2-1985

Behavior of Retarded Clients as a Function of Access to Leisure Activities Oriented Toward Task Completion

David R. Keltner

Behavior of Retarded Clients as a Function of Access to Leisure Activities Oriented Toward Task Completion

A Thesis

Presented to

the Faculty of the Department of

Home Economics and Family Living

Western Kentucky University

Bowling Green, Kentucky

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

David R. Keltner

February, 1985

Complete this

AUTHORIZATION FOR USE OF THESIS

Permission is hereby

☒ granted to the Western Kentucky University Library to make, or allow to be made photocopies, microfilm or other copies of this thesis for appropriate research or scholarly purposes.

☐ reserved to the author for the making of any copies of this thesis except for brief sections for research or scholarly purposes.

Signed David C Hobbs

Date 2-27-85

Please place an "X" in the appropriate box.

This form will be filed with the original of the thesis and will control future use of the thesis.

Behavior of Retarded Clients

as a Function of

Access to Leisure Activities Oriented

Toward Task Completion

Recommended 2-11-85
(Date)

Director of Thesis

Approved March 21, 1985
(Date)

Dean of the Graduate College

ACKNOWLEDGMENTS

I would like to express my appreciation to Dr. Lou Fong, Director of my thesis, for her encouragement and assistance in this project. I would also like to express my appreciation to Dr. Richard Mason, Dr. Gene Harryman and Dr. Charlie Daniel for their assistance in the completion of the project. Finally I would like to express my gratitude to Mr. Robert Cobb, who assisted me in a very crucial stage of the project, and to my wife, Angela, for her patience and understanding during some very trying times.

TABLE OF CONTENTS

ILLUSTRATIONS

Figure

Tables

BEHAVIOR OF RETARDED CLIENTS AS A FUNCTION OF ACCESS TO LEISURE ACTIVITIES ORIENTED TOWARD TASK COMPLETION

David R. Keltner February, 1985 45 pages

Directed by: Dr. Lou Fong

Department of Home Economics
and Family Living Western Kentucky University

This thesis represents an investigation of the effects of increased access to task completion activities on the behavior of institutionalized retarded clients. The hypothesis was that increased access to task completion leisure activities (non-competitive free time activities requiring the subject to attend to a constructive task during at least five free time periods over the course of the study) would result in reduced frequency of unacceptable social behaviors in a group of institutionalized retarded clients. A hobby kit designed according to the experimental definition of leisure activity was made available to each subject in the experimental group. Target behaviors (social behaviors to be changed) were based on each subject's social behavior history obtained from medical charts and determined by an interdisciplinary team composed of a psychiatrist, psychologist, social worker, speech pathologist, residential supervisor, program specialist, recreation specialist, occupational therapist, physical therapist, and nurse. The behavior of the subjects was systematically observed and measured by residential staff on target behavior checklists. Data indicated that the

unacceptable social behaviors of the 44 mildly and moderately retarded clients in the experimental group increased significantly while the frequency of this type of behavior decreased slightly in the control group. Explanations for this finding are discussed in conjunction with previous theories and findings.

Chapter 1

INTRODUCTION

Statement of the Problem

The implementation of recreation programs in residential facilities for the retarded has been plagued by a lack of information regarding what types of programs best meet the various needs of the clients. A necessary preliminary to improving this situation is research which indicates what type of activity best meets the needs of the various treatment goals of the clients. In the present study, the focus is on one aspect of the problem, the control of social behaviors through the provision of task oriented activities during leisure time. Behavior control is defined as an attempt to obtain compliance with pre-established target behaviors.

Need for the Study: Scope and History of the Problem

The incidence of mental retardation in the United States has been estimated to be about 6.8 million persons (Coleman, Butcher, & Carson, 1980). In fact, Hayes (1973) estimated that approximately three percent of the total population of the United States is mentally retarded, and

approximately 126,000 retarded American children are born each year. Hayes went on to say that twice as many individuals are affected by mental retardation as by blindness, polio, cerebal palsy, and rheumatic heart disease combined. These figures alone emphasize the need to provide quality services to the retarded population.

This need has only recently been addressed seriously. Until the past century, retarded clients were tucked away in asylums used as sanctuaries to protect them from a harsh society. No large scale rehabilitation attempts were made. Pioneers in the field began to understand the problem in the late 1800's. Hayes (1973) wrote:

> The nineteenth century brought a sudden flare-up of interest in the education and welfare of the mentally retarded. Most of the treatment of the retarded was carried out by young men in their early twenties who were unafraid of going against the established principles of the time: Itard proceeded against Pinel's judgment and Sequin had in Esquisnol a benevolent, though highly skeptical, friend and mentor. Itard leaped into prominence as one of the originators of the education of the feebleminded because of his efforts on the behalf of the Wild Boy of Aveyron whom Pinel thought was faking his wildness and was nothing but an incurable idiot. Sequin became known as the apostle of idiots and devoted his life to the study of idiocy and its treatment. He laid down many basic principles for teaching the mentally retarded that are still followed. Guggenhahl, Howe, Kerline, Fernald, and Montessori are other prominent names associated with the care, treatment, and education of the retarded during the nineteenth and early twentieth centuries.

Within the agencies where this research was conducted and within society as a whole, the prime objective of reintegrating retarded clients into society to be as

self-sufficient as possible has been constantly hampered by the problem of behavior control. The present study was designed to investigate the use of leisure activities as a method to help in the control of the social behavior of retarded clients. Behavior control has long been a prerequisite for teaching retarded clients other skills.

Need for the Study-Leisure Activity and Behavior Control

Birenbaum, Stein, Gessons, and Bernstein (1964) pointed out the usefulness of access to leisure as a tool in the control of social behavior in retarded children. Birenbaum (1966) emphasized that not all needs of the retarded can be met through educational and vocational training programs and that, in order for the retarded to remain in the community, their psycho-social needs must be provided for through constructive use of leisure time.

Mrs. Eunice Kennedy Shriver, Executive Vice-President of the Joseph P. Kennedy Foundation (1973), spoke on the importance of a leisure program for the retarded:

> The type of program available for the mentally retarded members of the community depends not only on the degree of retardation, but on physical fitness, and socialization as well as past experiences. There is need to find out how retardates use their leisure time, to provide programs that will prepare them for active participation in a wide variety of recreational activities, and to stimulate their interests and desire to participate in activities where they have had little previous experience or opportunity. Recreation and school physical education personnel need to develop programs for the mentally retarded that meet their needs, interests, abilities, and limitations. Programs have been designed with activities of all types as included

> in programs for normal people, the only adaptation being the setting of lower sights of achievement. Program content that will best reach the retardate of varying levels of intelligence must be determined; programs that will meet the goals and objectives of the retarded population must be planned, organized, and administered. There is further need to analyze activities in light of the special characteristics and limitations of the retarded, so that adaptations can be made and special methods, techniques, and approaches to teaching these activities to the retarded can be developed where necessary. Current literature and reports of interested leaders at conferences and conventions stress a need in recreation programming for the retarded, the need to unify the efforts of all recreation leaders, all organizations and agencies, public or private, in coordinating the existing recreation activities for the handicapped and to establish new programs. It is not only a question of how to make the best use of trained leadership and how to enlist all community resources in a program that will expand and continue the elementary school programs of physical fitness, play activities, and organzied sports throughout the adult life of the retarded. The school is a potent force, but it needs to be reinforced with the programs of all community agencies if a year-round program is to be maintained for the social adjustment of the mentally retarded.

Given the emphasis placed on the need for new programs, ideas, and facilities dealing with recreation for the retarded, it is interesting to note that in a survey conducted by the Joint Committee of the Council for Exceptional Children and the American Association for Health, Physical Education, and Recreation (1973) only two percent of 2200 community service centers offered recreation programs for the retarded. Salzberg and Langford (1981) also stated that although provisions have been made for leisure for the retarded during the past, it is not clear that the development of leisure skills is being seriously considered.

Purpose of the Study

The purpose of the study was to investigate the effect of task completion leisure activities on the social behavior of a retarded population. The hypothesis was that increased access to task completion leisure activities would be accompanied by a decrease in the frequency of inappropriate social behaviors in a retarded population as measured by a tabulation of the frequency with which the subjects behaved contrary to individualized pre-established target behaviors. These behaviors were based on each subject's social behavior history obtained from medical charts and were agreed upon by an interdisciplinary team composed of a psychiatrist, psychologist, social worker, residential supervisor, program specialist, recreation specialist, speech pathologist, occupational therapist, physical therapist, and nurse.

At this point it should be noted that the target behaviors are an on-going method of measuring the behavior of the clients in the facilities studied and could not be altered due to the necessity of maintaining constant and stable data on the behavior of the clients. This information was made available to the researcher in a condensed form which will be discussed at length in Chapter 3. No additional behaviors were added to the already established target behavior lists of the subjects in order to guard against any effect which might result from such a change.

Delimitation of the Study

The study was limited to two residential facilities for the mentally retarded in south central Kentucky. Both facilities are owned and operated by a corporation which also has nine other facilities in Kentucky and several others in other southeastern states. The organization's prime objective is normalization which is an attempt to reintegrate the retarded client into society to be as self-sufficient as possible. Behavior control is, and has been, a major obstacle to the attainment of this goal. Generalizations to non-institutionalized populations or populations living in facilities with different goals, locations, clientele, staff training, or programming should be made with extreme caution.

The study was further limited in that it dealt with only moderately and mildly retarded clients. Severely and profoundly retarded clients may learn more slowly and comprehend less. It is, therefore, recommended that the findings should not be generalized to such a population.

Definitions of Terms

Mental retardation has been defined in various ways. Retarded people have been described as possessed, bewitched, mad, in later years, as idiots. At present the Diagnostic and Statistical Manual of the American Psychological Association defines retardation as significantly subaverage general intellectual functioning existing concurrently with deficits

in adaptive behavior, and manifested during the developmental period. Mildly retarded individuals have an IQ score between 50 and 70, and moderately retarded individuals have an IQ score between 36 and 49. The subjects in the present study are all classified either mildly or moderately retarded under the guidelines of the Diagnostic and Statistical manual.

Inappropriate social behavior is defined as any behavior (exhibited by a subject) which is inconsistent with a pre-established target goal. Examples of target behaviors may include such things as does not yell, does not steal, does not tease others, etc. For a complete list of target behaviors, see Appendix A. For a more complete description of the use of target behaviors and the method of scoring them, see Chapter 3.

Leisure has had as many definitions as retardation. Hoyt (1980) said that leisure consists of activities (other than sleeping) in which one engages when not performing in his or her vocation, and that leisure has possibilities for both work and play. A slightly modified version of this definition will be suitalbe for the study. Leisure will be defined as any activities, other than sleeping, in which the subjects engage when not performing in their regularly scheduled activities.

Task-completion leisure activities are defined as any non-competitive activity available during non-scheduled times which requires the subject to attend to a constructive task during at least five free time periods over the course of the study.

Chapter 2

REVIEW OF THE LITERATURE

Research on access to leisure and its effect on the behavior of retarded clients has been scant. While several writers have proposed that access to leisure is an important aspect in the lives of retarded clients, few substantive research projects have actually been conducted in the field. The available studies and writings are primarily post-1960 and have come about largely as the result of a heightened awareness of the needs of retarded clients.

In this literature review the researcher attempts to do three things: investigate the relationship between leisure activity and social behavior; point out the need for recreation programming for the retarded; and briefly discuss some writings on the social behavior of retarded clients as opposed to that of a normal population.

Leisure Activity and Social Behavior

Friedman (1961) sees leisure activities as an outlet for frustrations, anger, and resentment. He writes that

> In some cases the impossibility of showing any personal characteristics during work creates a more or less marked state of depression, as well as a continuous nervous strain. In other cases, it encourages aggressive tendencies out of working hours,

> an ungovernable thirst for self-assertion shown in eccentric ways of using leisure, in a passion for gambling and for games of chance, like that of numbers so common among the semi-skilled workers in America, or in the football pools among British workmen. A certain number of leisure activities might generally be interpreted as attempts to compensate for what is lacking in work hours.

Friedman further suggests that there is a close connection between the non-involvement of the personality in the fragmentary jobs required by factory and office and the need for self expression which is equally excluded from the various duties of everyday life.

Other writers agree with Friedman. Swift and Spivak (1977) discuss the importance of the use of constructive activities by children during their free time:

> Disruptive, restless behavior can often be alleviated by planning to provide constructive activities without resorting to attempts to directly suppress this behavior. By legitimizing the activity the teacher can maintain a positive relationship with the child. The child finds rewards in productive activity and may eventually seek such legitimate vehicles when he feels the need for actiivty and social stimulation.

Many recreation programs for retarded clients have been designed with the concept of changing inappropriate behaviors.

The Southern Regional Education Board Committee--SEBRC (1964) pointed out that over and above providing fun and relaxation, recreational activities should also help the person to learn additional social and physical skills and that activities which will help the person grow and mature need to be planned. They stress that it should be remembered that it is not merely a leisure time activity, but also an

opportunity for physical, mental, and social growth. More pertinent, they write that while the primary objective of recreation is to aid in the adjustment and betterment of the handicapped persons, it can also provide opportunities for creativity, acceptable outlets for aggressive behavior, re-adjustment to community life, and refinement of physical skills.

In a report of a three year research and demonstration project for the National Institute of Mental Health, Birenbaum and Schwartz (1966) determined that all programs sponsored by the institute should have five goals similar to those discussed by the SEBRC. The first goal is to provide activities satisfying to the retarded. Secondly, an attempt should be made to train and equip the retarded for better adaptation to a community environment by developing maximum use of their potential. Thirdly, the retarded person should be better equipped to become a more independent member of a family group. Fourthly, improved parental understanding should be sought so that the retarded person may be permitted to achieve a greater degree of independence; and finally, the pressures and consequent tensions of family groups created by the unmet needs of the retarded member should be relieved.

The American Association for Health, Physical Education, and Recreation (1968) established five criteria for judging growth in mental health through play:

1. Is the child happier?
2. If he attends school does he enjoy it?
3. Is he easier to manage?
4. Does he accept direction and authority more easily?
5. Does he exercise more self control?

Other authors also discuss the importance of leisure to the behavior of retarded clients. They have indicated that leisure materials, as well as leisure time, are important in the control of behavior. Davenport and Berkson (1963) found that the introduction of manipulable objects to a group of severely retarded clients significantly decreased the frequency of stereotyped behaviors such as headbanging and rocking, and Berkson and Mason (1963) found a similar relationship between object manipulation and stereotyped behaviors. Also, Favell and Cannon (1976) indicated that proper toy selection can be an effective way of improving the behavior of retarded populations.

Research with average populations supports these findings. Quiltich and Risley (1978) indicated that the selection of play materials affects social behaviors in children during play time. and Pierce and Risley (1974) had already suggested that recreation time can be effectively used as a reinforcer for reducing disruptive behavior.

Several writers discuss the value of providing recreation or leisure programs as a method to improve social skills. Corcoran and French (1977) indicated that training

in leisure time skills can help retarded adults to cope more effectively with unstructured situations. A report conducted by the University of Kansas (1961) discusses self-governing leisure experiences as a way to develop confidence and to encourage more mature social behavior. The report also emphasizes the desirability in certain cases to devise training techniques which will help to develop a wider range of client interests and a more wholesome use of leisure time.

Mavin (1979) also mentions socialization skills. He points out that the three products of skill development in leisure activity are improved self concept, increased attention span, and increased socialization skills. The importance of leisure activities to socialization is evident throughout much of the available literature. Stein and Gessons (1973) contribute to the idea that socialization skills are a vital goal in the development of leisure programs when they comment that recreation should be used to enable each individual to become better prepared physically, mentally, emotionally, and socially. The works of Stein and Gessons and of Meyen (1967) emphasize that the prime objective of all programs for mentally retarded clients is to allow each individual to attain his fullest potential and to make his place in society as a self-sustaining adult who is capable of living the fullest, most satisfying, and most worthwhile life possible.

Carlson and Ginglend (1968) sum up much of the available research when they write, "Recreation in its broadest sense is wholesome use of leisure time. One school of thought emphasizes fun. Another group emphasizes growth and rehabilitation. The two schools are not worlds apart because in any recreation program, participants develop physically, socially, emotionally, and sometimes intellectually as they have fun."

Need for Leisure Activity in the Retarded

Salzberg and Langford (1981) have proposed the utilization of age appropriate leisure pursuits as a vehicle for facilitating integration of mentally retarded adults into the community. Despite good intentions and expressed need, however, programming has been inadequate in this area. While Friedman (1961) discusses a "fantastic mushrooming" of hobbies, of arts and crafts, and of all sorts of free time activities, Corcoran and French (1977) write that as facilities and programs expand for the majority of tax paying citizens interested in enhancing their lives with new skills and interests, a subtle discrimination exists that focuses post-secondary programs into a pattern that will fit only the intellectually able. They further state that imaginative planning and community action is needed if the retarded adults are to be allowed to continue their education and make use of local recreation and leisure time facilities. The lack of

adequate leisure time resources for the retarded becomes more evident as the matter is investigated.

Stein and Gessons (1973) discuss the importance of leisure time to retarded clients:

> Leisure time needs of the mentally retarded are especially crucial because so many are incapable of adequately filling their free time with profitable activities. For these retarded persons, leisure time is often a curse rather than a blessing. Through appropriate exposure to recreational activities, the retarded can be taught to utilize their leisure time more meaningfully. Too often, in the lives of the retarded, leisure is filled with passive amusements, such as watching television and listening to the radio.

Legg (1968) comments that the need to play is slight in the handicapped child. Others believe that it is not the need but the opportunity to satisfy the need which is lacking. Day and Day (1977) found that many retarded people spend time in non-creative activities and emphasized the importance of the constructive use of leisure time as did Sherrill and Ruda (1978), who also indicated that retarded clients did not possess hobbies or skills and/or interests that allowed them to use leisure time alone in ways other than napping, daydreaming, watching television, listening to the radio, or just sitting.

Legg (1968) discusses the need for constructive leisure activity for the retarded in greater depth:

> In a competitive game only the end result is important in the final analysis, not the degree and intensity of the effort. Thus a severly handicapped child can be the loser again and again, no matter how hard he tries.

It is possible that the needs or interests originally present in the retarded person are suppressed due to repeated failure; and while the need may still be present, the risk of fulfilling that need may simply be too high. Legg continues,

> The advancement of manual skills is one of the most important concerns in the education of the retarded. Many of them can express themselves better with actions than with words. To produce the beautiful and useful is a basic drive in all mankind, the retarded person will be able to satisfy this drive only with his hands.

Legg later qualifies this statement:

> If we intended to develop only his manual dexterity, we would not achieve our goal. It is a question of much more, it is a matter of developing his form discrimination, educating him toward aesthetic enjoyment, toward joy in creation. In short, it is a matter of elevating his whole personality. What gives manual work a specific value for the retarded is the stimulus toward more creative activity. This is important for our children. Although the activity is not lacking in them, the drive to create activity is.

Social Behavior of Retarded Clients

Bernstein (1968) has said that even daily living experiences may become problem situations for the mentally, socially, or emotionally deprived; moreover, if a child is a slow learner or mentally retarded or if he has limited environmental opportunity or experience, a simple encounter may become a problem. Retardation may certainly contribute to behavior problems in retarded individuals. Sturge (1982) found a high correlation between reading retardation and antisocial behavior in a group of ten year old boys in London. Likewise, Mangus (1980) indicated that retardation

in school may be a potent determinant of serious personality maladjustment in children.

He stated that in many cases school failure may be a basic cause of emotional tensions in the life of the child. He wrote:

> The tremendous prestige value of academic success makes school failure destructive of the child's confidence in himself and makes him feel like a failure in the eyes of his teachers, parents, and more successful classmates. In some instances, basic maladjustments in the child's personality may be aggravated and intensified by a series of school failures. There are, no doubt, other instances where failure to learn academic subjects is an outright result of emotional disturbances and defiant attitudes which arise from other sources.

Paquita (1979) agrees that antisocial behavior may also lead to reading retardation in some students. Rutter and Yule (1970) suggest the opposite: that the experience of educational failure may predispose an individual to delinquent activities. In either case, it is evident that the two go hand in hand. In the life of a retarded individual, one problem often predisposes another, and one failure may lead to another until success is almost nonexistent.

Summary

Three things should be evident from the literature review. The first conclusion that can be drawn is that social behavior of the retarded can be affected by leisure programming. Secondly, it should be evident that there is a need for more creative programming in the area of leisure

for the retarded. Finally, it should be noted that social behavior in the retarded can indeed be a problem and that every means available should be used to solve that problem.

Chapter 3

RESEARCH DESIGN AND PROCEDURES

Subjects

The subjects were chosen from two residential facilities for the mentally retarded in south central Kentucky. A random assignment was impossible due to the nature of programming at the facilities and to restrictions placed on group assignment as a result of permanent living arrangements. The different sizes of the groups were also the result of these factors. The experimental group was composed of the enture population of mildly and moderately retarded clients at one facility; there were 44 subjects in this group. The control group was composed of the entire population of mildly and moderately retarded clients at the other facility; this group contained 26 subjects. Fifty percent of the subjects in each group were males and 50% were females. The mean age of the subjects in the experimental group was 20.2 years and the mean age of the subjects in the control group was 21.6 years. In the experimental group, 47.1% were teenagers; in the control group, 39.6% were in their teens.

Apparatus

Behavior was measured by the use of a behavior improvement card (see Figure 1). Each client had his or her own card. Each card contained a total of ten pre-established target behaviors. Any time a staff member observed a subject exhibiting a behavior contrary to one of the target behaviors on that subject's card, the staff member initialled the card. At the end of each day the initials were totalled and the subject was assigned a daily behavior score based on the number of initials which he or she received. At this point it should be noted that the daily behavior scores were the only data made available to the researcher. The original behavior improvement cards were disposed of on a regular basis.

Any subject who received eight to ten initials on his or her card was assigned a behavior score of one for the day. Subjects with six or seven initials on their cards for the day were assigned a score of two. Three to five initials resulted in a daily behavior score of three; and those subjects who received two or fewer initials were assigned a daily behavior score of four.

Each subject was under constant staff supervision during waking hours with the exception of restroom use. No subject received more than ten initials on his or her card for any given day during the study. A complete list of target behaviors used on the behavior improvement cards is available in Appendix A.

Revised 2/17/83

BEHAVIOR IMPROVEMENT PROGRAM

RESIDENT _____ WEEK OF _____ to _____

ALL SHIFTS

	FR	SA	SU	MO	TU	WE	TH

COMMENTS: _____

FIGURE 1

Procedure

Behavior was observed over a fifteen day period and a pre-test score was determined for each group. Due to the form in which the data were made available to the researcher, the scoring was designed so that each subject could have achieved a possible score ranging from one to four on any given day. A behavior score of one for each of the 15 days would have resulted in an overall pre-test score of 15 (one, the daily score, multiplied by 15, which was the number of days in the pre-test period). A score of four each day would have resulted in an overall score of 60. The minimum possible pre-test score, then, was 15, and the maximum was 60, with the actual scores ranging anywhere between the two.

Days with missing data due to the subject being away from the center were assigned a value equal to the overall mean score of that subject. Any subject with more than four missing data points for either the pre- or posttest period was excluded in the final analysis. Only one subject in the experimental group was excluded on the basis of this criterion.

Following the pre-test period the treatment was introduced, and a treatment period of 40 days was allowed. A hobby kit designed to provide a task oriented leisure activity to each subject in the experimental group served as the treatment. The kits could be used during any free time. They were largely arts and crafts or building activities which required the investment of time over at least

five free time periods. A complete list of the kits can be seen in Appendix B. The control group received no kits. They were allowed to continue spending their free time in less constructive ways such as watching television, listening to the radio, talking, wandering around, playing games or just sitting. The treatment period served a three-fold purpose. It allowed time for the novelty of the projects to wear off, provided time for additional observation, and gave the treatment time to take effect.

At the end of the treatment period a posttest measure was taken for an additional 15 days and was tallied exactly the same as in the pre-test period. The analysis of the data was conducted using the pre- and posttest scores as its basis.

Chapter 4

RESULTS

To test the original hypothesis that an increased access to task completion leisure activities would result in a decrease in the frequency of inappropriate social behaviors in a retarded population, the behavior of the 44 subjects in the experimental group and the 26 subjects in the control group was observed and measured over a 15 day pre-test period. Each subject was assigned a daily behavior score according to the number of times the subject behaved in a manner contrary to one of ten pre-established target behaviors assigned to him or her. Contrary behaviors were totalled at the end of each day. Any subject exhibiting eight to ten contrary behaviors was assigned a daily behavior score of one. Those exhibiting six or seven contrary behaviors were assigned a two; three to five behaviors resulted in a score of three, and two or fewer behaviors resulted in a four. The minimum possible pretest score for any subject was 15 (one, the lowest possible daily score, multiplied by 15, the number of days in the pretest period). The maximum possible pretest score for any subject was 60 (four, the highest possible daily score, multiplied by 15). Actual scores ranged between the two.

Following the pretest period a task-oriented leisure activity was introduced into the experimental group, and a 40 day treatment period was allowed. Scores were not analyzed during this period. At the end of the treatment period a posttest period of 15 days was conducted and the behavior of each group was observed and measured as in the pretest period. A total distribution of the pre- and post-test scores can be seen in Tables 1, 2, 3, and 4.

At the end of the posttest period the data were compiled and statistically analyzed. Group scores were analyzed by t-tests to determine whether there was a significant decrease in the behavior scores of the experimental group. t (43)=2.21, $p<.05$. (see Tables 5 and 6)

An analysis of covariance (Table 7) was then employed using the pretest scores of the groups as a measure of the control variable and posttest scores as a measure of the treatment effect. The purpose of this analysis was to determine whether pre-treatment group differences may have accounted for a significant amount of the variance and also to determine if the treatment itself may have accounted for a significant amount of the variance. A significant amount of the variance was accounted for by pre-treatment differences between group scores. F (1)=6.108, $p<.02$. After accounting for this difference, however, a significant amount of variance which could be accounted for by the treatment effect remained between the posttest scores. F (1)=1.784, $p<.01$. The

CONTROL GROUP
PRETEST

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	36.	1	3.8	3.8	3.8
	45.	1	3.8	3.8	7.7
	46.	1	3.8	3.8	11.5
	48.	2	7.7	7.7	19.2
	50.	1	3.8	3.8	23.1
	51.	1	3.8	3.8	26.9
	54.	2	7.7	7.7	34.6
	55.	3	11.5	11.5	46.2
	57.	4	15.4	15.4	61.5
	59.	1	3.8	3.8	65.4
	60.	9	34.6	34.6	100.0
	TOTAL	26	100.0	100.0	

MEAN	54.769	STD ERR	1.202	MEDIAN	56.750
MODE	60.000	STD DEV	6.127	VARIANCE	37.545
KURTOSIS	2.060	SKEWNESS	-1.430	RANGE	24.000
MINIMUM	36.000	MAXIMUM	60.000		

Table 1

CONTROL GROUP
POSTEST

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	39.	1	3.8	3.8	3.9
	43.	1	3.8	3.8	7.7
	48.	1	3.8	3.8	11.5
	49.	1	3.8	3.8	15.4
	50.	1	3.8	3.8	19.2
	51.	1	3.8	3.8	23.1
	53.	1	3.8	3.8	26.9
	54.	2	7.7	7.7	34.6
	55.	2	7.7	7.7	42.3
	56.	1	3.8	3.8	46.2
	57.	2	7.7	7.7	53.8
	58.	4	15.4	15.4	69.2
	60.	8	30.8	30.8	100.0
	TOTAL	26	100.0	100.0	

MEAN	55.077	STD ERR	1.116	MEDIAN	57.000
MODE	60.000	STD DEV	5.692	VARIANCE	32.394
KURTOSIS	2.235	SKEWNESS	-1.519	RANGE	22.000

EXPERIMENTAL GROUP
PRETEST

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	32.	1	2.3	2.3	2.3
	36.	1	2.3	2.3	4.5
	37.	2	4.5	4.5	9.1
	40.	2	4.5	4.5	13.6
	45.	2	4.5	4.5	18.2
	49.	1	2.3	2.3	20.5
	51.	5	11.4	11.4	31.8
	52.	2	4.5	4.5	36.4
	53.	1	2.3	2.3	38.6
	54.	3	6.8	6.8	45.5
	55.	2	4.5	4.5	50.0
	56.	1	2.3	2.3	52.3
	57.	4	9.1	9.1	61.4
	58.	2	4.5	4.5	65.9
	59.	7	15.9	15.9	81.8
	60.	8	18.2	18.2	100.0
	TOTAL	44	100.0	100.0	

MEAN	53.182	STD ERR	1.148	MEDIAN	55.500
MODE	60.000	STD DEV	7.614	VARIANCE	57.966
KURTOSIS	0.909	SKEWNESS	-1.331	RANGE	28.000
MINIMUM	32.000	MAXIMUM	60.000		

EXPERIMENTAL GROUP
POSTEST

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	29.	1	2.3	2.3	2.3
	30.	1	2.3	2.3	4.5
	36.	1	2.3	2.3	6.8
	39.	1	2.3	2.3	9.1
	40.	1	2.3	2.3	11.4
	41.	1	2.3	2.3	13.6
	42.	1	2.3	2.3	15.9
	43.	1	2.3	2.3	18.2
	44.	2	4.5	4.5	22.7
	45.	2	4.5	4.5	27.3
	46.	2	4.5	4.5	31.8
	47.	1	2.3	2.3	34.1
	48.	2	4.5	4.5	38.6
	49.	1	2.3	2.3	40.9
	50.	1	2.3	2.3	43.2
	52.	12	27.3	27.3	70.5
	54.	1	2.3	2.3	72.7
	55.	1	2.3	2.3	75.0
	56.	2	4.5	4.5	79.5
	59.	3	6.8	6.8	86.4
	60.	6	13.6	13.6	100.0
	TOTAL	44	100.0	100.0	

MEAN	49.864	STD ERR	1.178	MEDIAN	51.750
MODE	52.000	STD DEV	7.816	VARIANCE	61.097
KURTOSIS	0.432	SKEWNESS	-0.755	RANGE	31.000
MINIMUM	29.000	MAXIMUM	60.000		

Table 4

findings of the Analysis of Covariance coupled with the findings of the *t*-tests support the contention that the treatment negatively influenced the behavior of the subjects.

Table 5

T-test EXPERIMENTAL GROUP

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	(DIFFERENCE) MEAN	CORR.	T VALUE	DF	2-TAIL PROB.
PRETEST	44	53.1818	7.614	3.3182	0.165	2.21	43	0.033
POSTTEST		49.8636	7.81					

Table 6

T-test CONTROL GROUP

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	(DIFFERENCE) MEAN	CORR.	T VALUE	DF	2-TAIL PROB.
PRETEST	26	54.7692	6.127	-0.3077	0.517	-0.27	25	0.790
POSTTEST		55.0769	5.692					

Table 7

ANALYSIS OF VARIANCE

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Covariates	293.078	1	293.078	6.108	0.016
Main Effect	373.493	1	373.493	7.784	0.007
Explained	666.570	2	333.285	6.946	0.002
Residual	3214.622	67	47.979		
Total	3881.192	69	56.249		

Chapter 5

SUMMARY AND DISCUSSION

A summary of the findings reported in Chapter 4 indicates several things:

1. There was a significant change in the behavior of the subjects in the experimental group. The scores were significantly lower, indicating that their social behavior became less acceptable following the treatment.

2. There was no significant change in the behavior of the control group, although the behavior improved slightly.

3. There was a significant difference between the behavior of the clients in the two groups with the behavior of the clients not subjected to the treatment being significantly more socially acceptable.

4. A significant portion of the variance between the groups on posttest scores could be accounted for by pre-treatment differences.

5. A significant portion of the variance between the groups on posttest scores could be accounted for by the treatment effect.

Several explanations for the findings can be considered. It is possible that change itself may influence retarded clients in a negative manner and that merely altering circumstances may have caused behavior deterioration in the subjects. As the addition of new leisure opportunities does not seem traumatic or even drastic it is felt that this change did not occur.

Extraneous Variables and Possible Effects

A second explanation which must be considered is the possible effect of the different group sizes. It is felt that group size is not an important variable in this particular study, since the number of social interactions does not seem significantly influenced. In any event, this factor could not be counteracted due to the nature of the facilities where the study was conducted. Another consideration is the possible intervention of changes other than the treatment. Since program content was exactly the same for both groups and no program modifications were conducted during the test period, it was not possible that curriculum differences caused the behavior change.

Likewise, staff training and qualifications remained the same, client age and sex ratios were similar (see Chapter 3), no major trauma was noted for any subject, staff-client ratio did not change, and no major changes or differences other than the treatment could be discovered.

Another possibility for the findings is reporter error, which was minimized as much as possible through consistency in staff training and no reporter-staff changes during the period. The consistent use of objective pre-established target behaviors also helped minimize the risk of reporter error.

Still another possible explanation which must be considered is that the teaching method employed at the

experimental facility might itself be detrimental to the clients served. It is felt that this is unlikely, since the methods used are widely accepted and are exactly the same as those employed at the control facility.

It is indicated and seems plausible, then, that the presentation of a task oriented leisure activity to members of the experimental group may actually have resulted in deterioration of the subjects' social behavior. If this explanation is accepted several crucial factors must be evaluated. One factor that possibly changed in the treatment, in addition to the actual activities offered, is the amount of social exchange that the clients experienced both with the staff and with other clients. As the projects offered were individual and required independent functioning, limited staff intervention was necessary and other clients were excluded due to the nature of the activities.

Zigler, Hadgen, and Stevenson (1958) indicated that adult support provided more reinforcement for a retarded sample than for a normal sample. Zigler labeled the desire for social reinforcement the positive reaction tendency and emphasized that in a situation where failure is possible a retarded individual may be detrimental to that individual and that the retarded person may show more behavior problems in an attempt to regain attention.

It is also possible that the very nature of the activity itself could cause difficulties. Avedon and Arje (1964)

pointed out that boredom, frustration, or rejection may lead retardates to delinquency. Boredom and frustration became evident when, even though all the experimental subjects devoted at least five free time periods to their projects, only 63% actually completed a project. At the same time, the inappropriate social behavior of these subjects as a group increased in frequency. Frankel, Happ, and Smith (1975) indicated that activity in quantity only is pointless; unless the activity gradually changes, learning is restricted to that specific activity and does not generalize to other areas.

The Nature of the Clients

Another major consideration concerns the nature of retarded subjects. Lippman (1972) discusses the tendency to view retarded individuals as "poor blighted creatures" who need protection from the world instead of help to become part of it. Zigler (1966) points out that because of this tendency, feelings of independence in retarded citizens are sometimes simply not there. He postulated that children learn to expect varying degrees of success and failure and that they approach a task with an expectancy based on past experiences. Zigler (1968) claims that a common reaction to excessive amounts of failure is a lowered level of aspiration and that since retarded persons commonly experience much failure they tend to set goals below their performance capabilities in all areas. The introduction of a task oriented project might

possibly have set up another failure experience for the subjects which, in turn, created other failure experiences.

Gold (1980) states that retarded children who experience prolonged failure on difficult problems often will fail to solve even very simple problems. It is likely that providing retarded individuals with a success or failure opportunity without providing extensive support and encouragement was tantamount to forcing them into another failure. Gunzberg (1973) stated that the will to strive against difficulties, the desire to reach specific and not easily attainable aims, appears to be absent in the retarded. Perry (1974) states that the retarded child has not had enough experience in expressing himself due to his lack of self-confidence and that this child generally receives only a small amount of satisfaction from creative attempts; Cruickshank (1967) points out that self-direction in the retarded generally results in confusion and further fracturing of the ego.

Two other explanations concerning the nature of the clients are offered in the available research. Hagan and Huntsman (1971) discovered that institutionalized retarded children showed an attention deficit compared to retarded children living at home. It is possible that the subjects lost interest in the projects and sought other activities which increased unstructured time and thereby increased behavior problems.

Finally, Turmre and Zigler (1964) found that retarded

children imitate behavior more following a failure experience. It is possible that upon becoming bored or frustrated or perhaps feeling rejected due to a decrease in staff attention the subjects began to imitate the inappropriate behaviors of other clients more often.

Conclusion

It is unfortunate that the treatment provided in this experiment seems to have negatively influenced the lives of the subjects. It is felt that this negative aspect does not outweigh the importance of the findings, since these results can be considered in assisting the subjects toward normalization in the future.

It should be noted that future researchers need to consider these findings and evaluate their worth before conducting similar research. A careful evaluation of the methods and findings here could very likely prevent a reoccurrence of any detrimental effects to the subjects. It should also be noted that recreation for the retarded is severely limited. Even with the presence of Special Olympics and more progressive ideas designed to help the retarded, there remains a lack of adequate recreational opportunities for a large number of retarded citizens. Recreational programs to aid the retarded individual in successfully dealing with other life situations is a must.

Research into the dynamics of social interaction and its importance to retarded individuals is absolutely necessary. Studies on the effects of different types and intensities of interactions should be conducted. Practical applications of the present findings may include the introduction of more community recreation time for the retarded in an attempt to reduce the isolation which may be present in many

of the recreational outlets for the retarded. Training to increase attention span and to reduce the need for feedback from others might also be considered.

Finally, the development of leisure projects designed entirely for the abilities and interests of the retarded should be considered. Retarded clients should not be limited to recreational activities and projects which have been chosen for them at random by someone who may find the project infinitely easier to accomplish than does the retarded person.

Practical considerations for institutions dealing with the retarded and especially for the facilities studied in the p.esent experiment may include careful evaluation of existing recreation programs with an eye toward designing programs which will better meet the emotional needs of the clients. Patterns of staff and client interaction should also be considered in an effort to improve the relationship between the two and to help the clients achieve greater autonomy in their lives.

REFERENCES

American Association for Health, Physical Education, and Recreation. A guide for programs in physical education for the mentally retarded. Washington, D. C., National Education Association, 1968.

Avedon, E. and Arje, B. Socio-recreative programming for the retarded: a handbook for sponsoring groups. New York: Bureau of Publication, Columbia University, 1964.

Berkson, G. and Mason, W. Stereotyped movements of mental defectives: the effects of toys and the character of the acts. American Journal of Mental Deficiency, 1963, 68, 511-524.

Bernstein, B. Everyday problems and the child with learning difficulties. New York: The John Day Company, 1967.

Birenbaum, A. and Schwartz, A. Recreation for the mentally retarded: a community based program. New York: The National Institute of Mental Health, 1966.

Birenbaum, A. and Birenbaum, M. Mentally retarded adults in the community--almost 4 years later. American Journal of Mental Deficiency, 1979, 83, 323-329.

Brolin, D. Life centered career education--a competency based approach. Reston, Va., Council for Exceptional Children, 1978.

Carlson, B. and Ginglend, D. Recreation for retarded teenagers and young adults. Nashville and New York: Abingdon Press, 1968.

Chandler, C. Babysitting for houseplants: responsibility, interest, and enthusiasm began to grow. Teaching Exceptional Children, 1978, 9, 61-63.

Cheseldine, S. and Jeffree, D. Mentally handicapped adolescents: their use of leisure. Journal of Mental Deficiency Research, 1981, 25, 49-59.

Coleman, J., Butcher, J., and Carson R. Abnormal Psychology and Modern Life (6th edition). Glenview, Ill.: Scott, Foreman, and Lange, 1980.

Corcoran, E., and French, R. Leisure activity for the retarded adult in the community. Mental Retardation, 1977, 15, 21-23.

Cruickshank, W. Learning disability in home, school, and community. Syracuse, N. Y.: Syracuse University Press, 1977.

Cruickshank, W. The brain injured chiid in home, school, and community. Syracuse, N. Y.: Syracuse University Press, 1967.

Davenport, R. and Berkson, G. Stereotyped movements of mental defectives: effects of novel objects. American Journal of Mental Deficiency, 1963, 67, 879-882.

Day, R. and Day, M. Leisure skills instruction for the moderately and severely retarded: a demonstration program. Education and Training of the Mentally Retarded, 1978, 12, 128-131.

Dumphrey, M. Participation of retarded children in regular recreational activities of a community center. Exceptional Children, 1970, 36, 453-458.

Edgerton, R. The cloak of competence; stigma in the lives of the mentally retarded. Berkley: University of California Press, 1967.

Favel, J. and Cannon, P. Evaluation of entertainment materials for severely retarded persons. American Journal of Mental Deficiency, 1963, 68, 511-524.

Feldman, S. Readings in career and vocational educations for the handicapped. Guilford, Conn.: Special Learning Corporation, 1980.

Frankel, M., Happ, W. and Smith, M. Functional teaching of the mentally retarded (2nd edition). Springfield, Ill.: Thomas, 1975.

Friedman, S. The anatomy of work. New York: The Free Press of Glencoe, Ireland, 1961.

Gold, M. "Did i say that"-articles and commentary on the try another way system. Champaign, Ill.: Research Press Company, 1980.

Gunzberg, H. Social competence and mental handicap; an introduction to social education. London: Bailliere Tindall, 1973.

Hallahan, D. and Cruickshank, W. Psychoeducational foundations of learning disabilities. Englewood Cliffs, N. J.: Prentice Hall, 1976.

Haywood, C. and Newbrough, J. Living environments for developmentally retarded persons. Baltimore: University Park Press, 1981.

Joint Committee of the Council for Exceptional Children and the American Association for Health, Physical Education, and Recreation. Recreation and physical activity for the mentally retarded. Washington, D. C.: Aapher Publications, 1973.

Legg, M. Educating the child who is different. New York: The John Day Company, 1968.

Lippman, G. Attitudes toward the handicapped. a comparison between Europe and the United States, Springfield, Ill.: Thomas, 1972.

Mane, A. A report on the institute on selected workshop services for the mentally retarded. Lawrence, Kansas: University of Kansas, 1961.

Mangus, A. Effect of mental and educational retardation on personality development of children. American Journal of Mental Deficiency, 1950, 55, 208-212.

Marion, R. Leisure time activities for trainable mentally retarded adults. Teaching Exceptional Children, 1979, 11, 158-160.

Mercer, C. and Snell, M. Learning theory research in mental retardation-implications for teaching. Columbus, Ohio: Merrell, 1977.

Meyen, E. Planning community services for the mentally retarded. Scranton, Pa.: International Textbook Company, 1967.

Paquita, M. The hen or the egg? which comes first--antisocial emotional disorders or reading disability. British Journal of Educational Psychology, 1979, 49, 226-238.

Perry, W. Teaching the mentally retarded child (2nd edition). New York: Columbia University Press, 1979.

Pierce, C. and Risley, T. Recreation as a reinforcer: increasing membership and decreasing disruptions in an urban recreation center. Journal of Applied Behavior Analysis, 1974, 7, 403-411.

Quilitch, H. and Risley, T. The effects of play materials on social play. Journal of Applied Behavior Analysis, 1973, 6, 573-578.

Rutter, M. and Yule, W. Reading retardation and antisocial behavior--the nature of the association. Education, Health, and Behavior, 1970.

Salzberg, R. and Langford, C. Community integration of mentally retarded adults through leisure activity. Mental Retardation, 1981, 19, 127-131.

Sherrill, C. and Ruda, L. A time to listen. Parks and Recreation, 1978, 12, 30-33, 57-58.

Southern Regional Education Board. Recreation for the mentally retarded: a handbook for ward personnel. Atlanta: Southern Regional Education Board, 1964.

Sturge, C. Reading retardation and antisocial behavior. Journal of Child Psychology and Psychiatry, 1972, 23, 21-31.

Stein, K. and Gessons, D. Recreation and special populations. Boston: Halbrook Press Ins., 1973.

Swift, M. and Spivack, G. Alternative teaching strategies--helping behaviorally troubled children become active. Champaign, Ill.: Research Press, 1977.

Wehman, P. A leisure time activities curriculum for the developmentally disabled. Education and Training of the Mentally Retarded, 1977, 11, 309-313.

Yando, R., Seitz, V., Zigler, E., and Erlbaum, L. Imitation--a developmental perspective. New York: Halstead Press 1978.

Yando, R., Seitz, V., and Zigler, E. Intellectual and personality characteristics of children: social class and ethnic group differences. New York: Lawrence Erlbaum and Associates, 1979.

Zigler, E. and Child, I. Socialization and personality development, Reading, Mass: Addison-Wesley Publishing Company, 1973.

APPENDIX A

Target Behaviors

1. does not slap self
2. does not bite self
3. does not yell
4. does not touch inappropriately
5. does not touch excessively
6. does not argue excessively
7. does not tease others
8. does not lie
9. does not fight
10. in assigned area
11. does not whine
12. does not interrupt
13. does not demand
14. works cooperatively in groups
15. does not tattle
16. does not curse
17. does not steal food
18. does not throw tantrums
19. does not threaten
20. takes medicine
21. does not hit

22. does not run in halls
23. does not exaggerate
24. moderates rate of speech
25. participates in group activities
26. does not tear clothes
27. does not throw things
28. does not manipulate by asking two staff members for the same thing
29. does not beg for food
30. does not steal
31. does not order others around
32. speaks without mumbling
33. does not cry excessively
34. agrees to keep schedule
35. does not kick walls or destroy furniture

APPENDIX B

Hobby Kits

1. 19 piece Paint 'n Finishing Kit
   Pactra Industries Inc.
   420 South 11th Ave.
   Upland, CA 91786

2. Candle Making and Decorating Kit
   Avalon Industries, Inc. Hobbycraft Division
   95 Lorimer St.
   Brooklyn, NY 11206

3. Paint 'n Tote
   Avalon

4. Monsters and Myths Wax Toy Maker Set
   Avalon

5. Stuff and Lace
   Avalon

6. Assorted Build a Scene
   Lifelike Products, Inc.
   Baltimore, Maryland 21211

7. Craftmaster Acrylic Paint by Number
   Fun Dimensions
   Division of CPG Product Corp.
   Mount Clemens, MI 48045

8. Craftmaster Crushed Stone Craft Kit
   Fun Dimensions

9. Stitchery Kit
   Arrow Handicraft Corp.
   Chicago, IL 60609

10. Transformer Paint by Numbers
    Hasbro Industries, Inc.

11. Latch Rug Kits
    Charles Craft, Inc.
    Larringburg, NC 28352

12. Needles N Hoops
Box 165
Abington, PA 19001

13. Cast and Craft Decor Mold
Deep Flex Plastic Molds, Inc.
2740 Lipscomp St.
Ft. Worth, TX 76110

14. Ideas Prints and Plaques
Carolyn's Crafts
Bay Minetere, AL 36507

15. Stencil Wick Pillow Kit
Mate Etc.
Appleton City, MO 64724

16. Country Forest Critter Pull Toy Work Kits
Walnut Hollow
Route 2
Dodgeville, Wisconsin 53533

17. Paint N Hang Sunbeams Stained Glass
Kelly's Crafts
P.O. Box 36195
Cincinnati, OH 45236

18. Country Metal Punch
Ankara
Pompano Beach, FL 33064

19. Assorted woodbuilding and painting projects
No brand names available
A. Boxes
B. Plaques
C. Trays
D. Weathervanes
E. Bird houses and feeders

20. Assorted jigsaw puzzles

21. Assorted doll making items