6. Transportation which is accessible and available to orthopedically impaired children.

Community recreation resources for the orthopedically impaired child refers to the presence or absence of programs which meet the needs of orthopedically impaired children. Public parks and recreation agencies for the most part usually serve the needs of the healthy, non-disabled members of society. A lack of programs for the handicapped reduces chances for these individuals to meet, socialize, and engage in recreation activities with other individuals including their non-disabled peers (King, 1980). On the other hand,

providing these opportunities provides the handicapped individual with a stronger self-concept and provides the non-disabled person with an opportunity to view the handi-capped person as a competent individual (Prial, 1976).

Architectural barriers are both man-made and naturally occurring obstacles which are inherent in the design and construction of a facility. These barriers can impede the entry and subsequent participation in activities within the facility. The primary barriers in facilities include narrow doorways, stairs, protruding thresholds, revolving doors, and inaccessible equipment and drinking fountains. In some instances, even the poor location of a recreation facility can have a negative effect on the recreation of a handicapped individual (Stephens, 1978).

In addition to barriers created by the design of a facility, many barriers exist in the surrounding environment. The terrain surrounding a facility may be too steep or rugged to allow movement by a person in a wheelchair or on crutches. The type of ground cover utilized, such as grass, wood chips, or sand, can also impede movement by wheelchairs or make the use of crutches hazardous. The resultant effect is that many handicapped individuals will not be able to participate in recreation activities conducted in such settings (Stone, 1971).

Family support for the child engaging in recreation

activities refers to members of the child's family providing
various forms of emotional, physical, psychological, and
financial support and encouragement for the handicapped
child to part:cipate in leisure activities. The child is
embedded in the family system and the family is usually
the most powerful source of support for the child in
developing and enhancing his or her sense of self-worth
and functional ability (Lyon, 1973; Power, 1979). Family
support for the child's participation in recreation provides
the child with additional motivation to develop skills.
Through participation in recreation experiences, the child
develops a greater sense of self-reliance and competence
and therefore reduces his or her dependency on the family
members for recreation activities. On the other hand,
a family system that over protects and restricts the
handicapped child for whatever reason, fosters a great
deal of dependence on the part of the child. The result
is a child with a severely limited realm of recreation
opportunities (Perske, 1972).

Support services within the community are those
programs designed to supplement existing recreation programs
available to the handicapped child. Support services are
found in the educational system, social service agencies
and advocacy programs for the handicapped. The educational
system is a primary contact for children. It is here that

they learn the academic ability and motivation to succeed in life. In addition, schools help teach about recreation activities. However, most recreation activities offered in most educational systems center around physical development, and competition. Few schools offer the means for handicapped children to engage in these activities, and this exclusion helps to create the spectator role for handicapped individuals. In addition, the opportunity to learn a wide range of artistic, dramatic, hobby and other recreational skills is usually absent.

Advocacy groups have begun to increase the awareness of society to the needs of the handicapped. With the cooperation of many social service agencies such as United Way, March of Dimes, and others, a wide range of recreation activities are now becoming available to the handicapped. Advocacy groups, however, concentrate on dependency or a narrow range of activities for the handicapped.

Caregiver response to the child's needs refer to all those individuals who are entrusted with the care of the child during the child's day. The caregiver can be parents, guardians, grandparents, relatives, teachers, therapists, or recreation leaders. Their response to the child's recreation needs include acting as an advocate. providing transportation to and from a recreation facility, or direct service delivery to the child. Barriers arise when the response to the child prevents or hinders the child's development

or opportunities in some way.

Many times in providing recreation, caregivers tend to be over-protective of the child in order to prevent injury. In reality, caregivers do not exhibit this behavior with non-disabled participants. Caregivers may view the handicapped child with feelings of pity or sorrow, and these feelings create a need to protect the child and not allow him or her the opportunity to engage in activities which may be perceived as risky (Perske, 1976).

Accessible and available transportation enables a handicapped individual to move about his or her community with minimal assistance. Transportation involves both the public transit system such as buses and cabs, as well as the services provided by private transportation enterprises and family automobiles. Transportation plays a large role in a child's daily activities. Usually orthopedically impaired children are dependent upon others to travel from one place to another. The availability of transportation which is accessible by handicapped individuals means that the individual has the independence to go and do whatever they want, including attending recreation activities. The absence of suitable transportation significantly reduces the independence of the handicapped individual. This situation can arise when a bus or automobile is not equipped to handle a wheelchair, or an individual is unable to negotiate the steps on a bus or unable to maneuver into a

seat. The lack of transportation designed to accommodate these special situations has a negative effect on the possibilities of participation in recreation activities for handicapped individuals.

The presence of any or all of these factors tends to increase the dependency of the handicapped on others for satisfying their recreation activities. Skill development, enhanced self-worth, competence, and socialization are all part of becoming a contributing member of society and fully enjoying leisure experiences. Identifying barriers to the development of these skills will allow the child and his/her support system to actively plan means of overcoming or circumventing these barriers and participating more actively in leisure.[1]

The AEBLE instrument was developed based on these six factors. An interview guide has been developed to assess the relative importance of each of the six factors. Each guide contains a series of questions which the interviewer can utilize to elicit responses. Additional questions can be added at the discretion of the interviewer to help obtain more complete information about a given factor.

PROCEDURES FOR ADMINISTRATION

The "Assessment of Environmental Barriers to Leisure Experiences" Instrument (AEBLE) is designed to be administered by a teacher, therapist, recreation leader, or parent familiar with the child. Information gathered from the instrument can and should be supplemented by knowledge of the child from the teacher, therapist or recreation leader.

The instrument uses an interview to obtain information about the child's perception of difficulties he or she has in participating in recreation activities. The interview should be conducted in an area or small room free from visual or auditory distractions. The teacher or therapist conducting the interview should first become familiar with both the definitions and descriptions of the six factors as well as with the six interview guides.

The interview guides are to serve as a starting point for the interviewer. The questions are to be answered by the respondent as either: 1) "Not a Problem For Me", 2) "Sometimes a Problem For Me", 3) "Usually A Problem For Me". For each question, the child should be asked to clarify his or her answer. The response to each question is recorded on the interview guide. Once all the questions have been answered and clarified, the interviewer may wish to ask

additional questions for further clarity. As each factor
is completed, the child can be asked how he or she feels
about the factor in general. When all of the factors have
been completed, the interviewer may wish to make additional
comments.

Test Administration

The AEBLE instrument should be individually administered
to children. The following steps should help in collecting
useful information.

Estimated Time Of Administration

The estimated time for the completion of the AEBLE
instrument is thirty (30) minutes which allows five (5)
minutes for each factor.

GENERAL INSTRUCTIONS

Please read this and all remaining instruction sections very carefully.

Protocol (Steps to Administer the Instrument)

STEP 1 — Read and familiarize yourself with the rationale of the AEBLE project.

STEP 2 — Read and carefully familiarize yourself with the six (6) factors of the AEBLE instrument.

STEP 3 — Arrange and select the dates and times for the individual administration of the AEBLE instrument. Also pick alternate dates and times during the following week in case a given child is absent, sick, or otherwise unavailable.

STEP 4 — Identify and secure the necessary room(s) for the administration of the instrument. The room should have the following:

- tables and chairs
- adequate lighting
- adequate air conditioning or heat
- be void of major distractions or noise

You will need the room for approximately one-half hour to forty-five minutes per child.

STEP 5 — Make the determination whether or not each selected child is capable of coming to the scheduled room and completing the survey with minimal assistance. If not, you will need to schedule them for an alternative site.

STEP 6 — Set up the room for the administration of the instrument. Be sure to have the following items:

- The AEBLE instrument and manual
- The AEBLE answer sheet
- Pen or pencil

STEP 7 - Bring the child to the testing area and seat him/her at the table.

STEP 8 - Read the following statement of purpose of the instrument to the child:

"YOU ARE GOING TO HELP ME FIND OUT ABOUT WHAT KINDS OF THINGS EITHER HELP YOU OR STOP YOU FROM PARTICIPATING IN RECREATIONAL ACTIVITIES. THE WAY WE'RE GOING TO FIND OUT ABOUT THESE THINGS, IS THAT I WILL ASK YOU A QUESTION AND YOU CAN ANSWER EACH QUESTION BY SAYING: "THIS IS NOT A PROBLEM FOR ME", "THIS IS SOMETIMES A PROBLEM FOR ME", OR "THIS IS USUALLY A PROBLEM FOR ME".

Example:

QUESTION: "IT'S DIFFICULT FOR ME TO GET FROM THE PARKING LOT INTO A BUILDING."

ANSWER: "THIS IS USUALLY A PROBLEM FOR ME BECAUSE I NEED ASSISTANCE GETTING OUT OF THE CAR, OVER CURBS, OR THROUGH THE DOORS."

STEP 9 - Then ask, "Are there any questions?"

STEP 10 - Tell the child that there are no right or wrong answers. You are only interested in their opinions or ideas.

STEP 11 - Administer the instrument:

A. Proceed to Factor 1 of the Interview Guide (Community Recreation Resources). Make any extra notes which you feel will help you score this area under the questions for each factor.

B. Proceed to Factor 2 (Architectural Barriers)

C. Proceed to Factor 3 (Family Support)

D. Proceed to Factor 4 (Community Support Services)

E. Proceed to Factor 5 (Caregiver Support)

F. Proceed to Factor 6 (Transportation)

STEP 12 - Then ask, "Are there any questions?"

STEP 13 - Refer to the Scoring Guide and score the instrument.

Instructions for Scoring

For Factors 1 to 5 there are five (5) questions per factor and the answer to each question will be scored from one to three points. (Procedures for factor 6 dealing with transportation barriers will be handled differently).

Score each question in the folliwing manner:

      Usually a Problem - 3 points

      Sometimes a Problem 2 points

      Not a Problem - 1 point

Total the points for each factor separately by adding the scores of each of the five (5) questions.

For the transportation factor only three questions are asked. To make scores commensurate with the previous factor, multiply the total scores by 1.6 and round off the nearest whole number.

Now, refer to the Profile Sheet and mark the appropriate score for the corresponding factor:

Example: Factor 1 might receive a score of 9 points. Place an "X" on the point where the score of "9" would intersect with the line for Factor 1.

Follow this procedure until each of the five factors have been scored. For a clearer illustration, join the marks to reveal the environmental barriers profile for the child.

Example:

· 15
highest
possible
score

5
lowest
possible
score
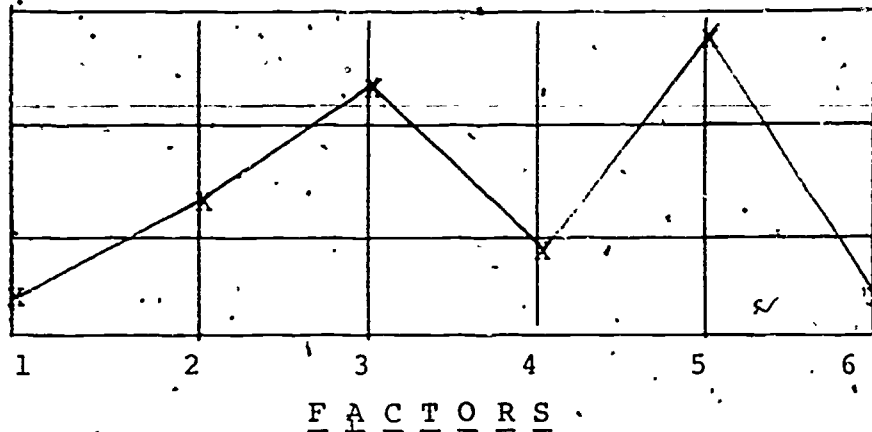
F A C T O R S

Interpretation of the Instrument

The scores for the Profile Sheet are divided into three levels. A factor with a score falling in the range between 5 and 7 inclusive, would be considered not a signficant environmental barrier to the child's leisure participation. Factors with scores falling in the range between 8 and 11 inclusive would be considered as somewhat of an environmental barrier for leisure participation. Factors with scores falling into the range between 12 and 15 would be considered significant environmental barriers for the leisure participation of the child. The factors in a range of 12 to 15 should be immediately targeted for corrective action.*

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*It should be noted that these domains are somewhat arbitrary. The experience and judgment of the tester may also be utilized to determine cut-off points.

There may be several scores in the top two levels.
To determine which factor(s) are more important, rank the
factors on the basis of their score from highest (most
important) to lowest (not very important). The factor
that is ranked first could be the one which will receive
the most attention. Lower ranked factors would receive
proportionately less attention.

Now proceed to the AEBLE Planning Guide for steps to
overcome identified barriers.

FOOTNOTE

[1]Development of the AEBLE Instrument

The AEBLE instrument was developed through a literature

search and a survey involving park and recreation professionals.

The literature review included examination of current

articles, textbooks, and dissertations in the field of

psychology, education, sociology, and leisure studies

dealing with the various environmental barriers encountered

by orthopedically impaired children. The review of litera-

ture led to the identification of three environmental

elements which would seem to have an influence on the leisure

participation of a handicapped child. These environmental

elements were identified as the physical environment, the

human environment, and the organizational/political environ-

ment.

The identification of the environmental elements led

to the development of a preliminary survey of environmental

barriers which was designed to determine the relative

importance of each of the three major elements and sub-areas

within each element. The survey contained twenty-eight

statements, twelve addressing the physical environment,

eight addressing the human environment, and eight addressing

the organizational/political environment.

The survey instrument was completed by 12 recreation

professionals in the Dallas-Fort Worth metroplex area. The

data was analyzed, and six factors were created from the

responses. The data were analyzed using a principle component factor analysis with R^2 for the communalities. Six factors were rotated to simple structure based on an eigenvalue greater than or equal to 1.00 using a varimax procedure. Sixty four percent of the variance was accounted for by these six factors. The six factors are as follows:

1. Community recreation resources for the orthopedically impaired children.

2. Architectural barriers in the design of facilities used for recreation.

3. Family support for the child to participate in recreation programs.

4. Ancillary support services within the community.

5. Caregiver support to the child's leisure and recreation needs.

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ASSESSMENT OF

ENVIRONMENTAL BARRIERS

TO LEISURE EXPERIENCES

Interview Guide

And

Instructions

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General Instructions

Before you begin to use the AEBLE instrument, read the section in the manual entitled, "The AEBLE Instrument". In that section, there is a description and definition of each of the six factors on the AEBLE instrument. These definitions will assist you in understanding the purpose of each of the six groups of questions. Also read the section entitled, "Protocol".

It is recommended that the following steps be used as steps in completing the AEBLE interview guides:

STEP 1--Make any notes in the space provided which will help to understand the answer given by the child.

STEP 2--Repeat the range of possible answers and explain each to the child.

3--Usually A Problem means that the statement describes a problem for the child which occurs when he/she tries to participate in recreation activities.

2--Sometimes A Problem means that depending on the situation, the statement read may cause the child a problem, but not all the time.

1--Not A Problem means that the problem described does not usually affect the child's recreation participation.

STEP 3--Begin with Factor 1 and read the first statement to the child.

STEP 4--Circle the appropriate number that correlates with the child's response in the appropriate space.

STEP 5--Read the next statement and circle the appropriate number of the child's response.

STEP 6--Continue until all statements for that factor have been circled.

STEP 7--Answer any questions the child might have.

STEP 8--Total the scores for the five statements and go on
to the next factor. For Factor 6 (transportation),
there are only three questions. You will need to
multiply the total score for this factor by 1.6 to
give it equal weight with the other areas.

STEP 9--When all six factors have been completed, refer
to the section entitled, "Scoring" for further
instructions.

PROFILE SHEET

Name of
Child _____

Name of
Interviewer _____

Age _____

Position/
Title _____

Sex _____

Date _____

Disability _____

Name of
Facility _____

	1	2	3	4	5	6
A Significant Problem 15						
14						
13						
12						
11						
Somewhat Of A Problem 10						
9						
8						
7						
Not A Significant Problem 6						
5						

1	2	3	4	5	6
Community Recreation	Architec. Barriers	Family Support	Community Support Services	Caregiver's Support	Transportation

F A C T O R S

FACTOR 1: COMMUNITY RESOURCES

COMMUNITY RECREATION RESOURCES FOR ORTHOPEDICALLY IMPAIRED CHILDREN

NOT A PROBLEM	SOMETIMES A PROBLEM	USUALLY A PROBLEM	
1	2	3	I don't go to recreation centers because they don't offer activities I can join. COMMENTS:
1	2	3	I don't go to movie theatres, bowling alleys, or amusement centers because the way they are built makes it hard to get around. COMMENTS:
1	2	3	I don't go to the park because it's too hard to move around on grass or rough ground. COMMENTS:
1	2	3	I don't go to the playground because the equipment is just too difficult to use. COMMENTS:
1	2	3	I don't attend summer camp because there aren't any camps that have programs for kids like me. COMMENTS:

_____ Total Score for Factor 1 (Transfer to Profile Sheet)

Proceed to Factor 2

FACTOR 2: ARCHITECTURAL BARRIERS

ARCHITECTURAL BARRIERS IN THE DESIGN OF RECREATION FACILITIES

NOT A PROBLEM	SOMETIMES A PROBLEM	USUALLY A PROBLEM	
1	2	3	It's difficult for me to get from the parking lot into a building. COMMENTS:
1	2	3	Narrow doors and stairways make it hard for me to around a building. COMMENTS:
1	2	3	Tables and chairs are not easy for me to use because of their height. COMMENTS:
1	2	3	It's hard for me to join in any outdoor activities unless they are done on hard surface. COMMENTS:
1	2	3	Bad weather makes it hard for me to get around outside because the sidewalks get wet and the ground gets too soft. COMMENTS:

_____ Total score for Factor 2 (Transfer to Profile Sheet)

Proceed to Factor 3

FACTOR 3: FAMILY SUPPORT

FAMILY SUPPORT FOR THE CHILD TO PARTICIPATE IN RECREATION ACTIVITIES

NOT A PROBLEM	SOMETIMES A PROBLEM	USUALLY A PROBLEM	
1	2	3	My parents don't take me to local recreation activities. COMMENTS:
1	2	3	My parents don't like for me to participate in recreation activities because I might get hurt. COMMENTS:
1	2	3	My brothers or sisters don't encourage me to get involved in recreation activities. COMMENTS:
1	2	3	My family doesn't include me in many of their recreation activities as a participant. COMMENTS:
1	2	3	My family doesn't help me get the most out of my recreation activities. COMMENTS:

_____ Total Score for Factor 3 (Transfer score to Profile Sheet)

Proceed to Factor 4

FACTOR 4: SUPPORT SERVICES

SUPPORT SERVICES IN THE COMMUNITY WHICH ALLOW FOR RECREATION ACTIVITIES

NOT A PROBLEM	SOMETIMES A PROBLEM	USUALLY A PROBLEM	
1	2	3	There aren't any recreation programs for me at my school. COMMENTS:
1	2	3	There aren't any recreation programs for me in my neighborhood. COMMENTS:
1	2	3	My church doesn't offer any recreation activities for me. COMMENTS:
1	2	3	There aren't any local organizations such as the Lions Club, Kiwanis, or the Rotary that offer recreation activities for me. COMMENTS:
1	2	3	There aren't any recreation programs offered by any of the neighborhood service groups like United Way or the Y.M.C.A. COMMENTS:

_____ Total Score for Factor 4 (Transfer score to Profile Sheet)

Proceed to Factor 5

FACTOR 5: CAREGIVER SUPPORT

CAREGIVER SUPPORT FOR THE RECREATION NEEDS OF THE CHILD

NOT A PROBLEM	SOMETIMES . A PROBLEM	USUALLY A PROBLEM	
1	2	3	My teacher doesn't encourage me join in recreation activities. COMMENTS:
1	2	3	My parents don't encourage me join in recreation activities. COMMENTS:
1	2	3	My relatives don't encourage me join in recreation activities. COMMENTS:
1	2	3	When I'm at a recreation activity, the leader doesn't try to get me involved. COMMENTS:
1	2	3	My therapists don't know enough about my recreation needs to encourage my participation in activities. COMMENTS:

_____ Total Score for Factor 5 (Transfer score to Profile Sheet)

Proceed to Factor 6

FACTOR 6: TRANSPORTATION

ACCESSIBLE AND AVAILABLE TRANSPORTATION FOR HANDICAPPED CHILDREN

NOT A PROBLEM	SOMETIMES A PROBLEM	USUALLY A PROBLEM	
1	2	3	There is a lack of accessible and convenient public transportation systems for me to use (buses, taxis), in order to get to community recreation facilities. COMMENTS:
1	2	3	My parents or other family members are unable to drive me to recreation activities. COMMENTS:
1	2	3	There are no local agencies (Lions Club, United Way, etc.) that provide transportation for the handicapped. COMMENTS:

_____ Total Score for Factor 6 (Transfer score to Profile Sheet)

THE AEBLE PLAN

Once the AEBLE instrument has been administered, scored, and interpreted, it is recommended that an Action Plan be com-. pleted that can be used to help the child overcome environmental barriers to his or her leisure participation.

The AEBLE plan has been designed so that one or several environmental barriers can be analyzed. Once goals are identified, strategies can be formulated which will outline in detail means to overcome or eliminate a particular environmental barrier.

The AEBLE plan is composed of five sections: a) Goals, b) Strategies, c)Responsibilities, d) Duration, and e) Evaluation. The summary sheet is used as a reference guide on which the goals and strategies are listed in an abbreviated style. This allows for a person to obtain a quick overview of the environmen- tal factors that are being worked on. Further detail about each goal is then found on the appropriate detail sheets.

The "Goals" section is where the goal for each child is listed. The goal(s) should address overcoming a particular environmental barrier to leisure participation. For example, a child may find that the local recreation center doesn't offer recreation programs for the handicapped. A goal may then be to get the recreation center to offer programs which can be participated in by handicapped children.

Once the goal has been identified, a strategy for accom- plishing the goal should be outlined. The strategy may be broken down into general steps. Refer to the example plan for

an illustration. This breakdown of each strategy allows for the evaluation of the success of each step, and planning strategy changes if necessary.

A strategy for the goal stated above could be broken down into: a) contacting the recreation center to determine what programs are offered, b) finding out which one the child wants to join, c) determining ways which would allow for participation by the child such as modifying the activity, the equipment, or its location (further strategies could be added to this list).

The "Responsibility" section is used to designate who has the responsibility for undertaking each of the proposed strategy steps. Responsibility may belong to the child, teacher, therapist, recreation leader, parent, or some combination of these people. The child, teacher, or therapist may be responsible for contacting the local recreation center and finding out about their various programs. It should be the child's responsibility to determine which programs he or she wants to participate in. The recreation leader then becomes responsible for helping the child participate in the recreation activity.

The section marked "Duration" is used to indicate when the steps to overcome a particular barrier will be initiated and when a given barrier is expected to be overcome. The time required is based upon an estimation of the time required to successfully complete each step of the strategy.

The "Evaluation" section is used for evaluating the success of each of the strategy steps. The evaluation should be used to find out whether it is necessary to alter, continue, or

rewrite the goal or strategy. For example, after an evaluation,
it may be determined that specialized equipment is needed to
help the child participate in the recreation activity. Also,
the activity may have to be modified in order for the child to
receive the maximum benefit from it.

The AEBLE plan is to be used as a guide in helping the
child overcome or eliminate environmental barriers to his or her
leisure participation. In the process of planning a strategy
for dealing with a specific environmental barrier, it may be
necessary to teach the child a new method for coping with the
environmental barrier until a permanent change in the environ-
ment can be facilitated. For example, in the description of
Ernie (see Preface), it was stated that Ernie's family is afraid
for his safety so they tend to discourage any interest or in-
volvement in community recreation. A possible solution to this
environmental barrier is helping Ernie's family change their
attitude to become more open to his recreation needs. However,
until this is achieved, the therapist may have to teach Ernie
how to behave more independently in order to prove his abilities.

The AEBLE plan provides a mechanism for improving the
environmental conditions which prohibit leisure participation
of the handicapped. Use of the plan provides the means for
identifying these environmental barriers which are significant
problems for handicapped children. As a result of identifying
goals to be achieved, the child is able to engage in recreation
activities of his choice and enjoy a happier, healthier lifestyle.

AEBLE PLANNING FORM

Date _____

Name of Child: _____ Age _____ Sex _____ Disability _____

Name of Interviewer: _____ Position/Title _____ Name of Facility _____

Factor(s) to be corrected: _____

GOAL	STRATEGY	RESPONSIBILITY	DATE BEGUN	DATE COMPLETED	EVALUATION

13

AEBLE   PLANNING FORM

Date   8-21-81

Name of Child: Ernie S.   Age   11   Sex   M   Disability Spinal Cord Trauma

Name of Interviewer: Michael A.   Position/Title   Teacher   Name of Facility Crockett Elem.
                                                                                                    School

Factor(s) to be corrected: 1. Community Recreation Sources

2. Transportation Systems

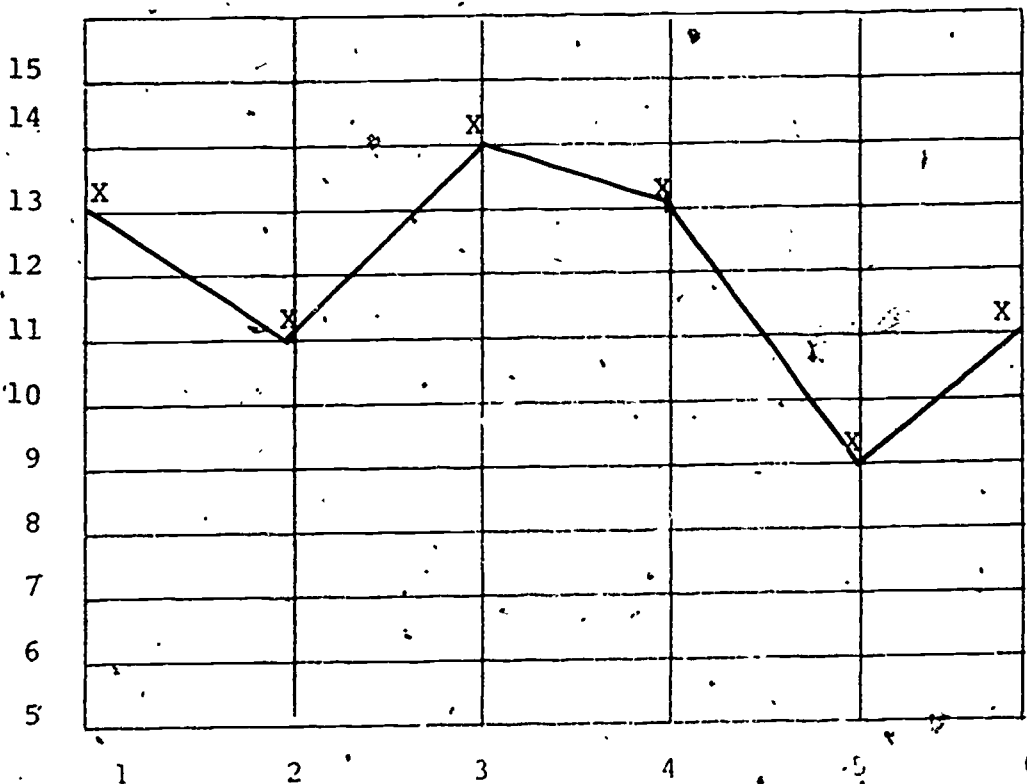| GOAL	STRATEGY	RESPONSIBILITY	DATE BEGUN	DATE COMPLETED	EVALUATION
1. To increase the availability of recreation programs that Ernie can participate in at the local community recreation center.	1a) Contact local recreation center.	1a) Teacher	9-1-81	9-15-81	a) Talked to Director She's very supportive
	1b) Determine what programs are offered.	1b) Teacher, recreation leader	9-15-81	9-16-81	b) A large realm of programs are offered
2. To develop an appropriate and adequate transportation system for Ernie to use to get to and from the recreation center.	1c) Determine which programs or activities Ernie is interested in.	1c) Ernie, teacher	9-16-81	9-16-81	c) Swimming & chess
	1d) Modify activities if necessary.	1d) Teacher, recreation leader	9-16-81	10-5-81	d) Join chess club & get qualified instructor
	2a) Get bus schedule and fare rates.	2a) Teacher	9-1-81	9-2-81	2a) Talked to bus company
	2b) Determine where Ernie can get on a bus.	2b) Teacher, recreation leader	9-1-81	9-2-81	2b) Talked to bus company
	2c) Determine if Ernie is able to get on and off a bus.	2c) Teacher and Ernie	9-3-81	9-5-81	2c) Ernie is able to get on & off the bus.

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PROFILE SHEET

Name of
Child   Ernie S

Name of
Interviewer   Michael A.

Age   11

Position/
Title   Teacher

Sex   M

Date   9-1-81

Disability Spinal Cord Trauma

Name of
Facility Crockett Elementary School

	1	2	3	4	5	6
A Significant Problem 15 14 13 12 11						
Somewhat OF A Problem 10 9 8 7						
Not A Significant Problem 6 5						

Community Recreation	Architec. Barriers	Family Support	Community Support Services	Caregiver's Support	Transportation

F A C T O R S