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AUTHOR Dillenschneider, Cindy A.
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ABSTRACT

The paper explores basic concepts of mental retardation and proposes wilderness adventure programing as an approach that offers mentally retarded persons the dignity of taking a reasonable risk. Benefits of such programing are cited for affective, cognitive, and psychomotor domains. Processes involved in the therapeutic bases for program development are traced from needs assessment, component analysis (covering physical, social, task, perceived risk, and leadership components), and evaluation. An example is provided of designing a therapeutic program to increase risk taking behavior and self esteem. The distinction between a therapeutic and a recreational model for wilderness adventure programing is stressed. Among appended materials is a list of common program activities and the corresponding needs addressed. (CL)

WILDERNESS ADVENTURE PROGRAMMING FOR THE MENTALLY RETARDED: A RATIONALE AND THERAPEUTIC BASIS FOR PROGRAM DEVELOPMENT

by

Cindy Dillenschneider

CONTENTS

FIGURES

Chapter 1

INTRODUCTION

> For many who work with the retarded, "mental retardation" triggers such action words as "protect", "comfort", "keep safe". . . . Acting on these impulses at the right time, can be benevolent, helpful, and developmental. But, if they are acted upon too intensely, or if they are used exclusively without allowing for each retarded person's individuality and growth potential, he becomes overprotected and emotionally smothered. In fact, such overprotection endangers the retarded person's human dignity and tends to keep them from experiencing the normal taking of risks in life which is necessary for normal human growth and development. (Perske, n.d., p. 1)

These words by Robert Perske so aptly state a problem encountered frequently within the United States today; the paradox between the duty of the protection of the retarded and the duty of allowing the dignity of reasonable risk to the retarded.

In the past, retarded persons have been removed from society and placed in institutions solely providing for maintenance needs. They have been written off as burdens to society with no potential for personal development or usefulness. Recently, we have begun to recognize the mentally retarded person as a human being with rights to as normal a life as possible. Programs have been developed to encourage intellectual development, economic usefulness, and social and recreational fulfillment.

Wilderness adventure programming for the average population has been recognized as affecting, in a positive manner, attitudes and abilities of many participants (Godfrey, 1974; Pollock, 1976). The author's purpose is to explore the rationale of providing wilderness adventure programs to the mentally retarded population and establish a therapeutic basis for

the development of wilderness adventure programs as an adjunct to standard educational, recreational, and rehabilitation programs.

The main body of information is divided into three areas: Chapter Two contains the definitions of pertinent terms and background information on the mentally retarded population. Chapter Three is an exploration of the rationale for wilderness adventure programming based on the assimilation of supportive literature. Chapter Four is a discussion of the therapeutic basis for wilderness adventure programs involving the mentally retarded population.

The author has not attempted to statistically prove the value of wilderness adventure programs for the mentally retarded population, but does intend to provide anecdotal evidence of the benefits to mentally retarded participants of these programs.

Chapter 2

DEFINITIONS AND BACKGROUND INFORMATION

In order to standardize the communication of ideas between the author and the reader, definitions and background information pertinent to the subject matter are given as follows: a) definition of wilderness adventure programming and a brief explanation of the program components; b) definition of wilderness adventure activities; and c) definition of mental retardation and an overall view of prevalence, causes, characteristics and ramifications of mental retardation.

Wilderness Adventure Programming

Wilderness Adventure Programming refers to "learning programs in which outdoor pursuits that are either physically or psychologically demanding are used within a framework of safety and skills development to present meaningful challenges leading to increased satisfaction and personal, social, and environmental awareness" (Bagby, 1980, p. 1).

The components of wilderness adventure programs are designed to facilitate a desired change in behavior and attitude or reinforce specific behaviors and attitudes. Figure 1 describes the general program components and the behaviors and attitudes encouraged.

Wilderness Adventure Activities

Wilderness Adventure Activities will be defined as "Those experiences utilizing the natural environment which challenge the capabilities

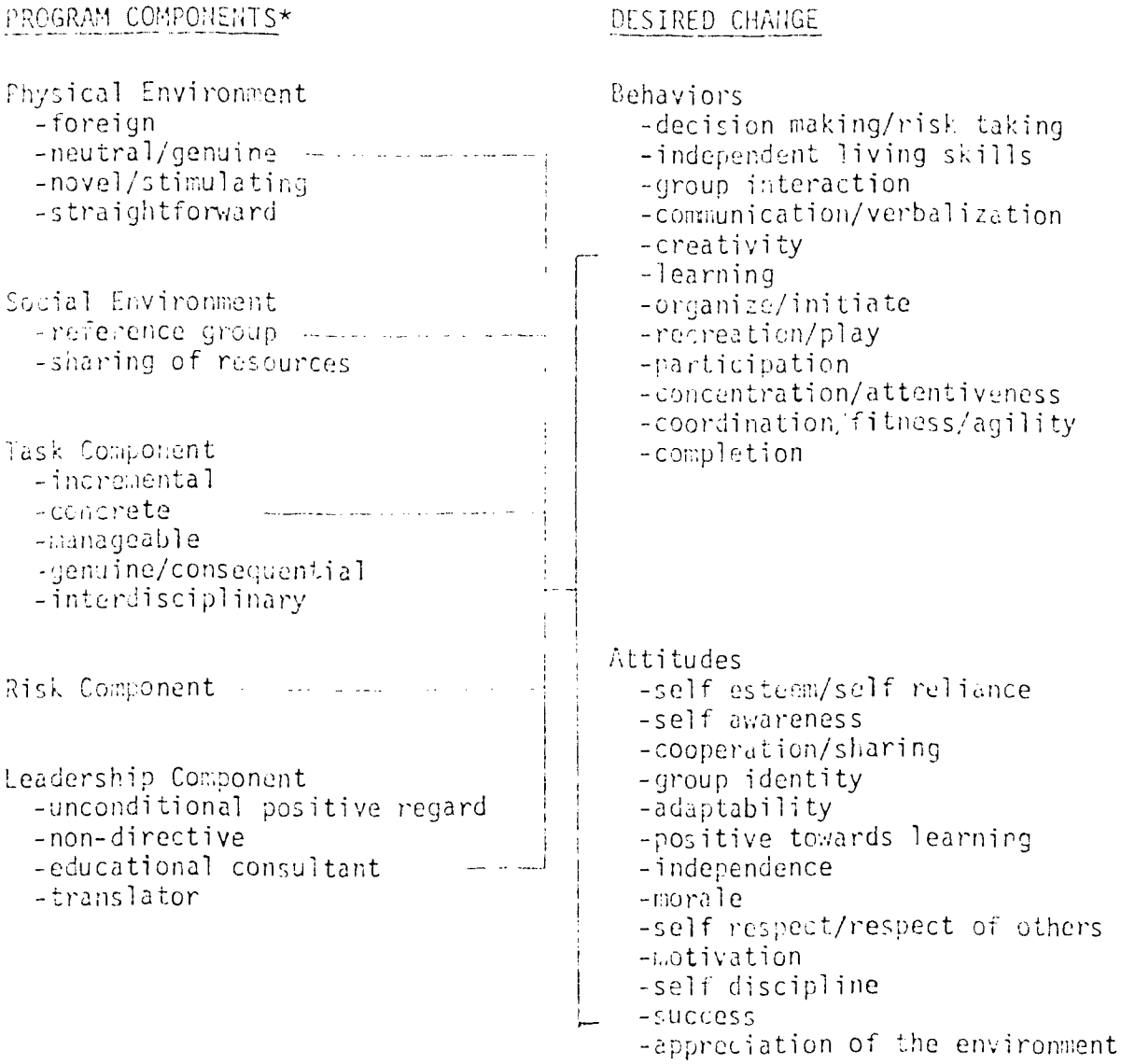

Figure 1

Desired Effect of Program Components on
Attitude and Behavior

*Program components are defined and explained in detail in Chapter Four. Program components do not have a direct cause and effect relationship on specific behavior and attitudinal changes.

of the participant mentally, physically, and psychologically" (Van Der Smissen, 1980, p. 1). The adventure comes in attempting to master a series of real situations and tasks, imposed by the environment, which contain a certain amount of perceived risk.

Mental Retardation

Mental retardation, as defined by the American Association on Mental Deficiency (AAMD), is:

> The significantly sub-average general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period.
>
> General intellectual functioning is defined as the results obtained by assessment with one or more of the individually administered general intelligence tests developed for that purpose.
>
> Significantly sub-average is defined as I.Q. more than two standard deviations below the mean for the test.
>
> Adaptive behavior is defined as the effectiveness or degree with which an individual meets the standards of personal independence and social responsibility expected for his/her age and cultural group.
>
> Developmental period is defined as the period of time between birth and the 18th birthday. (Grossman, 1973, p. 11)

The dynamic approach to mental retardation, concerned with the underlying reasons for behavioral reactions, asserts that intellectual functioning is not static and is a result of many interacting factors including motivation and cultural experiences. Attitudes of society coupled with the mentally retarded person's limited intellectual capacity jointly determine the mentally retarded person's actions to his/her limitations (Hutt & Gibby, 1979, p. 16).

Corbin (1976, p. 65) stated, "Research indicates that environments rich in sensory stimulation yield positive changes in behavior whereas

environments low in sensory experiences lead to social, motor, and intellectual retardation." The implications are that mental retardation is a condition which may improve through significant intervention practices which stimulate development and adaptation.

Prevalence of Mental Retardation

It is estimated that there are currently greater than five and one-half million mentally retarded persons in the United States. The extent of mental retardation based on demonstrated I.Q. is described below by the AAMD classification system.

Level	I.Q. Range - Wechsler Scale
Mild	55-69
Moderate	40-54
Severe	25-39
Profound	below 25

(Grossman, 1973, p. 19)

Of the five and one-half million persons considered mentally retarded, approximately five million are considered mildly retarded (The President's Committee on Mental Retardation, 1976, p. 7). Mildly retarded persons and some moderately retarded persons have the potential to achieve an academic level between third and seventh grade and an independent vocational level including at least marginal support for a family (Haring, 1974, p. 297). All severely retarded persons and moderately retarded persons with I.Q.'s up to 50, although being semi-dependent throughout their lives, have the potential for learning self-help skills, socially adjusting to family and neighborhood, and being economically useful in a sheltered workshop (Haring, 1974, p. 419). Profoundly retarded persons are in need of custodial care and will not be considered in the scope of this paper.

Causes of Mental Retardation

Although the specific cause of mental retardation in an individual is usually unknown, some causes include:

1. Physical injury
2. Metabolic/nutritional disorders
3. Infection and intoxication
4. Disease (pre- and postnatal)
5. Chromosonal abnormalities
6. Gestational disorders
7. Psychiatric disorders
8. Environmental influences

Characteristics and Ramifications of Mental Retardation

Although mental retardation effects each person differently, there are some characteristics common to the mentally retarded population and ramifications of these characteristics should be taken into account in order to understand the needs of the mentally retarded person.

Intellectual functioning. The difference in mental maturity between mentally retarded persons and average persons increases with age. By the age of 14 a moderately retarded person may, at the lower limits have a mental age of 5.6 (Hutt & Gibby, 1979, p. 77). The impact of this difference upon the mentally retarded person's social success and academic readiness is significant. Often, successful and rewarding experiences are overshadowed by repeated failures and frustrations. Emphasis must be placed on areas in which the mentally retarded person may excell.

Variability in behavioral performance. Behavioral performance measurements taken from physical, intellectual, academic, and personality functions indicate variability within each child is greater than the variability suggested based on I.Q. alone. Although I.Q. is an important factor in estimating one's potential, it must not be regarded as the definitive measure of a person's total functioning capability.

Physical development and performance. Stages of physical development and performance in mild and moderately retarded persons are not different from average peers, but development and performance are slowed as I.Q. decreases especially in retardation caused by metabolic factors. In most cases, physical performance can match that of normal peers if adequate training is provided.

Sensory motor skills. Sensation seems to be normal but motoric responses necessary in receiving sensations may be deficient lending to less and less varied sensory motor experiences.

Perceptual ability. "Mentally retarded persons are as perceptually reactive as average persons but have difficulty in organizing and analyzing their percepts adequately" (Hutt & Gibby, 1979, pg. 82). There are also deficiencies in skills and experiences necessary to the formation of adequate percepts. These include attending, language, and conceptualization skills as well as a lack of differentiation between self and object.

Motor development. Motor development is slower in both fine and gross motor skills but mentally retarded persons are usually closer to peers in motor ability than intellectual ability. Motor abilities

concerning equilibrium, locomotion, complex coordination, and manipulative dexterity are usually deficient, but can be improved through training programs.

Memory and attention span. These are often considered highly deficient but the difference between average and retarded persons is probably largely due to mental maturity. These are also affected by interest, motivation, experience, and personal relevance.

Speech and communication development. The maldevelopment of speech and communication is usually affected by mental age, cultural deprivation, and/or brain injury. Poor development is not caused by mental retardation unless the retardation is itself caused by or complicated by disorders of the central nervous system. Often poor development of communication skills is directly related to environmental conditions.

Social behavior and adaptation. Social abilities are generally inferior based partially on a relatively low self concept and high frustration levels, partially on inadequate social opportunities, and partially on other's attitudes of the retarded.

Transfer of learning. Generally there is little transfer of learning except in specifically structured settings. Transfer of general skills and concepts occurs more readily than specific skills or concepts (Hutchinson, 1975, pp. 2-7).

Use of leisure time. Mentally retarded persons usually do not engage in spontaneous play and must be taught specific play and leisure skills. Appropriate use of leisure time can facilitate the normalization

of the mentally retarded.

Other associated conditions. Mental retardation is most often associated with other handicaps involving motor control, perceptual abilities, or other physical or emotional abilities. The following chart describes the prevalence of handicaps associated with mental retardation as found in Hutt and Gibby (1979).

Prevalence of Other Handicaps in Mentally Retarded Persons

Handicap	Total %	% Partial Handicap	% Severe Handicap
Speech	54.9	33.4	21.5
Upper Limb Fine Control	43.9	34.9	9.0
Upper Limb Gross Control	42.4	34.2	8.2
Ambulation	42.3	32.4	9.9
Emotional Disorders	42.0	35.7	6.3
Vision	26.8	20.9	5.9
Toilet Training	22.5	10.2	12.3
Seizures	17.3	15.1	2.2
Hearing	14.9	11.5	3.4

(1979, p. 30)

Chapter 3

EXPLORING A RATIONALE

In reviewing current literature it quickly became apparent that there is little information specifically concerning adventure programming involving mentally retarded persons. Therefore, it became necessary to look for applicable studies within other areas. Resources were tapped in areas concerning development, rehabilitation, and leisure of mentally retarded persons as well as wilderness adventure programming with normal and physically disabled populations and studies concerning leisure needs of physically disabled persons. The validity for these inclusions comes from the following:

1. It is generally accepted that mentally retarded persons progress through the same intellectual, emotional, and physical developmental stages as normal persons only at a slower rate and that development may arrest at an earlier age (Stephens, 1971, pp. 70-101; Hutt & Gibby, 1979, pp. 146-152).

2. Mentally retarded persons face many of the same conditions as physically disabled persons, i.e. social isolation, associated disabilities, increased need for leisure skill development, and low self-esteem (Hutt & Gibby, 1979, p. 30).

As stated previously, mental retardation is not a static condition; it CAN BE POSITIVELY AFFECTED THROUGH A VARIETY OF MEANS. Wilderness adventure programming is one method which can provide benefits in the

affective, cognitive, and psychomotor domains.

Benefits of Wilderness Adventure Programming to Affective Domain

The affective domain encompasses attitudes towards self, others, and the environment. It is recognized that personal growth occurs as the participant stretches beyond his or her technical skill level and thereby enters a risk situation. It is here, when success occurs, that the individual begins to develop self-confidence and self-respect. It is the feeling of self-esteem which allows us to go on to further challenges and to persevere through difficult times.

Studies of standard residential camp programs have reported improvement in self-concept (Pick, 1975, pp. 28-29; Steel, 1969), but it is a primary component of adventure programming to stress experiences which push a person beyond his or her usual performance and perceived limits in a graduated manner designed for success. It is this component of design which promotes the personal growth reported in a limited study by Vidolovits-Moore (1979, pp. 28-30, 43) involving educable mentally retarded youngsters in an outdoor adventure education program.

Evidence supporting the value of adventure programming in providing personal growth experiences has been presented by Clifford and Clifford in 1967 when they reported non-specific significant increases in self-concept in adolescent males after survival training at Outward Bound (Clifford & Clifford, 1967, pp. 241-248).

Heaps and Thorstensen in 1974 reported in a retest of 21 participants, one year after participation in the Brigham Young University survival course, significant increases in Total Positive, Identity, Self

Satisfaction, Behavior, Physical Self, Moral Ethical Self, and Personal Self of the Tennessee Self Concept Scale were retained and Social Self Scale was significantly higher at retest (Heaps & Thorstensen, 1974).

Gray and Greben (1974, p. 26) also presented a case for adventure programming stating, "We have a need for challenge and risk taking recreation programs. They can be graduated to all levels of skill and risk, but they are essential elements that have great relevance to self discovery, self development, and self enhancement."

Other areas in which improvement has been noted due to participation in outdoor adventure experiences are: enthusiasm, ego strength, self reliance, adaptability, stability, reflectiveness, social skills and attitude, self control community relation, outgoingness, assertiveness, liveliness, dependability, and critical thinking (Cousineau, 1973, p. 46).

As well as statistical studies, anecdotal evidence from observers of and professionals in adventure programs carry many common themes. Among these are: (1) increased self esteem, (2) new awareness of personal capabilities, (3) rallying of physical and personal resources, and (4) increased social skills. These reoccurring themes indicate positive changes in attitude towards self and others resulting from adventure programming (Barcus & Bergeson, 1972, pp. 3-7).

Statements from the President's Committee on Mental Retardation in 1974 encourage the pursuit of leisure opportunities as being essential in successful social development and community adjustment.

With limited job opportunities available to the mentally retarded person, it is recognized that lifetime leisure skills take a viable part

in many rehabilitation programs. It is possible that even in the realm of leisure, the experience of success may take place nurturing the self esteem and personal growth of the mentally retarded individual.

Increased levels of responsibility were also demonstrated by four mentally retarded youth during a four day wilderness canoe trip (Anderson, 1966, pp. 4-5). Other examples from this trip which demonstrated growth in the affective domain are increases in risk taking behavior (as evidenced through increased decision making), increased concentration, and increased motivation.

It is agreed upon by both behaviorally and analytically oriented theorists that the self concept of the mentally retarded person depends more on social experiences than on cognitive development. "It is the deprivation in positive social experiences and frustration that schools and institution create that are correlated with low self esteem" (Hutt & Gibby, 1979, pp. 191-192). The above statements echo Guthrie's (1964, pp. 462-466) comments which inferred that, "positive self attitudes were derived from experiences in cooperative socially approved behaviors whereas negative self attitudes were derived from failures in interpersonal relationship" (Hutt & Gibby, 1979, p. 192).

Interpersonal skills such as cooperation, communication, and leadership also play a significant role within the affective domain. The development of social attitudes within an adventure setting comes from the demands of the environment for teamwork and group support. The physical environment stresses the need for cooperation in almost all situations from the need to produce a shelter to the actual teamwork demanded in rock climbing and whitewater rafting.

It is social interaction which fosters the exchange of ideas, opinions, or attitudes from which one develops his or her own ideas. It is also a particular group which one compares his or her own ideas to in order to gain feedback about oneself. In an adventure setting the entire group is matched against a foreign environment and foreign demands requiring and fostering a sense of community involvement. It is an involvement in which one individual cannot succeed without the help of the group. This requirement for group success promotes the development of a group identity, a reference group, around which the individual's confidence and self image develops.

Finally, it is through the interaction with the physical environment which allows the participant to begin to understand and formulate attitudes about the natural world. Hartung (1973) analyzed the "winterim" program at Southern Illinois University and reported significant changes indicating a heightened appreciation and understanding for the environment through direct contact in a wilderness setting.

Benefits of Wilderness Adventure Programming to Cognitive Domain

Cognitive benefits accomplished within a wilderness adventure setting are similar to those accomplished in other training programs. The benefit to this setting is the multi-sensory nature and the genuineness of the task. It is the variety of stimuli which allows learning to occur most easily for the student and the foreign nature of the environment which stimulates innovation and creativity. It is also the unforgiving nature of the environment which requires that both skill and knowledge are applied in order to overcome real situations.

The environment not only presents an unyielding side but also a recreational aspect which makes learning fun. In teaching mentally retarded persons, activities and learning situations must provide constant stimulation. Piaget's view on intellectual development state that mentally retarded persons go through the same stages of development as others only at a slower pace. He emphasizes that active learning and progressively challenging sensory-motor experiences are essential for effective learning to take place (Hutt & Gibby, 1979, pp. 152-154).

Learning theorists Marie Montessori (1964) and John Dewey (1951) also stressed the importance of experience in education. Both Dewey and Montessori felt that challenge was essential to the experience but that it should not exceed the child's capabilities; it should stimulate the child's quest for information. A common theme of their philosophies is that experience serves as the source of knowledge and as the process of knowing (quote from Conrad & Hedin JEE, 1981, p. 35).

Another aspect important in wilderness adventure programming is the ability for the student to take part in the decision making tasks therefore taking responsibility for many decisions. This responsibility was found, in a limited study, to promote significant gains in learning suggesting the importance of intrinsic motivation in maximizing learning in mentally retarded individuals (Grigsby & Harshman, 1977, pp. 27-29).

Novelty experience can also be used to promote verbalization and development of language skills. Common to most adventure education programs is a structured time for processing of emotions, attitudes, and knowledge. This often takes the form of group discussions where students are encouraged to voice their feelings. Many times this requires students to

utilize an expanded vocabulary in order to express excitement, fear, success, etc. In general motivation for verbal communication is very high in novel and challenging settings.

Benefits of Wilderness Adventure Programming to Psychomotor Domain

In 1974, Donn Kesselheim (1974, p. 11) stated in A Rationale for Outdoor Activity as Experiential Education: The Reason for Freezin': "It appears to me to be true that what one thinks and feels about one's entire self is greatly influenced by what one thinks and feels about one's body. There is a small but growing body of research which supports this point of view" (Fisher, 1979, pp. 27-32). "If this is the case, one obvious and very direct strategy for strengthening self-concept is to enable people to have successful experiences with their bodies."

The value found here and its relation to wilderness adventure programming with mentally retarded groups is that activities commonly engaged in are both physically challenging and designed to promote success. The strenuous nature of the activities engaged in throughout the program provides continuous upgrading of the fitness level of the participants. The intensity and significance of spatial awareness, fine and gross motor skill abilities, balance and other psychomotor processes within daily activities in an adventure setting provide participants constant practice in this domain.

Mentally retarded persons have the same physical potential as do non-retarded individuals (Rarick & Dobbins, 1972, p. 4), but unfortunately many retarded individuals are raised in a physically restrictive environment. They are protected from physical harm by not being allowed the same

physical experiences as "normal" persons, therefore their sum total of experiences many times does not provide them with a wide variety of psychomotor activities. Many mentally retarded individuals demonstrate poor development of coordination, depth perception, body awareness, gross and fine motor skill development. The wilderness setting constantly demands skill in each of these areas in a realistic way. The situations requiring psychomotor abilities are not contrived. It takes balance to stand up on cross-country skis or to cross a river on a log; depth perception is required in hiking over uneven terrain; fine motor skill is required in cutting food or tying knots. Significant psychomotor and perceptual motor development can best be obtained through direct kinesthetic involvement. It is important to note that motor skills are not only valuable from the aspect of fitness, but they provide a success platform from which other challenges may be accepted as well as provided valuable skills for vocational endeavors (Rarick & Dobbins, 1972, pp. 4-6).

Many retarded individuals especially those in institutional settings are provided with limited physical activity and undeveloped leisure time needs. These needs are often filled with inactive and many times inappropriate leisure skills such as eating or sitting in front of a television for hours at a time. Adventure programming activities can oftentimes provide lifetime leisure skills appropriate for the individual and acceptable to the community; some examples include hiking, camping, cross-country skiing, rafting or canoeing, etc.

Another component in appropriate leisure activity is the reduction of social isolation and the increase in self-esteem as noted in the discussion of the affective domain. Moreover, activities of daily living are

emphasized within the residential setting of wilderness adventure programming providing expanded experiences within both the cognitive and psychomotor domains.

Chapter Summary

In review, wilderness adventure programs can offer a variety of experiences which can positively affect the mentally retarded person's functional ability. Within the affective domain, an environment is designed which promotes social interaction and personal growth. A reference group is formed through the immersion of students into a foreign environment. Success depends upon the interaction of group members and fosters a sense of self-worth both for the group and the individual. Cognitive development takes place within an interdisciplinary and multisensory medium. Cognitive tasks are mastered because of their relevance to daily life providing a highly stimulating environment with no preconceived limits. Because of the general lack of psychomotor opportunities provided mentally retarded persons, wilderness adventure programs provide an excellent chance for the development of psychomotor skills and appropriate lifetime leisure skills. Psychomotor accomplishments not only stimulate greater accomplishments, but are also important in the development of vocational skill and overall feelings of self worth.

Chapter 4

THERAPEUTIC BASIS FOR PROGRAM DEVELOPMENT

There are a number of programs in existence which offer the opportunity for wilderness adventure experiences to mentally retarded persons. One problem encountered in program development is the justification of these activities. With the benefits purported in the rationale, it is possible to present these programs as adjuncts to current rehabilitation, educational, and recreational programs. It, therefore, becomes necessary to present a therapeutic basis for these programs.

Therapeutic Program Model

In order for a program to be considered therapeutic it must (1) identify a client need, (2) initiate an intervention plan, addressing the need to bring about a desired change, and (3) evaluate the effectiveness of the intervention. This developmental scheme forms a dynamic system where the evaluation of the need, change, and the intervention is a continuous process (see Figure 2).

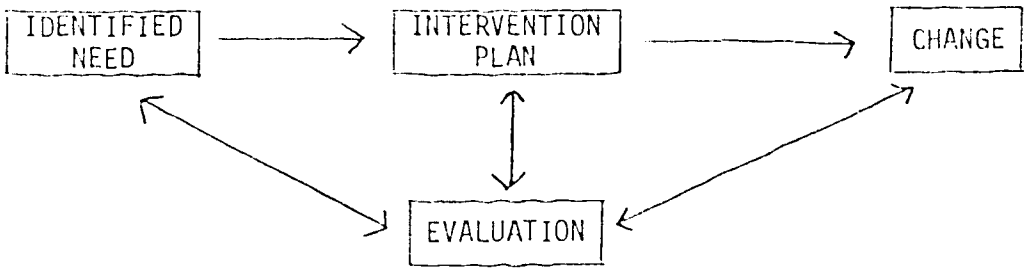

Figure 2

Basic Therapeutic Program Model

Needs Analysis

Within the prescribed wilderness adventure setting, general needs of the mentally retarded population can be extrapolated as follows from the characteristics of the population and their ramifications:

a) the need for successful experiences and increased self esteem

b) the need for increased opportunities for physical challenge

c) the need for stimulating and novel environments

d) the need for increased perceptual-motor experiences

e) the need for increased opportunity for social interactions and communication exchange

f) the need for increased opportunities to practice independent living skills

g) the need for opportunities for recreation and leisure skill development including lifetime leisure skills

Needs of a specific client should also be established to enable the program to act as an adjunct addressing current needs. These can be established through a variety of means including interview, questionnaire, and observation.

Component Analysis

After defining the needs to be addressed, a plan must be decided upon. Within the wilderness adventure setting intervention techniques can be developed from the following aspects of program design: (1) the physical component, (2) the social component, (3) the task component, (4) the perceived risk component, and (5) the leadership component (adapted from Walsh & Golins, 1976, pp. 4-8).

The following information provides the reader with an analysis of

each of the aforementioned program components and the significance they present for the mentally retarded population.

Physical component. The physical environment provides the participant with a stimulating and novel setting. It is filled with a variety of new sensations. These sensations (sights, sounds, odors, etc.) are both aesthetic and many times dangerous, i.e. cactus spines, fast flowing rivers, animals, weather conditions, etc. Both the aesthetic and dangerous qualities must be considered by the participant when addressing their personal hierarchy of needs.* The novel aspect of the environment potentially encourages creativity, attending skills, decision making and problem solving skills.

Another aspect of the physical environment is its neutrality. The wilderness environment does not provide the participant with any buffers; the mentally retarded individual faces the same consequences of misjudgment as the mentally average person. The resulting behavior may include increased efforts in problem solving and decision making skills, increased independent living skills, and increased participation. The participant may also find the need to increase verbalization to express elation, anger, fear, etc., and the necessity of bringing activities to completion in order to accommodate the neutrality of the environment.

The environment is also foreign. It contrasts highly with the

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*Abraham H. Maslow postulated a theory of motivation based on a set of needs organized into a hierarchy of relative importance. Maintaining flexibility for individual differences, the order of needs is generally (a) physiological needs, (b) safety needs, (c) belongingness and love needs, (d) esteem needs, (e) self actualization needs, and in some cases (f) aesthetic needs. There is usually no conscious recognition of the basic needs.

participant's home environment. Although this aspect decreases the possibility of transfer, it increases the opportunity for the student to stretch beyond his/her perceived limits. It provides no preconceived limits of performance. This allows the participant to challenge their own potential and increases the probability of enthusiastic participation.

Finally, the physical environment is perceived as being straightforward. It presents concrete demands. Persons entering a foreign environment tend to narrow their scope and concentrate on areas of basic need; for example, keeping warm, staying dry, making or finding shelter, and food needs. As a result, ambiguous or more abstract constraints such as token economics, social trends, and unstated but rigorously upheld traditions and rituals are perceived as unnecessary. Consequently, actual needs and demands become clearer, augmenting the probability of a participant operating at a concrete level of intellectual functioning,* understanding and acting on those demands.

Social component. The second component is the social environment. The usual social environment encountered in adventure programs is a reference group. These small groups of usually between seven and 13 people present a number of unique properties.

1) The group is large enough to accommodate diversified behavior types, but small enough that cliques are unlikely.

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*Referring to Piaget's stages of cognitive development, Piaget's descriptions of thought changes are qualitative and include the following stages: sensorimotor, preoperations, concrete operations, and formal operations. Concrete operational thought is characterized by a shift from egocentrism--the increased ability to perform intellectual operations. Most mentally retarded persons never exceed this stage of cognitive development.

2) The group is large enough for conflicts to occur, but small enough for the group to resolve conflict. (Walsh & Golins, 1976, p. 15)

The importance of these two qualities is that the small size of the group encourages participation of all students and responsibilities are not easily ignored. Secondly, it becomes necessary to tap resources of all the participants and abilities and strengths as well as weaknesses become known to the group. This provides the opportunity for group cooperation and support at mastering problem solving tasks. It also encourages communication and initiative within a cooperative framework.

Task component. The third component is the task component. Many of these tasks or activities are presented in a problem solving or guided discovery format. Instrumental in the structure and organization of these tasks is that they are incremental, concrete, manageable, and consequential.

The incremental nature pre-supposes a needs assessment of the learner. This occurs both in understanding the characteristic needs of the population and also an ongoing observation of the participant's successes and frustrations throughout the program. Activities are structured in a progression of simple to complex based on the demonstrated capabilities of the student, ensuring successful experiences.

Activities are also concrete; they have a visible beginning and end. This feature encourages the participant to bring the activity to completion and provides immediate feedback.

The manageability of the tasks encourages interaction, initiative, and participation and again ensures success.

Finally, the tasks are consequential, personally relevant, prompting

attentiveness, communication, participation, responsibility, and a willingness to learn. The importance here is that it stimulates the participant through the direct need for comfort or safety.

A specific analysis for many of the tasks commonly found in adventure programs is included in the appendix.

Perceived risk. This component is the real or imaginary physical or psychological risk perceived by the participant. Certain activities are included in adventure programming to provide a perceived risk and elicit a commensurate amount of stimulation.

Adventure programming is designed to provide a supportive environment for resolving the anxiety of the perceived risk through mastery of the task. This design encourages a will to learn, fosters communication within the group and participation of all group members, and involvement of the individual through attentiveness and the desire for completion and resolution.

Leadership component. The role of the leader takes in the program determines the direction and outcome of all the other components. Leadership style is dependent upon the needs and safety of the cliental, but generally, the role which allows the student the most potential for growth is one of unconditional positive regard, non-directive teaching style, educational consultation, and translator of circumstances and situations. Unconditional positive regard encourages the participant to attempt situations he/she perceives as risky. The participant's attempts are not condemned as failures, but encouraged and praised. Resulting attitudes include a positive attitude towards learning, self-respect, self-esteem,

motivation, success, and a positive attitude towards risk taking.

A non-directive teaching style allows the student to face problems and to participate in decisions. This encourages behaviors such as risk taking, participation, completion of tasks, group interaction and communication, and creativity. It also increases attitudes of self-esteem and self-reliance, adaptability, cooperation, independence, motivation, self-respect, and success.

It is important to note that teaching style must be flexible and adapted to the immediate needs of the group.

In accordance with a non-directive teaching style, the leader facilitates curiosity in learning and problem solving by acting as an educational consultant. The encouragement of initiative and creativity in problem solving and the role of providing resource information allows the participant to act as independently as is safely possible.

Finally, the leader needs to act as a translator of circumstances and situations, assisting the participant's understanding and organization by restating the experience in familiar terms. This is especially important for the mentally retarded population as learning and transfer occurs more readily if adequate translation of the circumstances and situations takes place.

Evaluation

Evaluation should occur concurrently with program operation (the carrying out of the plan). The purpose of evaluation is twofold. First, to determine if the plan is effective in addressing the needs, why or why not, and to what extent it is effective. Secondly, evaluation must also

continuously determine the current status of the established need. This not only provides feedback on the program, but also establishes if the program is providing a necessary service.

Common forms of evaluation include direct observation, written evaluations, questionnaires, interviews, and testing. More specific information on methods of evaluation can be obtained in the vast quantity of literature pertaining to therapeutic recreation and adventure education. Current efforts in evaluation of wilderness adventure programs with mentally retarded persons, with few exceptions, is limited to observation and written evaluation of student performance and attitudinal change during and immediately after participation. There is a need to provide additional objective evaluation of these programs and their long and short term effects.

Designing a Therapeutic Program (An Example)

The information in this chapter provides the necessary framework for designing a therapeutic program. The following example demonstrates how this information is assimilated into an actual program.

> Agency "A" is working with a group of mentally retarded residents on increasing risk taking behavior (i.e. decision making, ownership of actions, self motivated participation), and self esteem. They choose to use a wilderness adventure program as an adjunct to their current programs and are presented with the following program design as the intervention plan.
>
> Need: 1) increase in risk taking behavior
> 2) increased self esteem
>
> Plan: An X day wilderness adventure program stressing the development of risk taking behavior and increased self esteem.
>
> Desired change: Same as need.

Program Components:

1) Physical: Season--summer
Environment Available--River (M)*
Mountain (B, M)
Desert (M)
Climbing Area (B, M)*
Ropes Course (B)

2) Social: six clients (mildly mentally retarded adults)
two agency staff
four program staff

3) Task: Possible activities specifically addressing needs

Risk taking: initiatives, rock climbing, rafting, canoeing, cooking, shelter construction, map, compass, pack packing, camp organization

Self Esteem: successful experiences in any area. Any program activities can be included.

4) Perceived Risk: possibilities--low to high

5) Leadership: encourage independent behavior
unconditional positive regard

A cooperative decision is made to offer a program emphasizing specific activities from a base camp area.

A three day mountain course emphasizing initiatives, rock climbing, camp organization, cooking, and map work. Risk taking behavior and behavior demonstrating high self esteem are to be especially recognized.

Evaluation: 1) Client evaluation--a written evaluation by program staff of observed behavior of clients emphasizing change in behavior from day one to day three.

2) Program evaluation--(a) interview with agency staff immediately and one week after course; (b) written evaluation from agency staff, and (c) written evaluation from program staff.

*(M) signifies mobile course
(B) signifies base camp area available

Chapter Summary

This chapter presented a foundation for therapeutic use of adventure

programs. The discussion included a basic model of therapeutic programs emphasizing the importance of the program actually addressing a need, an analysis of the general needs of the mentally retarded population, an analysis of the components of wilderness adventure programs, a brief overview of the purpose of evaluation, and an example of a therapeutically designed program.

It is important to recognize that the main difference in adventure programs for recreational purposes or those for therapeutic reasons is based in the design, not in the activities or facilities. Through intelligent programming and design, we may begin to provide a sound adjunct to standard therapeutic programs for the mentally retarded population.

Chapter 5

SUMMARY

The purpose of this study was to explore the rationale for offering Wilderness Adventure Programs to the mentally retarded population and to provide a therapeutic basis for the development of Wilderness Adventure Programs involving mentally retarded persons. The format for presenting this information began with a chapter stating the problem followed by a chapter on definitions and background information. This chapter contained definitions of wilderness adventure programming and wilderness adventure activities and gave an overview of mental retardation including the AAMD definition of mental retardation and data on causes, prevalence, characteristics and ramifications of mental retardation. Chapter Three contained the exploration of the rationale for Wilderness Adventure Programs for the mentally retarded population based on a review of literature in areas concerning development, rehabilitation, leisure, adventure programming, and related studies with physically disabled populations. This chapter focused on the benefits provided by Wilderness Adventure Programs on the affective, cognitive, and psychomotor domains. Chapter Four presented a therapeutic basis for program development. The first three sections included a basic model for therapeutic program design, a needs analysis of the population, and an analysis of the basic components of the Wilderness Adventure Program. The section on component analysis included discussions on the physical, social, task, perceived risk, and leadership components and the significance of each component to the

mentally retarded population. The next section commented briefly on the purpose of evaluation within a therapeutic setting and listed common forms of evaluation used in adventure programs. The final section contained an example of a therapeutic design of a Wilderness Adventure Program involving mentally retarded populations. The Appendix contains an analysis of common program activities and the needs they address and another table cross-referencing common needs with appropriate activities.

Mentally retarded persons in the United States form close to 3% of our population. It is a population in need of adequate educational, recreational, and rehabilitation programs. Based on the information assimilated, it appears that a substantial case can be made for providing wilderness adventure opportunities to the mentally retarded population. Significant research efforts have yet to be pursued in establishing the effect of Wilderness Adventure Programs on mentally retarded persons, but the possibility of providing credible therapeutic adjuncts to current educational, recreational, and rehabilitation programs does exist within the realm of wilderness adventure programming.

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APPENDIX

COMMON PROGRAM ACTIVITIES AND RELATED NEEDS

Activity	Need Addressed
Backpacking	Balance (static/dynamic) Cardiovascular fitness Environmental awareness Gross motor control Muscular endurance Spatial awareness/depth perception Strength
Canoeing	Attending skills Balance Communication Coordination Directionality Gross motor control Lifetime leisure skill Perceptual skills Problem solving Teamwork Vestibular stimulation
Compass Skills	Directionality Fine motor control Math Perceptual abilities Problem solving
Cooking	Activities of daily living Cognitive skills--reading/math Fine motor control Nutrition Problem solving Teamwork
Fire Building	Attending skills Decision making Environmental awareness Fine motor control Following directions Responsibility
Group Discussions/Debriefings	Attending skills Communication Language skills Organization Verbalization

Activity	Need Addressed
Hiking	Balance (static/dynamic) Cardiovascular fitness Environmental awareness Gross motor control Muscular endurance Spatial awareness/depth perception Strength
Horse packing	Attending skills Balance Communication Directionality Gross motor control Lifetime leisure skill Responsibility towards animals Vestibular stimulation
Initiative Games/Ropes Course	Balance Body awareness Communication/language skills Coordination Fine motor control Gross motor control Problem solving Responsibility Teamwork
Map Skills	Attending skills Directionality Math skills Perceptual abilities Problem solving Symbol recognition
Pack Packing & Camp Organization	Attending Skills Decision making Gross motor control Organization Problem solving Responsibility
Personal Hygiene	ADL's--Activities of Daily Living Responsibility
Rafting	Balance Coordination Directionality Following directions Gross motor Lifetime leisure skill Problem solving Responsibility towards equipment Teamwork Vestibular stimulation

Rock climbing	Agility Attending skills Balance Body awareness Fine and gross motor control Flexibility Problem solving Responsibility Self esteem Spatial awareness/depth perception Strength Teamwork
Shelter Construction	Communication Decision making Fine and gross motor control Problem solving Responsibility Teamwork
Skiing (nordic)	Balance Body awareness Coordination Cardiovascular fitness Flexibility Gross motor control Muscular endurance Weight transfer
Stove Use	Attending skills Fine motor control Following directions Responsibility
Benefits associated with the setting rather than specific activities:	Adaptability Environmental awareness/appreciation/ education Group identity Group interaction Independence Motivation Positive learning environment Self-esteem Self-reliance

AREA OF NEED AND RELATED BENEFICIAL ACTIVITIES

NEED	ACTIVITY
I. Cognitive	
a. Language Arts	Canoeing Cooking Debriefings/discussions Initiatives/ropes course Nature study Shelter construction
b. Math	Compass Cooking Map
c. Nutrition	Cooking
d. Reading	Nature Study Cooking
e. Science	Fire building Nature study Shelter construction
II. Independent Living Skills	
a. Activities of Daily Living	Cooking Pack packing Personal hygiene
b. Problem Solving/ Risk Taking	Canoeing Compass Cooking Map Pack packing/camp organization Rafting Rock climbing Shelter construction

III.	Perceptual Abilities	
	a. Spatial/Body Awareness	Backpacking Canoeing Compass Hiking Map Rock climbing
	b. Vestibular Stimulation	Canoeing Horse packing Rafting
	c. Weight Transfer	Skiing
IV.	Physical Fitness	
	a. Balance/Agility/ Coordination	Backpacking Canoeing Hiking Horse packing Initiatives/ropes course Skiing Rafting Rock climbing
	b. Cardiovascular/Respiratory	Backpacking Canoeing Hiking Skiing
	c. Directionality	Canoeing Compass Map Rafting
	d. Fine Motor Control	Compass Cooking Fire building Initiatives/ropes course Rock climbing Shelter construction Stove use
	e. Flexibility	Rock climbing Skiing

f. Gross Motor	Backpacking Canoeing Hiking Horse packing Initiatives/ropes course Pack packing Rafting Rock climbing Shelter construction Skiing
h. Muscular Strength and Endurance	Backpacking Skiing Hiking Rock climbing

V. Social

a. Attending Skills	Canoeing Compass Fire building Group discussions Horse packing Map Rock climbing Stove Use
b. Following Directions	Fire building Rafting Stove use
c. Lifetime leisure skills	Backpacking Canoeing Hiking Horse packing Rafting Rock climbing
d. Self Esteem	Successful experience at any activity
e. Team Work/Cooperation	Canoeing Cooking Initiatives/ropes course Rafting Rock climbing Shelter construction