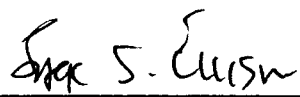


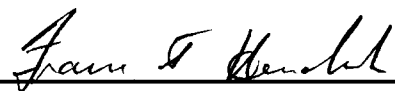
To the Graduate Council:

I am submitting herewith a thesis written by Fredrick E. Brown entitled "The Relationship of Activity Implementation to Camper Outcomes as a Function of Activity Programming for Children with Varying Degrees of Disability Severity." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science with a major in Recreation and Leisure Studies.


Dr. Gene A. Hayes, Major Professor

We have read this thesis and
recommend its acceptance:





Accepted for the Council:


Associate Vice Chancellor
and Dean of The Graduate School

**THE RELATIONSHIP OF ACTIVITY IMPLEMENTATION TO CAMPER
OUTCOMES AS A FUNCTION OF ACTIVITY PROGRAMMING FOR
CHILDREN WITH VARYING DEGREES OF DISABILITY SEVERITY**

A Thesis
Presented for the
Master of Science
Degree
The University of Tennessee, Knoxville

Fredrick E. Brown
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Abstract

The purpose of this study was to investigate the relationship between the implementation of activities and the outcomes derived from participation in those activities as a function of activity programming at a camp for children with multiple disabilities. The subjects for this study were 100 children attending Camp Koinonia during April 6-11, 1997. The Daily Activity Assessment Scale (DAAS) was completed by the individual counselor for their camper for one day as the child participated in nine activities. The DAAS form consisted of six items investigating the implementation of the activity and three items concerned with the outcomes that the child received. Each subject was grouped by level of disability severity (either slight, moderate, or severe) based on the individual's application to Camp Koinonia. Pearson's Correlation Coefficient was used to assess the relationship between the Implementation items and the Outcome items of the DAAS. Coefficients were computed for all subjects, and for each group having either slight, moderate, or severe impairment. Tests for significance of difference between correlation coefficients were used to assess differences observed for each of the three groups of disability severity. It was concluded that the involvement of all campers in the activity and appropriate interaction skills of the staff were most related to the outcome items of the DAAS. Data also suggests that positive outcomes may be more difficult to acquire as severity of disability increases.

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Chapter 1

Introduction

Much research has been done in the area of evaluating the effects of recreational activities for participants. With the increasing pressure for recreation professionals to document success of their programs, evaluation plays a critical role in program design (Witman, 1994). The field of therapeutic recreation is responding to this focus on documentation of effectiveness. However, evaluations often focus on only client outcomes from participating in the program (Kraus, 1997; Rawson and Barnett, 1993; Rawson and McIntosh, 1991, and Witman, 1994). Other researchers are encouraging evaluation of the preparation for the program and implementation of the program to provide more complete and detailed information needed for program improvement (Peterson and Gunn, 1984; Haring and Breen, 1989; and Lee, Priest, and Halberg, 1991).

For therapeutic recreation programs, it is necessary to design activities to meet the needs of the participants. This requires careful and ongoing evaluation (Peterson and Gunn, 1984). The program design should include evaluation of the inputs of the program (those necessary materials, persons, or plans involved in the activity), the process of the program (the actions and activities needed to implement the activities), and the outputs of the program (outcomes), as described by Connolly (1984). Further research is necessary to determine if measures other than, or in

addition to, client outcomes can offer recreation programs more complete information to use as a basis for changing programming structure.

This study attempted to determine the value of utilizing an evaluation design focusing on activity implementation (process or delivery) in conjunction with camper outcomes for programs providing meaningful and appropriate activities for participants who have a variety of abilities.

Statement of the Problem

Evaluations of therapeutic recreation programs often concentrate on the final outcome from participating in the program, however, the use of only outcome measures can be vague in describing the extent to which the presentation of the activity was appropriate for the participant. In addition, the degree of relationship between high quality programming and client benefit has not been established. For programs that serve persons with multiple disabilities, it may be more difficult to offer quality programming that meets the participant's needs than for programs concerned with a single disability. It can be hypothesized that as a person's severity of disability is increased or confounded by multiple disabling conditions, the more complex is the provision of the program, and the greater the need for accurate evaluation of the program's objectives. To strengthen programming, and possibly improve outcomes, it may be helpful for program administrators to determine the relationship between the implementation of an activity and camper outcomes as a result of activity programming.

Purpose of the Study

The purpose of this study was to evaluate activity programming for children with disabilities of varying degrees. This purpose was accomplished through the examination of the relationship between activity implementation and camper outcomes as measured by the Daily Activity Assessment Scale (DAAS)(see Appendix A). Another purpose of this study is to evaluate activity implementation and camper outcomes for each of the nine program areas offered at Camp Koinonia during the period of April 6-11, 1997.

Need for the Study

This type of study is needed to determine the value of utilizing an evaluation design centering on activity implementation and camper outcomes for programs providing activities for participants who have a variety of abilities. While evaluations of therapeutic recreation programs are being done, they often focus on outcomes alone and do not evaluate the implementation of the activities. This lack of information leaves program designers without documentation of the relationship between the quality of activity programming and the results they achieve.

It is necessary for therapeutic programs to design their activities to meet the needs of the participants, which requires careful and ongoing evaluation (Peterson and Gunn, 1984). Successful program design includes evaluation of the inputs of the program (those necessary materials, persons, or plans involved in the activity), the process of the program (the actions and activities needed to implement the

activities), and the outputs of the program (outcomes), as described by Connolly (1984).

Unfortunately, many studies are not focusing on evaluation of all three levels of the program (inputs, process, and outputs) and instead focus on only outcomes (Kraus, 1997; Rawson and Barnett, 1993; Rawson and McIntosh, 1991, and Witman, 1994). Haring and Breen (1989) warn against this and state that the major drawback in assessing outcome measures alone is that the results do not identify which parts of the program were needed to achieve the outcome results. By not evaluating the inputs and delivery of the program, it is difficult to know which aspects of the program need improvement.

The descriptive information gathered from this study will be used to evaluate the need for any changes in the delivery of service (activity implementation) in the different program areas and determine effectiveness of program areas in reaching objectives for persons of varying degree of severity of disability (camper outcomes). It is hoped that results will be able to be generalized to recreation programs for persons with disabilities, as well as give feedback for program planning at Camp Koinonia, the setting for this study.

Delimitations

The delimitations in this study were:

1. This study was delimited to evaluation of the activity program at Camp Koinonia during the period of April 6-11, 1997.

2. The population of this study was delimited to the 100 campers attending Camp Koinonia during the period of April 6-11, 1997.
3. Data was only used from campers who had a corresponding camp application which lists the severity of their disability in the following categories: Slight, Moderate, or Severe.

Limitations

The limitations in this study were:

1. The counselor's ability to correctly rate the appropriateness of the activity sequence of events and the appropriateness of the equipment used in the activity.
2. The counselor's awareness of interactions that occurred during the activity.
3. The counselor's knowledge of the abilities of their campers.
4. The counselor's ability to accurately rate the extent that their camper enjoyed the activity.
5. The counselors must have completed and returned the DAAS form.

Basic Assumptions

The assumptions of this study were:

1. The counselors responded honestly to the scale items.

2. The counselors were able to correctly identify the appropriateness of the activity sequence of events and the appropriateness of the equipment used in the activity.
3. The counselors were able to accurately rate whether their camper enjoyed the activity.
4. The counselors were aware of the skill(s) being utilized in the activity.
5. Staff completing the scale were present and alert during the activity.
6. The evaluation scale (the DAAS) was valid and reliable in assessing activity implementation and camper outcomes.
8. Counselors were able to identify if their camper experienced success relative to their abilities during the activity.

Definition of Terms

Activity Implementation: For the purposes of this study, activity implementation was measured by a score on the activity implementation subscale of the DAAS. Activity implementation included the actual components of the activity plan in action. Activity implementation encompassed staff performance, use of equipment or materials, sequencing of actions or skills, use of time, and level of involvement of participants.

Activity Programming for Children with Varying Degrees of Disability Severity: For the purposes of this study, activity programming for children with varying

degrees of disability severity was that program as implemented by Camp Koinonia for children between the ages of seven and twenty-one with a condition or conditions placing limits upon their activities of daily living attending Camp Koinonia during the period of April 6-11, 1997.

Camper Outcome: For the purposes of this study, camper outcome was measured by a score on the camper outcome subscale of the DAAS. Camper outcomes were the responses or actions of the camper in relation to the activity presented. These included level of enjoyment, ability to experience success appropriate to their capabilities, and ability to perform the task or skill emphasized in the activity (the central skill(s) needed for completion of the activity).

Camp Koinonia: A residential outdoor recreation camp experience for children with multiple disabilities in the east Tennessee area. This camp was planned and staffed by University of Tennessee, Knoxville students as part of a University course.

Daily Activity Assessment Scale (DAAS): The DAAS was a nine-item scale, utilizing "yes" or "no" responses, which pertained to the actual implementation and presentation of the activity to the camper, as well as the outcomes for the individual camper.

Degree of Disability Severity: For the purposes of this study, degree of disability severity was based on the parents' judgement of the child's functional impairment as reported on the camper's application to Camp Koinonia.

Evaluation: For the purpose of this study, evaluation was defined as a systematic type of research offering empirical evidence of the worth of a program in meeting its stated goals.

Summary

In summary, this study proposed to analyze data pertaining to the provision of activities, and outcomes related to those activities, to persons with disabilities through the Camp Koinonia Project, a University of Tennessee program held each spring. This chapter introduced the topic of this study, identified the research problem, and discussed the need for the study. Delimitations, limitations, and assumptions of the study were explored, and relevant terms were defined.

The rest of this study was organized into the following chapters. Chapter 2 presents a review of the literature related to evaluation of recreation programming. Chapter 3 discusses the specific methodology that was used in this study. The analysis of data for this study is presented in Chapter 4. Chapter 5 includes the summary, findings, conclusions, and recommendations for this study.

Chapter 2

Review of Literature

This chapter will review literature relevant to the present study of evaluating programming effectiveness for persons with disabilities. This chapter will begin by focusing on the beginnings of the organized camping programs and the growth of camping programs for persons with disabilities. Discussion will include the benefits of camping programs for persons with disabilities, the role of therapeutic recreation and appropriate programming for persons with disabilities, and discussion of a particular outdoor recreation program, Camp Koinonia, and its role in this study. Evaluation research design will be examined for relevant models which included the systems-based evaluation model, the discrepancy evaluation model, and the transaction/ observation model, which offer significance to the evaluation design of this study. This chapter will conclude with a review of articles utilizing evaluation methods designed to investigate programming effectiveness for persons with disabilities.

History and Description of Organized Camping Programs

The organized camping movement began in the late 1800's as a social movement that has continued to grow for the past century (Rodney and Ford, 1971). The goals of these camps for youth have undergone several changes in focus and at times, for example, have emphasized work ethic, physical fitness,

character growth, environmental awareness, environmental education, and recreation (Sessoms and Henderson, 1994). The American Camping Association defines organized camping as: "A sustained experience which provides a creative, educational opportunity in group living in the out-of-doors. It utilizes trained leadership and the resource of natural surroundings to contribute to each camper's mental, physical, social, and spiritual growth "(American Camping Association, 1990, p.3).

Kennedy, Austin, and Smith (1989) report the provision of camping programs for large numbers of persons with disabilities began in the 1930's. Since the 1960's most camps for persons with disabilities have begun paralleling the goals of camps for the general population. However, opportunities to attend camping programs were still limited. In the 1970's, it was estimated that only about 10% of children with disabling conditions had the opportunity to experience camping (Hillman and Appel, 1978).

Since the implementation of the Americans with Disabilities Act (ADA) in 1990, more camps are believed to be responding to the needs of persons with disabilities (Sessoms and Henderson, 1994). Bedini, et al. (1992) states that camping programs cannot discriminate by denial of participation, by offering participation with unequal benefit, or by offering programming separate or different from what is provided to others. Scanlin (1992) also describes the implementation of ADA in camping programs. Unfortunately, both Bedini, et al. (1992), and Scanlin (1992) briefly mentions the need to address programming issues, but then provide

little information on this topic, and instead focus on physical and attitudinal barriers of program inclusion of persons with disabilities. As many as 5.3 million children have the opportunity to attend organized camping experiences each summer (Sessoms and Henderson, 1994). However, children with disabling conditions continue to have fewer comparable camping opportunities.

Sessoms and Henderson (1994) describe camping programs by organization and administration classification which includes day camps, short-term residence camps, long-term residence camps, or trip camping. Additionally, camp programs can be classified by function or program emphasis such as special interest (e.g., gymnastics, music), special needs (for persons with disabilities, for children with bereavement issues, or for persons with diabetes), or general purpose camps. Camping programs designed for persons with disabilities can focus on provision of services for a population of persons with a particular disability (such as for persons with cerebral palsy or spina bifida) or for persons with multiple disabilities.

Benefits of Organized Camping Programs for Persons with Disabilities

It is necessary that the benefits of organized camping programs be discussed in relation to this study to understand the possible achievement of effective programming. Recreation is believed to promote healthy physical, emotional, social, and mental growth (Kraus, 1997). While these benefits are likely in camping programs, organized camping programs have been recognized as offering unique social interactions and are considered effective alternative learning

environments (Kennedy, Austin, and Smith, 1989). Kennedy et al. (1989) describe benefits of organized camping as synthesized by Hansen in 1972. Of fifty references reviewed five most frequently listed benefits emerged. These benefits include: 1) recreational activities, 2) learning opportunities, 3) expanded environment, 4) socialization/informal group participation, and 5) independence/self-confidence.

The potential benefits of organized camping programs for persons with disabilities are great. However, developing such programs is not an easy task and requires careful design, implementation, and evaluation. McCormick, White, and McGuire (1992) surveyed parents' perceptions of benefits of summer camps for campers with mental retardation. Six dimensions of benefits perceived by parents were found: 1) social skill development, 2) social competence, 3) respite care, 4) cognitive development, 5) expressive development, and 6) physical competence. One organized camping program designed for persons with multiple disabilities which attempts to provide practical and useful evaluation is Camp Koinonia.

The Camp Koinonia Project

Camp Koinonia is the setting for this study and it is important that its role in effective recreation programming be assessed to possibly offer application of meaningful evaluations to other camping programs for persons with disabilities. "Koinonia" is a Greek word meaning "fellowship" and "caring community," (Hayes, et al., 1997). The Camp Koinonia Project is an activity-based outdoor recreation

program offered each spring by the Recreation and Tourism Management Program of the Department of Health, Leisure, and Safety Sciences at the University of Tennessee, Knoxville. This program provides an organized camping experience for children with multiple disabilities while preparing college students to conduct a residential outdoor recreation and education program.

The goals of Camp Koinonia are:

1. "To provide each camper with an educational and fun-oriented experience in an outdoor environment.
2. To provide an educational experience for each university student involved in the program.
3. To provide an enriching and rewarding experience that will foster the emotional, social and physical well-being of the camper.
4. To provide an opportunity to establish personal interrelationships among campers, counselors, and staff" (Hayes, et al. 1997, p.8).

The Camp Koinonia project is divided in two parts:

- 1) Phase I: The program is offered as a college course and the students receive 24-27 hours of classroom instruction on how to organize, develop, implement, and evaluate a one week outdoor residential camping program for persons with disabilities, and
- 2) Phase II: The actual implementation of the camp at an outdoor camping location near Knoxville, Tennessee. During this week the college students will be responsible for all aspects of care for the

approximately 100 campers, as well as conduct all activities, programs, and evaluations of the program.

The children that attend Camp Koinonia range in age from seven to twenty-one and have varying degrees of cognitive and physical abilities. Prevalent conditions of campers include mental retardation, autism, visual impairment, hearing impairment, cerebral palsy, spina bifida, and attention deficit disorders. Most campers attending Camp Koinonia have more than one disabling condition.

The recreational programming at Camp Koinonia is designed to provide a broad range of activities appropriate to the skills and needs of the participants (campers), and includes nine activities that are offered daily to each cabin group. The nine activities are Horseback Riding, Nature Crafts, Canoeing, Music and Movement, Sports and Games, Outdoor Education, Cooking, Computers, and Ropes initiatives. The quality of the programming of these activities are all evaluated in a summative evaluation design during the camp program. This study will focus on analysis of one evaluation used at Camp Koinonia, the Daily Activity Assessment Scale (DAAS), which will be explained in more detail in the methodology section.

Recreational Programming for Persons with Disabilities

The provision of appropriate, successful, and meaningful activities is vital to all recreation programs, and is of central importance to this study. The discipline

of Therapeutic Recreation is an integral component of providing activity programming for persons with disabilities. Therapeutic recreation is defined as,

"A process which utilizes recreation services for purposive intervention in some physical, social, emotional, and/or social behavior to bring about a desired change in behavior and to promote the growth and development of the individual" (Peterson & Gunn, 1984, p.2).

Therapeutic Recreation professionals often use a systems approach to program planning. The systems approach to program planning is a client-centered planning method which views the recreation program as a dynamic entity of related program components (Peterson and Gunn, 1984). In this method program design, implementation, and evaluation are linked in a feedback cycle. The evaluation process is created in conjunction with the program design and allows feedback during all phases of the program. This model provides a basis for understanding the interactive relationship between the evaluation process and program design and implementation.

Most camping programs have similar goals without regard to the population they serve. Camping programs for persons with disabilities differ from programs for persons without disabilities only in that its participants may need some special consideration, modification or assistance to participate in the activity. In the provision of activities to groups of individuals with varying degrees of abilities, it can be difficult to keep all participants involved and thus limit one's potential success in the activity. The activities provided are modified as little as possible from what would be offered at any outdoor camp for children without disabilities. As designed

by Peterson and Gunn (1984), the following criteria are observed when developing activities:

- 1) Keep the activity and the action as close to the original or traditional form of the activity as possible.
- 2) Only modify those aspects of the activity that need adapting for children with disabilities. For example, a child with mental retardation may need the rules of a game simplified but can perform the required physical activity without adaptation.
- 3) Base any modification on the needs of the individual participant. For example, two children with cerebral palsy may have different amounts of leg strength, an important ability for mounting a horse. For the two participants, the type and extent of necessary adaptation could be different.

Successful recreational programming is based on meeting the needs of the program's participants and requires detailed planning, implementation, and evaluation of activities and experiences (Sessoms and Henderson, 1994). Evaluation of programming is a necessary and integral part of the provision of beneficial and meaningful recreation activities, including camping programs.

Evaluation of Recreational Programs

Program evaluation is defined by Peg Connolly as, "... a method of documenting program operations and outcomes to determine the strengths and

weaknesses of the program” (Connolly, 1984, p. 137). While this description maybe somewhat simplistic, it embodies the basic function of evaluation and evaluation research. Other definitions of evaluation include components of evaluation being a systematic process, used for decision-making purposes, providing information related to program improvement, and is used to judge the effectiveness of programs (Kraus, 1997; Peterson and Gunn, 1984). Evaluations of programming can be used to provide information for revision of programs, enhance accountability, provide information regarding impact of programs on the participant’s quality of life, measure participant satisfaction, and help determine if program goals and objectives are being obtained (Schleien & Ray, 1988).

Kraus and Allen (1997) argue evaluation should be considered a subcategory of research. The term evaluation is often used interchangeably with evaluation research (e.g., Rossi and Freeman, 1982), yet, evaluation tends to be more applied in nature than research. Evaluation and research do have common components: Both are systematic inquiries utilizing accepted data-gathering methods and data-analysis methods to produce evidence of a program’s effectiveness (Kraus and Allen, 1997). For the purposes of this study, the term evaluation will be used as a systematic type of research offering empirical evidence of the worth of a program in meeting its stated goals.

Several approaches to evaluation have been proposed for use in recreation and leisure services programs. These include evaluation by professional judgement, by application of standards and criteria, by goal achievement, or by

participant satisfaction (Kraus and Allen, 1997). Other models include the transaction/observation model, the systems-based evaluation model, the discrepancy evaluation model, and process models (Kraus, 1984; Kraus and Allen, 1997; Peterson and Gunn, 1984). The models of evaluation that are most relevant to this study are the discrepancy evaluation model, the system-based model and the transaction/observation model, which will be described in more detail.

Systems-Based Evaluation Model

The systems-based approach to evaluation is significant to this study due to its focus on feedback during the course of program implementation. This method of evaluation focuses on input, process, outcomes, and the environment in which the program operates (Kraus and Allen, 1997). Examples of this type of system include the PPBS (Planning-Program-Budgeting Systems), the PERT (Program Evaluation Review Technique), and CPM (Critical Path Method). This method focuses on several different aspects of program operations and tends to be focused on managing resources (Kraus and Allen, 1997). While this model's focus may be more broad in focus than the specific problem of this study, it does address the importance of addressing the relationship between the program's inputs, processes, and outcomes. The next model considered, the discrepancy evaluation model, offers additional program considerations within a similar framework.

Discrepancy Evaluation Model

The discrepancy evaluation model focuses on comparing actual outcomes with desired or planned outcomes (Peg Connolly, 1984). In this model, the discrepancies between the intended and actual inputs, processes, and outputs are the focus of investigation. Inputs are defined as the item (e.g., persons, materials, funding) necessary for the activity. Process refers to the actions and activities needed during the implementation of the activity. Outcomes are the intended outcomes of the program as determined by the goals and objectives (Peterson and Gunn, 1984). This type of model provides an important difference from evaluations that only investigate outcomes. It allows a detailed evaluation of why a program might not meet its desired objectives by determining which area (input, process, or output) is lacking. The instrument used in this study, the DAAS, includes subscales hoped to measure the degree to which the activity programming is meeting program goals related to the activity implementation and related camper outcomes.

Transaction/Observation Evaluation Model

This model focuses on the evaluation of a program by its participants or staff members. The evaluators rate the program's effectiveness based on their personal experience and subjective judgement of the process of the activity and the dynamics involved in it (Kraus, 1985; Kraus and Allen, 1997). This type of method often relies on qualitative and naturalistic observation instead of quantitative data.

These three models each contain aspects pertinent to this study. The evaluations of Camp Koinonia activity programming seek to investigate both the activity transaction (process) and the camper outcomes from participating in the activity. This information is based on the discrepancy evaluation model. Evaluation of the actual activity implementation and camper outcome (i.e., the score given for a particular survey item) is compared to the intended implementation (i.e., a perfect score for that item). Smaller discrepancy between these indicates the relative strength of the programming to meet the intended outcome.

The manner in which the evaluation data is gathered is related to the transaction/observation method. The data for this study will be completed by the camp counselors who will be evaluating the activity's effectiveness based on their subjective view of whether the process and dynamics of the activity were appropriate for their camper. The counselor will also be asked to rate the activity's effectiveness in meeting the desired outcomes for the activity.

Types of Recreation Evaluation in the Literature

Recent articles addressing the issue of evaluation of program effectiveness were reviewed. With the increased focus on documenting the benefits of therapeutic recreation, some articles are focusing efforts on producing benefits (outcomes) to participants for justification of therapeutic value of their programs (Kraus, 1997; Witman, 1994). Pressures from insurance companies and external reviewers are focusing on effective and efficient treatments from therapeutic

recreation programs. The inability of a program, or discipline, to demonstrate specific outcomes is a major problem in the health care industry (Witman, 1994). Kraus (1997) agrees that evaluations should measure "... the program's efficiency in achieving goals and objectives, chiefly in terms of participant outcomes" (pg. 237). It is becoming increasingly necessary for recreation programs to justify their benefit to participant. Several camping program studies in the literature are embracing this focus on outcomes.

Many of these types of studies focus on the effects of the camping experience on a psychological variable of the participant. Several of these types of studies will be discussed. Rawson and Barnett (1993) report that the use of a highly structured and intensive short-term residential camp focusing on behavior modification decreased children's manifest anxiety by 17 percent as measured by the Revised Children's Manifest Anxiety scale. This study reported detailed planning of the camping program with specific interventions but does not report any method of evaluating the success of the transaction of these processes other than the outcome, which was significant. Rawson and McIntosh (1991) investigated the relationship between a therapeutic camping program and self-esteem of children with severe behavioral problems. Results of the Culture-Free Self-Esteem Inventory for Children indicated that the subjects total self-esteem rose 9.4% and their academic self-esteem increased 14.9%. Again, outcomes were attributed to the highly structured therapeutic camp setting utilizing behavioral modification. Rawson and McIntosh (1991) state that the nature of the gains were related to the

nature of the camp in some way but did not document which parts of the program contributed to the favorable outcomes.

Condon and DeVore (1996) also report evaluation results focusing on improvement of subjects self-esteem but use different methods. The subjects of this study were adolescents involved with the court system and the goals of the camp were to increase self-esteem and reduce recidivism for the campers. Methods of data collection for program evaluation focus on counselor narrative of camp factors that seemed important for the camper. Outcomes were based on scores on a self-concept scale and percentage of recidivism among campers. Results reported showed improvement on the self-concept scales while keeping recidivism constant at 28%. While the article implies that narrative data regarding program components was collected, no discussion of such data was presented. All three of these studies demonstrate the attempts of the researchers to document the effectiveness of camping programs by evaluating benefits to the participant. However, these studies are only addressing one portion of the possible evaluations of programming. By examining only the outcomes, these studies are neglecting evaluation of the inputs into the program and the process related to program implementation which impact the intended outcomes.

Other studies have attempted to evaluate more than just outcomes with some degree of success. These studies will be briefly discussed in relation to the present study. Jordan, Edginton, and Edginton (1994) describe a comprehensive summative evaluation procedure used with Camp Adventure. This evaluation does

include programming evaluation but does not give details of their camp programming evaluation results. The discussion of programming evaluation focuses on the formal or informal observation of participant behavior or listening to participant comments about the program. The evaluation procedure presented in this article seems to focus on administrative use of evaluation.

The evaluation program for a Korean camp program for children with disabilities (Camp Gonee) was described by Lee, Priest, and Halberg (1991). This evaluation program was designed using the Peterson and Gunn model of systems approach to program planning and focused on the interconnected elements of input, process, and outcome. The data collection of this evaluation program consisted of journal narratives of counselor observations of their campers. Little results of the evaluation were reported in the article and no formal program improvements based on the evaluation were reported.

Articles presented in a 1989 Journal of the Association for Persons with Severe Handicaps focusing on measurement support the need for evaluation of process in relation to outcomes in therapeutic programs (Haring and Breen, 1989; Meyer and Janney, 1989). Haring and Breen (1989) state, "We believe it is essential to measure the outcomes . . . as well as the process variables . . . that are pivotal in creating the outcomes" (pg. 255). While the focus of this article is supported education and the evaluation of increased social interaction skills for students with severe disabilities, the discussion can be directly related to the use of outcome evaluations in recreation programs. Haring and Breen states that the

major drawback in assessing outcome measures alone is that the results do not specify which program interventions were needed to achieve the outcome results.

“Although outcome measures specify the functional effects of the intervention (e.g., an assessment showing an increase in friendships), they do not indicate the process needed to achieve those effects. In contrast, process variables, when appropriately developed within educational research, can implicitly or explicitly specify a pathway to a functional end” (Haring and Breen, 1989, p. 257).

By focusing not only on outcomes, but also on what aspects of the recreation program help achieve those outcomes, more information is gained regarding how to increase a program's effectiveness.

Summary

This literature review began by focusing on the growth of the organized camping programs and its relationship to offering camping programs for persons with disabilities. Discussion included the benefits of camping programs for persons with disabilities, the role of therapeutic recreation and appropriate programming for persons with disabilities, and discussed a particular outdoor recreation program, Camp Koinonia, and its role in this study. Evaluation research design was examined for relevant models which included the systems-based evaluation model, the discrepancy evaluation model, and the transaction/ observation model. The models were compared and their relationship to the present study was discussed. This chapter concluded with a review of articles utilizing evaluation methods and

discussed their relevance to the current study evaluating programming effectiveness for persons with disabilities.

Chapter 3

Methodology

The purpose of this study was to evaluate the activity programming for children with disabilities of varying degrees. This purpose was accomplished through the examination of the relationship between activity programming and camper outcomes as measured by the Daily Activity Assessment Scale (DAAS). This study also evaluated the activity implementation and camper outcomes for each of the nine program areas offered at Camp Koinonia during the period of April 6-11, 1997. This chapter explains the methods and procedures used in this study. The study design, variables, subjects, setting, procedures and data-analysis techniques are addressed. The instrument used, the DAAS (in Appendix A), is discussed at length, as are the steps used to collect and analyze the data.

Study Design

This study concentrated on the use of program evaluations as an applied research tool to determine program effectiveness in the implementation of activities and camper outcomes from those activities. The study was descriptive in nature and was non-obtrusive to the camp participants. This study was a secondary analysis of data collected as a normal part of the Camp Koinonia program during the April, 1997 camp. Survey data gathered was completed by the camp

counselors based on their observations of the activity programming and their camper's involvement and outcomes of participation.

Study Variables

The variables identified in this study were:

- Dependent Variables: Activity implementation as measured by the Activity Implementation subscale of the DAAS
- Camper outcomes as measured by the Camper Outcome subscale of the DAAS
- Independent Variable: Activity programming for children with varying degrees of disability severity

Subjects

Subjects for this study were 100 campers that attended Camp Koinonia in the period of April 6-11, 1997. The data-gathering instrument was completed by the counselor assigned to each specific camper. All counselors for this study were University of Tennessee students taking the Camp Koinonia course offered through the Recreation and Tourism Management Program of the Department of Health, Leisure, and Safety Sciences.

Some Camp Koinonia participants were identified through word of mouth in the east Tennessee area, however most participants were referred by special education teachers through the public school system. The criteria for camper

selection for Camp Koinonia are described by Hayes, Brown, & Brown (1997).

Individuals attending camp should be:

1. "Individuals who are classified as having more than one disability.
2. Individuals who have little or no opportunity to attend other organized camping programs.
3. Individuals who do not represent severe behavioral problems.
4. Individuals who are able to appreciate, in some way, the difference between the institutional and camping environment.
5. Individuals who are at least 7 years old" (Hayes, et al., 1997, p. 8).

The application packet completed and signed by the parent(s) included an informed consent statement allowing observation of their children for data-gathering purposes. The application packet also included a section in which the parent(s) were asked to rate the child's disability severity as either slight, moderate, or severe.

Subjects for this study consisted of 48 female and 52 male campers. Table 1 displays all ages as they correspond to gender for all subjects. The mean age of the 48 female subjects was 15.1 and 14.6 for the 52 male subjects. The camper's severity of disability rating resulted in 17 persons being classified as having slight impairment, 58 as having moderate impairment, and 25 as having severe impairment.

Table 1
Age of All Subjects By Gender
(n=100)

Age	Number of Subjects	Females (n=48)	Males (n=52)
7	1	1	0
8	2	2	0
9	5	2	3
10	3	0	3
11	9	2	7
12	6	4	2
13	9	3	6
14	10	4	6
15	7	3	4
16	14	9	5
17	13	8	5
18	5	2	3
19	10	6	4
20	2	0	2
21	4	2	2
	total: 100	(F) Avg: 15.1	(M) Avg: 14.6

Table 2 exhibits the level of severity by gender of the subjects. The gender of the subjects was near equal by level of severity except for the group with severe impairment, in which males (16) nearly doubled the number of females (9).

Setting

The setting for this study was the Clyde M. York 4-H Training Center in Crossville, Tennessee during the time period as identified above. The data for this study (the DAAS) was collected at this site. The activity programming at Camp Koinonia was implemented at reasonably segregated sites throughout the 4-H training center. Presentation of activities to participants was in a round robin fashion whereby each cabin group of participants attended each activity each day.

Sampling Procedures

This study employed a sample of convenience of persons with multiple disabilities. Only those persons with multiple disabilities attending Camp Koinonia during the period of April 6-11, 1997 were included in this study. All children attending Camp Koinonia during the above period were surveyed for this study on a randomly selected day. Simple random sampling without replacement was employed to select which day, of the four full days of camp, the counselor would complete the DAAS form for their camper. Random selection of the day for each camper/counselor was completed by first randomly assigning each of the ten cabin groups to a schedule of either having:

Table 2

Total Subjects By Gender and Level of Severity

(n=100)

Level of Severity	Female Subjects	Male Subjects	Total Subjects by Level
Slight	9	8	17
Moderate	30	28	58
Severe	9	16	25
Total	48	52	100

- A) 2 camper/counselors complete the DAAS on Monday (4/7), 3 camper/counselor pairs on Tuesday (4/8), 2 camper/counselors on Wednesday (4/9), and 3 camper/counselors on Thursday (4/10), or
- B) 3 camper/counselors complete the DAAS on Monday (4/7), 2 camper/counselors on Tuesday (4/8), 3 camper/counselors on Wednesday (4/9), and 2 camper/counselors on Thursday (4/10).

Next each counselor/camper pair was numbered. Numbers were then randomly selected based on the cabin group's assigned schedule for each of the four days of camp activities. Three cabin groups did not conform to having ten counselor/camper pairs. For the one group which had eleven counselor/camper pairs, the extra pair was randomly assigned a day after the rest of the cabin group was assigned. Two groups had only nine counselor/camper pairs. For these cabin groups the tenth pair was omitted when it was to be selected, based on the above

daily schedule. The results of this randomized schedule are presented by gender and day selected to participate in the survey in Table 3. The randomized schedule resulted in slightly uneven groups for the female schedule.

Instrumentation

Evaluation data were collected on the DAAS form (Appendix A). The DAAS was developed by Antozzi, Hayes, and Impara (1980) (and modified for the purposes of this study), for use in evaluating recreational activity implementation with the Camper Outcome subscale being specifically developed for persons with multiple disabilities.

The DAAS was completed by the camper's counselor after the camper had participated in the activity. The counselors were given verbal instructions, by the

Table 3
Subject Selection for DAAS by Day of the Week
(n=100)

Day of the Week	Female Subjects	Male Subjects	Total Subjects
Monday (4/6/97)	11	13	24
Tuesday (4/7/97)	13	13	26
Wednesday (4/8/97)	12	13	25
Thursday(4/9/97)	12	13	25
Total	48	52	100

administrative staff of Camp Koinonia, detailing how the DAAS form should be filled out and explaining all sections and measurement values (nominal scale).

The DAAS included items for the name of the counselor, the camper being evaluated, the activity being evaluated, and the subscales for Activity Implementation and Camper Outcomes. The Activity Implementation and Camper Outcome subscales contained six and three items respectively, and a response column utilizing a nominal scale measurement system with responses being either "Yes" or "No" based on whether the counselor believed the item was achieved or not.

Reliability estimates for the DAAS, as originally designed by Antozzi, Hayes, and Impara (1980) which used a Likert Scale for responses, were established utilizing an alpha coefficient each subscale of the DAAS as a measure of internal consistency (Antozzi, Hayes, and Impara, 1980). The average reliability estimate reported for the activity areas was .84 for Activity Implementation and .92 for Camper Outcomes. While the empirical validity of the DAAS has not been established, the designers felt that the content validity of the items was adequate.

Procedures

Counselors were given information describing the DAAS form and instructions for its completion during the last class before attending Camp Koinonia. Instructions included the following information:

1. Counselors were instructed to fill out the form completely and to fill out the form immediately after the completion of the activity being evaluated.
2. Counselors were also advised that while the measurement values they provided on the form would not affect their class grade, or the grades of the students providing the activities, they were required to participate on the day randomly selected and must complete the forms.
3. Counselors were informed that they should consider each activity individually and only for the day they were assigned when completing the form.
4. Counselors were asked to consider the implementation of the activity and the outcomes of the activity as they related to their camper only except in the following items:
 - a. Implementation Subscale #4: "All campers were involved throughout the activity"- Counselors were asked to observe if all campers that were present in their group were involved in the activity.
 - b. Implementation Subscale #5: "All activity staff were involved in the presentation of this activity"- Counselors were asked to observe if all of the activity staff contributed to the presentation of the activity.
5. Counselors were told to fill out the DAAS form for each activity at the end of the activity and to leave the form with the staff for that activity.

Before each day of activities, the counselors selected for that day were given all forms necessary for the day's activities. The staff administering the activities

were advised to remind the counselors, at the end of their activity, to fill out the DAAS form and leave the completed form with the activity staff, who were given an envelope to keep all collected forms in. The DAAS forms were turned in by the activity staff daily to the Program Director. DAAS forms were checked by the administrative staff for completeness on Tuesday evening and Thursday evening and were coded by cabin group and period of the day when each DAAS form was filled out, based on the daily camp schedule for that cabin group. Incomplete forms or missing forms were identified and discussed with the counselor on an individual basis on Friday (4/11) and were completed if possible. Some forms were impossible to complete due to the camper missing the scheduled activity for a variety of reasons.

Since each camper was participating in the sample and there were nine activities each day, a total of 900 DAAS forms could possibly have been completed. However, 39 forms (4.3%) were not returned. Additionally, three forms had four unusable responses due to either marking both the 'yes' and "no" responses or marking neither response. This resulted in a response rate of 95.6% (861 responses) for the Implementation subscale items of numbers 1, 3, 4, 5, and Outcome subscale item number 1. For Implementation subscale items numbers 2, 6 and Outcome subscale items numbers 2 , 3 the response rate was 95.5% (860 responses).

After returning from camp, the DAAS forms from each camper were matched with the camper's application for classification of degree of severity of disability, as

provided by the parent(s) on the camper's application to Camp Koinonia. Sixteen of the 1997 camper applications did not include a disability severity classification. Attempts were made to contact the parent(s) by telephone and thirteen were completed through communication with parent(s). The other three missing classifications were taken from the camper's previous year's application to attend Camp Koinonia.

Analysis of Data

Descriptive statistics were used to compare the scores for all items on both the Activity Implementation and Camper Outcome subscales. This information was described in three ways:

- 1) for each of the nine activity areas of camp,
- 2) for each item in each of the subscales of the DAAS (nine items in total),
- 3) For each category of severity of disability (slight, moderate, or severe).

Pearson's correlation coefficient was used to determine the relationship between all activity Implementation and Camper Outcome Subscale items, as well as for all three groups by level of severity. An additional test on significance of difference between correlation coefficients for independent samples was used to assess differences observed between the three groups.

Summary

Chapter 3 outlined the methodology that was observed for this study. Sections were included to cover topics of study design, study variables, subjects, the study setting, and sampling method. The instrument used, the DAAS, was discussed and is located in Appendix A. The procedure of the study was explained and a description of the data analysis was discussed.

Chapter 4

Analysis of Data

The purpose of this study was to investigate the relationship between the implementation of activities and camper outcomes as a result of activity programming for children with multiple disabilities. To meet this purpose, the Daily Activity Assessment Scale (DAAS) was used to assess activity implementation and camper outcomes as judged by the Camp Koinonia counselors as the activities were provided to their individual campers. Children participating in this research were classified into three groups of disability severity to investigate the effect of disability severity on activity implementation and camper outcomes. This study also sought to evaluate activity implementation and camper outcomes for each of the nine program areas offered at Camp Koinonia 1997.

Scores of percentage of persons responding "yes" to each item on the DAAS were calculated for: the three classifications of disability severity, for each activity, for each day of the week, and for each time period activities were offered. Next, Pearson's correlation coefficients were computed between the Implementation items and Outcome items for all subjects. Pearson's r was also calculated for each of the three levels of disability severity. To determine if any significant difference existed between the correlational scores of the three levels of severity, a test of correlations between groups for independent samples was used. Results will be presented and discussed in the sequence of their description above.

Descriptive Data

Level of Disability Severity

All subjects were classified by severity of disability into three groups: slight, moderate, and severe. Mean scores were calculated across all activities for both the Implementation Subscale items and the Outcome Subscale items for each of the three groups. Results are presented in Figure 1. This shows little variability in the implementation of activities between the groups (less than two percent difference) but does show a ten percent decrease in the Outcomes Subscale items between the slight disability group and the severe disability group. With all activities combined, activity implementation was fairly consistent between groups, however as the severity of disability increased, successful outcomes decreased.

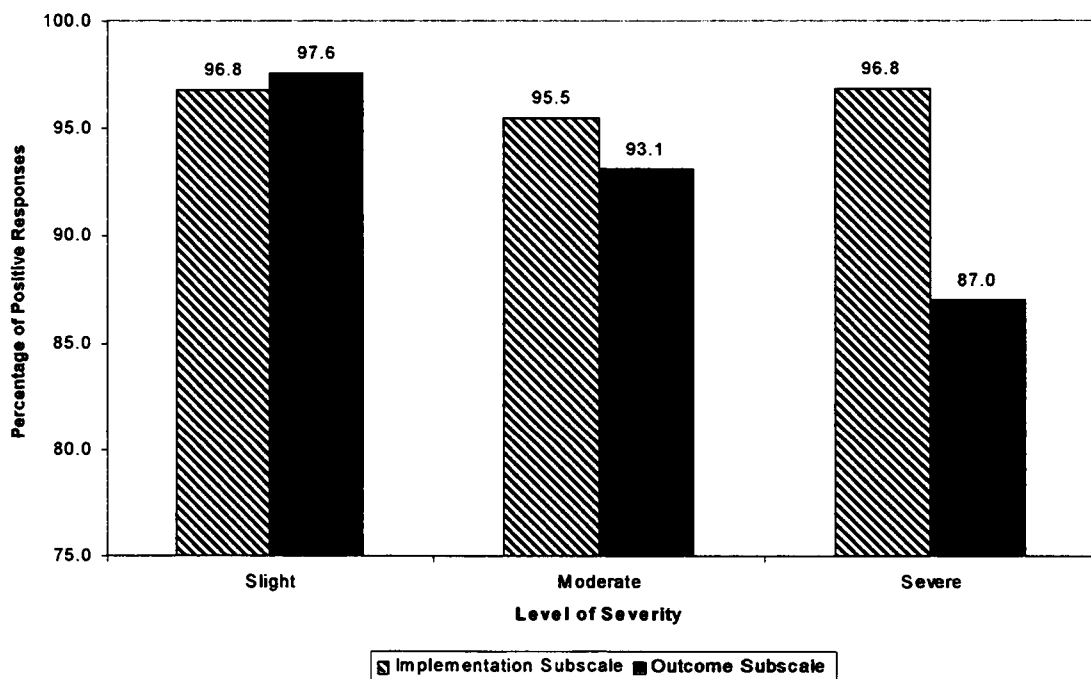


Figure 1
Implementation and Outcome Subscales by Severity of Disability

The observed decrease in outcome score as disability severity increased may be attributed to several factors. For persons with increased severity of disability, individual adaptations for activities are occasionally required. If staff do not have the necessary materials/equipment or do not have the skills/experience to individualize the activity, the outcomes can be decreased. While it is possible that the activities offered were not planned as efficiently for persons with increased severity of disability, other explanations are also plausible. The success, enjoyment, and abilities of campers may be more difficult for counselors to determine for campers with severe disabilities. This could result in counselors scores being lower on the Outcome subscale for campers in the severe impairment category. Additionally, it may be more difficult for persons with severe disabilities to express their enjoyment of an activity if they have an impairment in communication skills.

Activity Area

Mean scores were calculated across all levels of severity for both the Implementation Subscale items and the Outcome Subscale items for each of the nine activity areas and are presented in Figure 2. From these data, it can be seen that the Ropes activity area had the highest percentage of positive responses on both the Implementation and Outcome Subscales. It is interesting to note that the staff of the Ropes activity consisted of students who were experienced in presenting ropes courses and initiative activities. Prior experience and high quality

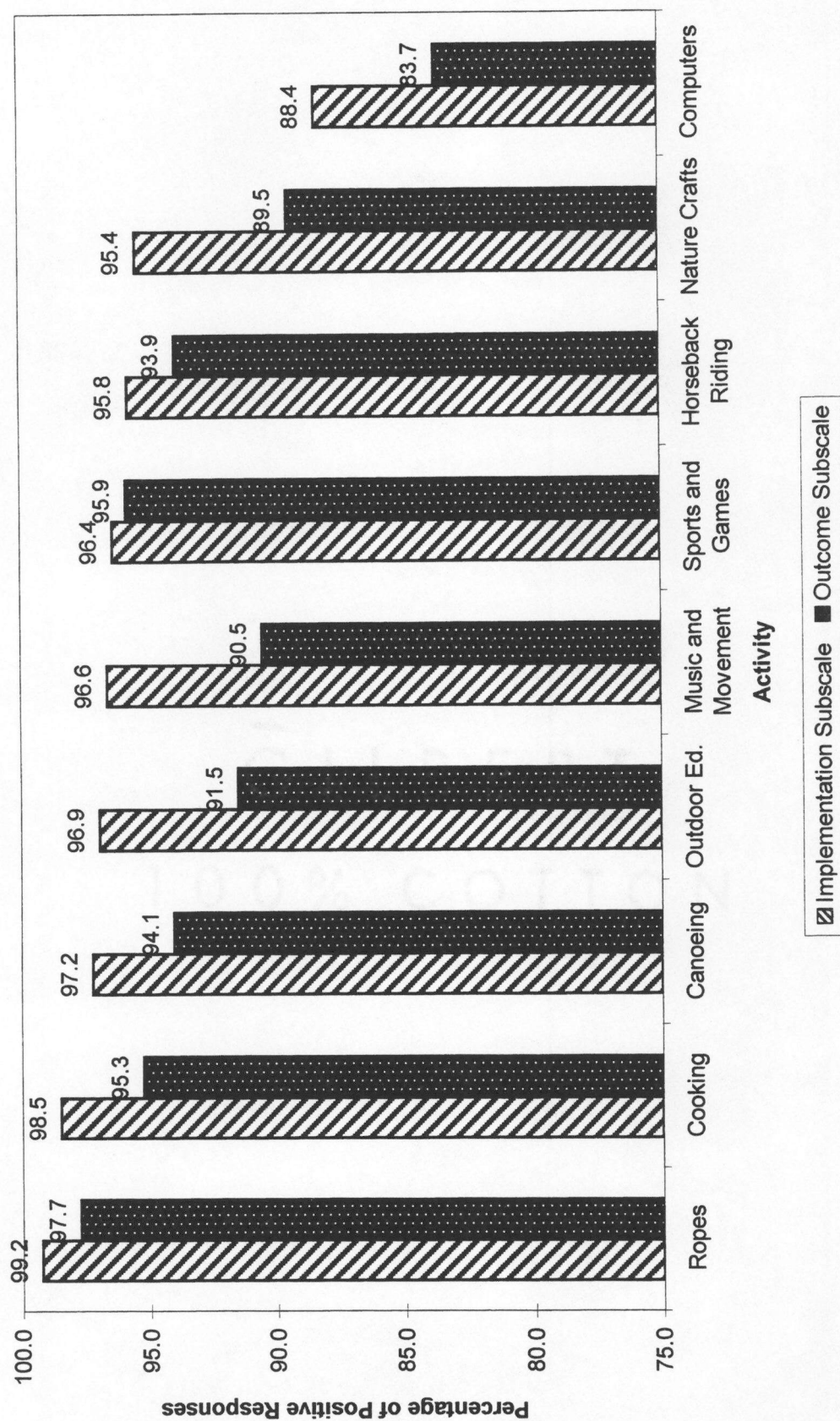


Figure 2
Implementation and Outcome Subscales by Activity for All Subjects

staff could explain the higher scores in that area.

Most of the other activities also did well on the Implementation items with the exception of the Computers activity area. However, all of the Outcome Subscale scores are below their implementation scores and the Outdoor Education, Music and Movement, Nature Crafts, and Computers activity areas appear markedly lower (at least five percent lower than their implementation scores). The Computers activity appears to have significantly decreased scores in both subscales in relation to the other eight activities. The low Computers activity area scores may be related to several problems: recurring computer failures during the week of camp, one of the two staff members was relatively inexperienced in presenting computer activities, and activity lesson plans were never fully developed by the activity leader, i.e., the "inputs" into the activity programming may have limited the possible "outputs".

Day of the Week and Period of the Day

Percentages of "yes" responses to DAAS items were also determined for each day of the week that activities were offered. These scores were computed from all activities, all subjects, and all periods of the day. Mean scores of all Implementation items varied from 93.8% on Tuesday to 97.0% on Wednesday. The Outcome items rendered scores from 89.6% on Thursday to 94.8% on Wednesday

Scores were also computed for each of the ten 30 minute activity period throughout the day. Morning activity periods (1-5) were offered from 8:30 am to

11:40 am and afternoon periods (6-10) were offered from 1:45 pm to 5:00. Activity periods were followed with a transition time of 10 minutes for the groups to move to the next activity. Results varied from 93.6% for period 7 to 99.1% for period 5 on the Implementation item mean scores. The Outcome item scores ranged from 89.8% for period 1 to 94.9% for period 4. While this information was not pertinent to the research questions of this study, it was deemed worth investigating at a descriptive level for any significant findings. Summary data for all days and periods of the day are presented in Appendix B for examination.

Correlations Between Implementation and Outcome Subscales for All Subjects

Pearson's product moment correlation coefficient was used to assess the relationship between the six items of the Implementation Subscale and the three items of the Outcome Subscale of the DAAS. Table 4 presents correlation findings using data from all subjects. The level of significance/p-value are not presented due to being inflated by the large sample size (859-861 observations for each item). However, a correlation of .20 or stronger was believed to be show a significant correlation. The most significant correlations exists between Implementation item #4 and all three of the Outcome items. The correlation between Implementation item #6 and all of the Outcome items also implies a relationship. This means that when considering all subjects, the strongest correlation to having good outcomes is the involvement of all participants in the activity. Additionally, to receive positive

Table 4

Pearson's Product Moment Correlations Among Implementation Subscale

Items and Outcome Subscale Items for All Subjects

Outcome Implementation	O1. My camper was able to function at the most basic level required to participate in this activity.	O2. My camper was able to realize success appropriate to his/her capabilities.	O3. My camper enjoyed this activity.
I1. The sequence/ progression within this activity was appropriate.	.11	.12	.19
I2. The equipment and materials used in this activity were appropriate.	.08	.05	.16
I3. This activity was appropriate to the time frame.	.11	.10	.08
I4. All campers were involved throughout this activity.	.30	.32	.35
I5. All activity staff were involved in the presentation of this activity.	-.01	-.02	-.02
I6. The activity staff demonstrated appropriate interaction skills during this activity.	.18	.17	.22

outcomes it appears that the relationship and interactions between staff and camper is important. Having an appropriate sequence of activities (Implementation #1) and using appropriate materials/equipment (Implementation #2) may have a slight relationship with the camper's enjoyment of the activity (Outcome #3).

Correlations Between Implementation and Outcome Subscales by Level of Severity

Correlations between the Implementation and Outcome items were completed for each of the three groups based upon severity of disability. Table 5 presents the correlation coefficients for each of the three levels of severity for both of the DAAS subscales. The number of observations for each item varies due to group size as well as missing or incomplete forms. The number of observations used to compute the correlation coefficients for each group is as follows: 150-151 observations for the slight severity group, 499-500 observations for the moderate severity group, and 210 observations for the severe severity group.

While the level of significance is presented for the .01 level, it should be noted that this is somewhat inflated due to the large sample sizes used. For this reason, only correlations significant at the .01 level with a coefficient of .20 or greater was considered to show definite significance. For clarity during discussion, Implementation Subscale items may be referred to I1 through I6 and the Outcome items will be referred to as O1 through O3.

Table 5

**Pearson's Product Moment Correlations Among Implementation Subscale
Items and Outcome Subscale Items for Levels of Disability Severity**

Outcome Implementation	O1. My camper was able to function at the most basic level required to participate in this activity.			O2. My camper was able to realize success appropriate to his/her capabilities.			O3. My camper enjoyed this activity.		
	Slight	Mod.	Sev.	Slight	Mod.	Sev.	Slight	Mod.	Sev.
I1. The sequence/ progression within this activity was appropriate.	-.01	.09	.19*	.34*	.07	.16	.30*	.09	.37*
I2. The equipment and materials used in this activity were appropriate.	-.02	.12*	.05	.27*	.03	.03	.23*	.20*	.07
I3. This activity was appropriate to the time frame.	-.01	.11	.12	.34*	.13*	.01	.30*	.07	.05
I4. All campers were involved throughout this activity.	.36*	.30*	.32*	.37*	.34*	.29*	.45*	.36*	.30*
I5. All activity staff were involved in the presentation of this activity.	-.02	.00	-.03	.23*	-.05	-.03	.20	.00	-.02
I6. The activity staff demonstrated appro- priate interaction skills during this activity.	-.02	.25*	.15	.49*	.17*	.12	.43*	.17*	.31*

* denotes significance at the .01 level

The major trend seen for all subjects, the importance of involvement of all campers, is continued in each of the three groups. Several differences were also seen between the three groups, which are discussed for each group of disability severity. Additionally, a test of significance between two correlation coefficients for independent samples was used to determine any significant differences between the three groups for each item.

The test of significance between two correlational coefficients is a conservative test which utilizes z-scores. An alpha was set for the .05 level for significance which means that a z-score of 1.96 or better would adequately demonstrate significant difference between the two groups compared. Results of this test are shown in Table 6. Results revealed that the slight impairment group was significantly different from the other two groups in several comparisons.

The difference between the slight impairment group's coefficients for the second outcome item, success appropriate to the camper's capabilities, and implementation items #1, #2, #3, and #6 were significantly different from the other two groups. Possibly due to the conservative nature of this test, the relationship between I5 and O2 was not determined to be significant different for the group with slight impairment, however the scores approached the significant level. Additionally, the slight impairment group was statistically different from the other two groups in the comparison between the enjoyment of the camper (O3) and the appropriateness of the activity to the time frame (I3). The high degree of difference observed for the slight impairment group may have been due to the counselor's

Table 6

**Tests for Significance of Difference Between Correlation Coefficients
for Levels of Severity**

Outcome Implementation	O1. My camper was able to function at the most basic level required to participate in this activity.	O2. My camper was able to realize success appropriate to his/her capabilities.	O3. My camper enjoyed this activity.
I1. The sequence/ progression within this activity was appropriate.	1 x 2 (z=0.79) 1 x 3 (z=1.69) 2 x 3 (z=1.31)	1 x 2 (z=3.03)* 1 x 3 (z=1.79) 2 x 3 (z=1.10)	1 x 2 (z=2.36)* 1 x 3 (z=0.71) 2 x 3 (z=3.16)*
I2. The equipment and materials used in this activity were appropriate.		1 x 2 (z=2.60)* 1 x 3 (z=2.30)*	1 x 2 (z=0.41) 1 x 3 (z=1.56) 2 x 3 (z=1.57)
I3. This activity was appropriate to the time frame.		1 x 2 (z=2.42)* 1 x 3 (z=3.17)* 2 x 3 (z=1.38)	1 x 2 (z=2.53)* 1 x 3 (z=2.38)*
I4. All campers were involved throughout this activity.	1 x 2 (z=0.68) 1 x 3 (z=0.43) 2 x 3 (z=0.20)	1 x 2 (z=0.36) 1 x 3 (z=0.82) 2 x 3 (z=0.66)	1 x 2 (z=1.15) 1 x 3 (z=1.62) 2 x 3 (z=0.81)
I5. All activity staff were involved in the presentation of this activity.		1 x 2 (z=1.95) 1 x 3 (z=1.89)	1 x 2 (z=1.25) 1 x 3 (z=0.92)
I6. The activity staff demonstrated appro- priate interaction skills during this activity.	1 x 2 (z=2.48)* 1 x 3 (z=1.26) 2 x 3 (z=1.17)	1 x 2 (z=3.81)* 1 x 3 (z=3.77)* 2 x 3 (z=0.59)	1 x 2 (z=3.12)* 1 x 3 (z=1.28) 2 x 3 (z=1.86)

* denotes significance at the .05 level

1 = Slight severity group, 2 = Moderate severity group, 3 = Severe severity group

ability to recognize a relationship between implementation and their camper's outcomes when their camper had only slight impairment.

The group with moderate impairment was found to be significantly different from the group with slight impairment in the comparison between the camper's ability to function at the most basic level of the activity (O1) and appropriate interaction skills by the activity staff (I6). This outcome item may not have been as important for the campers with slight impairment since they could almost always function at the most basic level of the activity. This idea was supported by this finding. The groups with moderate and severe impairment had stronger coefficients for the comparison between items O1 and I6 and the moderate group was found to be significantly different from the group with slight impairment.

Slight Severity of Disability Group

This group differed greatly from the correlations received for all subjects. For the first outcome measure (O1), the ability to participate at the most basic level for the activity, only the involvement of all campers (I4) was significant. As seen in Table 6, no group was distinguishable from another, and this correlation was significant for all groups.

All of the coefficients between the implementation items and the outcome items # 2 and #3 were found to be significant. It is possible the increased number of significant correlations found were related to the counselor's ability to determine which aspects of the activities implementation effect their camper's outcomes. It

may be that this is more difficult to recognize if the camper has increased impairment of disability or if the counselor is inexperienced in interacting with persons with disabilities.

For the second outcome item, this group was significantly different, or nearly significant, from all other groups, except for Implementation item #4. This indicated a relationship between the activity programming and this group's ability to succeed in the activity. This relationship was strongest ($r=.49$) in relation to the staff's interaction skills with the camper.

The relationships between the camper's enjoyment (O3) and the implementation items were also all significant (with the exception of I5 which was close with a level of significance of .014). This indicated that the enjoyment of the camper depended on appropriate activity programming for this group of people. Again, the interaction skills of the activity staff were important to the enjoyment of the camper. For this group, a correlation between the appropriateness of the time frame and the enjoyment of the activity was noted.

For this group, the relationship between the appropriateness of the activity to the time frame (I3) and outcomes #2 and #3, was significantly higher (statistically significant) than the other two groups. Additionally, this group was statistically significant from the two other groups in the relationship between the camper's ability to realize success appropriate to capabilities (O2) and the activity's use of appropriate equipment/materials (I2) and the interaction skills of the staff (I6).

Moderate Severity of Disability Group

Between the Outcome item #1 and the Implementation items there were only a few significant correlations for this group. The involvement of all campers was important for this group, as it was for all groups and all outcome measures. The only other distinguishing score was the relationship between O1 and I6, or the staff's interaction skills. The Pearson's product moment coefficient here was .25 and proved to be significantly different from the slight impairment group but not from the severe impairment group.

For the second outcome, success appropriate to the camper's capabilities, this group was significant with I4 and approached significance with I6. The enjoyment of the camper (O3) was related to the use of appropriate materials/equipment (I2), the involvement of all campers (I4), and near significance for I6 (staff use of appropriate interaction skills). However, none of these scores were significantly higher than the other groups (see Table 6). In all, this group tended to follow the pattern seen for all subjects, which is not too surprising since this was the largest group and more than doubled the size of the other two groups. It should be noted that this group did show some relationship between the use of appropriate materials and equipment (I2) and the camper's enjoyment (O3). While not significantly higher than the slight severity group's score, a trend of decreasing relationship to increasing severity was seen among all groups for I2 and O3.

Severe Severity of Disability Group

This group included campers with the most severe impairment of disability. The relationships between the camper's outcomes and the activity programming for this group supported the overall trends observed, but also included some differences. For the camper to participate in the most basic level of the activity (O1), involvement was important (I4) and the sequence/progression of activity (I1) was near significance. Since the difference between coefficients test is a conservative test, this relationship (I1 and O1) may actually be different from the other groups. A trend of increasing importance of appropriate activity sequence/progression to increasing severity of disability was observed for Outcome item #1.

For the second outcome measure, only the involvement of all campers was significant for this group. The enjoyment of the activity by the camper (O3) was related to I4 (involvement of all campers) and I6 (appropriate interaction skills by staff). Additionally, the sequence/progression of the activity was also important to this groups enjoyment of the activity. This coefficient was .37 and was significantly different from the moderate group (.09) but not the slight impairment group (.30).

Summary

Chapter 4 reviewed the analysis of the DAAS by type of activity, disability severity, day of the week, and period of the day. The statistical procedures used for analysis were discussed and results were presented for subjects by severity of disability groups.

Chapter 5

Summary, Findings, Conclusions, and Recommendations

This chapter presents a summary of this study and draws conclusions based on the findings of the study. Recommendations for improvements to the activity programming at Camp Koinonia, and for further research, are discussed.

Summary of Study

The purpose of this study was to investigate the relationship between the implementation of activities and the outcomes derived by the campers from participation in those activities as a function of activity programming at Camp Koinonia. This study was delimited to the 100 campers who participated in the Camp Koinonia program during the period of April 6-11, 1997.

The literature review showed that camping programs can offer opportunities for unique social interactions and can be effective alternative learning environments (Kennedy, Austin, and Smith, 1989). The design, implementation, and evaluation of camping programs can be complex. Recreation programs often use outcome measures as a means of evaluating the success of an activity. However, outcome measures alone may not provide enough information on what specific parts of the program need to be improved. It is more helpful to measure not only outcomes, but also the components that go into a program (the inputs), as well as the process of

how the activities were implemented, to see which parts of the program were important to achieving the outcomes (Haring & Breen, 1989; Connolly, 1984).

This study used the Daily Activity Assessment Scale (DAAS) to measure how well the activity programming at Camp Koinonia met goals for how the activities should be implemented, and met the desired outcomes for participants. DAAS forms were completed by each counselor on a randomly determined day for their camper. Each camper (subject) was assigned to either having slight, moderate, or severe impairment based on their application to camp.

The analysis of data centered on three main points: 1) the descriptive analysis of the data by type of activity, by level of disability severity, by day of the week, and period of the day, 2) the statistical analysis of the relationship between the Implementation and Outcome subscales of the DAAS for all subjects, and for each group having either slight, moderate, or severe impairment, and 3) the determination whether the correlation coefficients among any of the groups were significantly different from the coefficients achieved in the other groups.

Findings

Descriptive Data

- Among all subjects, little variability was seen in implementation scores between the three groups (slight, moderate, or severe impairment) (ranged from 95.5% to 96.8%).

- Among all subjects, as severity of disability increased, the percentage of positive responses on the Outcome subscale decreased (slight group= 97.6%, moderate=93.1%, severe= 87.0%).
- The Ropes activity area achieved the highest scores on both the Implementation and Outcome subscales (Implementation= 99.2%, Outcome= 97.7%).
- The Computers activity area scored the lowest scores on the Implementation and Outcome subscales (Implementation= 88.4%, Outcome= 83.7%).
- All of the other activity areas were fairly equal in Implementation subscale scores (ranged from 95.4% to 98.5%).
- The Outdoor Education, Music and Movement, and Nature Crafts activity areas had Outcome subscale scores lower than the other areas (at least 5% below their own Implementation subscale score).
- No obvious differences were noted between either the Implementation and Outcome subscale scores when organized by the day of the week or period of the day.

The Relationship Between Activity Implementation and Camper Outcomes for All Subjects

- The strongest relationship (Pearson's $r=.30-.35$) existed between all of the Outcome measures (O1-O3) and the involvement of all campers (I4).

- A smaller relationship ($r=.17-.22$) was observed between all of the Outcome measures and the demonstration of appropriate interaction skills by the activity staff (I6).
- A tendency was seen in the relationship between the enjoyment of the activity (O3) and an appropriate activity sequence/progression (I1), and the activity's use of appropriate equipment/materials (I2).
- Implementation item #5, the involvement of all activity staff in the presentation of the activity, did not show a relationship to the camper's outcomes.

The Relationship Between Activity Implementation and Camper Outcomes for Subjects With Slight Impairment

- The Outcome item involving the camper's ability to function at the basic level of the activity (O1) was not related to the Implementation items for this group, except for involvement of all campers (I4). This Outcome item was not very meaningful for this group.
- All of the Implementation items were significant for Outcome items #2 and #3 for this group.
- The involvement of all campers in the activity (I4) and appropriate interaction skills demonstrated by the activity staff (I6) had the strongest relationships to the camper's success (O2) and the camper's enjoyment of the activity (O3).

- This group was significantly different from the other two groups in the relationships between the success of the camper in the activity (O2) and I1, I2, I3, and I6. The relationship between O2 and I5 was nearly significantly different from the other two groups.
- This group was significantly different from the other two groups in the relationships between the camper's enjoyment of the activity (O3) and the appropriateness of the activity to the time frame (I3).

The Relationship Between Activity Implementation and Camper Outcomes for Subjects With Moderate Impairment

- The involvement of all campers (I4) and the demonstration of appropriate interaction skills by the activity staff (I6) were related to all Outcome measures for this group.
- The relationship between the interaction skills of the activity staff (I6) and the camper's ability to function at the most basic level of the activity (O1) was significantly higher than the group with slight impairment, but not significantly stronger than the group with severe impairment.
- No relationship existed between I1 and O3, which is statistically significant when compared to other two groups.
- A slight relationship was found between use of appropriate materials and equipment (I2) to the camper's enjoyment (O3) for this group.

The Relationship Between Activity Implementation and Camper Outcomes for Subjects With Severe Impairment

- The involvement of all campers (I4) was related to all Outcome measures for this group.
- The demonstration of appropriate interaction skills by the activity staff (I6) were moderately related to the camper's enjoyment of the activity (O3) for this group, and to O1 and O2 at a lesser degree.
- A slight relationship was seen between an appropriate sequence/ progression in the activity (I1) and all of the Outcome items (ranged $r = .16$ to $r = .37$).
- The relationship between I1 and O1 was near significant difference from the other two groups (1x3 $z=1.69$, 2x3 $z=1.31$).

Conclusions

Descriptive Data

No differences among scores for the period of the day or the day of the week were observed (see Appendix B). Findings for the type of activity showed that the Ropes activity received the highest percentage of positive responses for both the Implementation and Outcome subscales when considered for all subjects. Conversely, the Computer activity received the lowest scores. Most of the other activities did well in both subscales except for the outcome scores for the Outdoor

Education, Music and Movement, and Nature Crafts which were somewhat lower than their implementation scores. The differences seen between activities scores are somewhat difficult to interpret without additional data, yet it is reasonable that the activities implementation and outcome scores were influenced by the level of inputs into the activity. More experienced staff in the Ropes activity area may have contributed to its success, just as the relative inexperience and problems encountered in the Computers area detracted from its success. While no quantitative data were gathered, the more prepared and experienced the activity staff were, the better their success in both the implementation of their activities and in the outcomes achieved.

When organized by level of severity, the data revealed an interesting difference. While the implementation scores of all three groups remained fairly constant, the outcomes varied by level of severity (see Figure 1). As severity of disability increased, the percentage of positive responses on outcome scores decreased. The group having slight severity scored 97.6% of possible positive outcome responses, while the group having moderate impairment scored 93.1% and the group with the most severe impairment scored 87.0%. This led to the conclusion that the programming at Camp Koinonia achieved better outcomes for persons with lesser severity of disability. This does not mean that the group having severe disability did not benefit from their experience at camp. This group did achieve most desired outcomes, however room for improvement exists. This is consistent with the idea that as a person's severity of disability increases, or if the

person has multiple disabling conditions, it may be more difficult to provide meaningful and beneficial activities.

Potentially, these differences could have been caused by inadequacies in either the inputs into the programming or in the process in which the activities were implemented, or both. However, it is equally plausible that as severity of disability increased, the counselor was less able to adequately identify the camper's enjoyment of the activity, or was less likely to believe the camper could function at the most basic level of the activity, or had less knowledge of the camper's capabilities. Any of these scenarios could occur since most counselors typically did not have experience interacting with, or observing, persons with disabilities.

The Relationship Between Activity Implementation and Camper Outcomes for All Subjects

Pearson's product moment correlation coefficient was used to determine the relationship between the Implementation and Outcome subscales of the DAAS. Correlations were computed for all subjects, as well as for the three groups differentiated by level of disability severity (see Tables 4 and 5). When calculated for all subjects among all groups, two main relationships were noted. The strongest relationship ($r=.30-.35$) existed between all of the outcome measures (O1, O2, and O3) and the involvement of all campers throughout the activity (I4). A smaller relationship ($r=.17-.22$) was also observed between all of the outcome measures and I6 (the demonstration of appropriate interaction skills among activity

staff). Additionally, there was a tendency for the enjoyment of the activity (O3) to be related to appropriate activity sequence/progression (I1, $r=.19$) and to the activity using appropriate equipment and materials (I2, $r=.16$). The Implementation item #5, involvement of all activity staff in the presentation of the activity, exhibited no relationship to the desired outcomes.

The Relationship Between Activity Implementation and Camper Outcomes for Subjects With Slight Impairment

While this group echoed most of the relationships seen for all subjects, many other coefficients were significant. All of the Implementation items were significant for both the camper's success relative to their capabilities (O2) and the camper's enjoyment of the activity (O3). The highest coefficients for these outcome measures were the involvement of all campers (I4) and the staff's interaction skills (I6), just as seen for all subjects. For this group, the interaction skills of the staff were important to the camper's success in the activity (O2) and the camper's enjoyment of the activity (O3).

While no relationship was seen between Implementation item #5, the involvement of all activity staff in the presentation of the activity, and the Outcome items for all subjects, a relationship is seen when calculated for this group. For the group with slight impairment relationships were seen between I5 and O2, and between I5 and O3. Since it has been determined that appropriate interaction with activity staff was important for this group, it is possible that when all staff were not

involved the campers had less interaction with staff which negatively effected their outcomes.

Two additional points were noted: 1) No relationship existed for this group between the Implementation items and the camper's ability to function at the most basic level except for I4 (the involvement of all campers), and 2) so many items are significant for this group as compared to the other two groups. It was possible that the lack of relationship between O1 and the Implementation items was due to this group only having slight impairment of disability. If all of the subjects in this group were always able to function at the most basic level, then no correlation would have appeared. The only relationship that did appear with this outcome is if they did not get involved, they were not able to function at the most basic level required for the activity. It is unclear why so many items were significant for this group, but it might be possible that since this group had little impairment of disability, any problems in achieving the outcomes were readily apparent. This is consistent with the hypothesis that as impairment of disability increases, or is confounded with multiple disabling conditions, the more complex is the provision of activities.

The Relationship Between Activity Implementation and Camper Outcomes for Subjects With Moderate Impairment

Generally, this group followed the pattern observed for all subjects. The involvement of all campers (I4) and appropriate interactions by the activity staff (I6) were the most related to the outcome measures. For this group, the relationship

between camper's ability to function at the most basic level of the activity (O1) and the activity staff's interaction skills (I6) was more significant than either of the other groups and was statistically different from the slight impairment group but not different from the group with severe impairment. It seems that involvement and appropriate interactions with the staff were of the most importance to good outcomes. Secondly, the use of appropriate equipment and materials (I2) was also slightly important to this group's outcomes.

The Relationship Between Activity Implementation and Camper Outcomes for Subjects With Severe Impairment

For persons with severe impairment, the significant relationships observed between outcomes and implementation also centered on the involvement of all campers (I4) and appropriate interaction skills by the activity staff (I6). Again, camper involvement and appropriate interactions with staff were important to achieving outcomes. Additionally, the relationship between appropriate sequence/progression within an activity was also related to all of the Outcome measures and neared statistical difference from the other groups for O1, the ability for the camper to function at the most basic level required to participate in the activity. This may be meaningful for this group. For persons with severe impairment, it may have been important that the sequence and progression of the activity be well-planned and thought out for good outcomes to have been possible.

In conclusion, definite relationships between the implementation of activities and camper outcomes were demonstrated. From these data it can be inferred that camper outcomes can be positively influenced if activity staff make attempts to involve everyone in the activities and if staff interact appropriately with campers during the activity. Some differences were observed between groups with different levels of disability severity. This seems to stress the importance of knowing the population involved in the activities and their characteristics. Specific differences in the importance of some aspects of the activity implementation may exist depending on the person's level of disability impairment. Additionally, it is important to note that even when activity implementation appears adequate, positive outcomes may be more difficult to acquire, or to measure, as severity of disability increases.

Recommendations

Researchers have stressed the importance of evaluating both the inputs into the program and the process of how the activities are implemented to be able to continuously improve programming and achieve positive outcomes (Connolly, 1984; Haring & Breen, 1989). This is important for all programs trying to attain desired objectives, and recreation and camping programs are no exception. To increase positive results, programming evaluation must include an evaluation of the inputs into the programming. While most activities at Camp Koinonia did well in both Implementation and Outcome scores, the difficulties that were observed in the

Computers activity seemed to directly relate to decreased effectiveness in both Implementation and Outcome scores. Good leadership, quality planning by the activity staff, and experienced activity staff seem necessary inputs into a good activity program. It is recommended that evaluation of the programming inputs play a stronger role in the Camp Koinonia evaluation plans.

The findings of this study suggest that it would be beneficial to increase training given to activity staff in the areas of interacting with the campers. Staff need to be able to adequately, and appropriately, interact with the campers. It is possible that the interaction of staff with the campers (I6) and involvement of all campers in the activity are related. If staff are interacting with the campers, they may be more likely to get involved and participate more fully in the activity. Additional training should focus on the appropriate use of materials/equipment and appropriate sequence/progression in activities. These areas were the most important to positive outcomes after the involvement of all campers and interaction skills of the staff.

Some potential problems were encountered in using the DAAS in determining the relationship between activity implementation and outcomes. The DAAS is centered on assessing programming for all persons attending an activity. In some instances, this is not fully suited for assessing the individual camper and their outcomes. The DAAS would be better suited for individual evaluation if all items were re-worded to only involve the camper being assessed. For example, Implementation item #4 states, "All campers were involved throughout this activity".

It is possible that the response to this item could be “no”, yet the camper being evaluated by the counselor did participate. This makes the item difficult to interpret. The DAAS may also be more sensitive if a Likert scale was employed for responses. Persons filling out the form may prefer to indicate “degrees” of success for each item.

For further study, it would be beneficial to evaluate both the inputs into the programming and the process of implementing the activities for relationships to desired outcomes. Also, a thorough evaluation of the success of specific activities for persons of different levels of disability severity would be of benefit to activity programs. This could be accomplished through a correlation study of activity outcome for each activity type for groups having different levels of disability severity.

It would also be of interest to investigate the desired outcomes for camping programs based on what campers, parents, teachers, etc. wanted the camper to achieve from participating in camping programs. It is important to make sure the outcome measures used are meaningful. Conversely, it would be possible to do a study of the validity of what items indicate successful activity implementation to be more certain the DAAS is asking the right questions.

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Appendices

Appendix A
The Daily Activity Assessment Scale (DAAS)

Appendix A

Daily Activity Assessment Scale

Activity Area: _____
Counselor: _____

Day: _____
Camper: _____

Instructions: For each of the items below, the counselor should make a decision whether the statement was achieved or not and circle the corresponding response. The counselor should only consider the activity just completed by the camper. For example, if all campers were involved throughout the activity, the #4 item would appear like this:

4. All campers were involved throughout this activity. ☒ Yes ☐ No

Activity Implementation

- | | | |
|---|-----|----|
| 1. The sequence/progression within this activity was appropriate. | Yes | No |
| 2. The equipment and materials used in this activity were appropriate. | Yes | No |
| 3. This activity was appropriate to the time frame. | Yes | No |
| 4. All campers were involved throughout this activity. | Yes | No |
| 5. All activity staff were involved in the presentation of this activity. | Yes | No |
| 6. The activity staff demonstrated appropriate interaction skills during this activity. | Yes | No |

Camper Outcome

- | | | |
|---|-----|----|
| 1. My camper was able to function at the most basic level required to participate in this activity. | Yes | No |
| 2. My camper realized success appropriate to his/her capabilities. | Yes | No |
| 3. My camper enjoyed this activity. | Yes | No |

Appendix B
Responses to DAAS by Time Period
and Day of the Week

Appendix B

Percentage of Positive Responses to Each Item For Each Day for All Subjects

Implementation Subscale

Day	I1	I2	I3	I4	I5	I6	Mean Percentage of Positive Responses
Mon	0.990	0.986	0.986	0.886	0.986	0.981	0.969
Tues	0.972	0.981	0.945	0.839	0.959	0.935	0.938
Wed	0.991	0.991	0.977	0.891	0.982	0.986	0.970
Thurs	0.981	0.981	0.967	0.902	0.981	0.972	0.964

Outcome Subscale

Day	O1	O2	O3	Mean Percentage of Positive Responses
Mon	0.957	0.919	0.943	0.940
Tues	0.903	0.912	0.921	0.912
Wed	0.955	0.941	0.950	0.948
Thurs	0.902	0.860	0.925	0.896

Appendix B

Percentage of Positive Responses to Each Item For Period of the Day for All Subjects

Implementation Subscale

Period	I1	I2	I3	I4	I5	I6	Mean Percentage of Positive Responses
1	0.989	0.977	0.932	0.830	1.000	1.000	0.955
2	0.977	0.988	0.930	0.895	0.977	0.965	0.955
3	0.967	1.000	0.956	0.944	0.978	0.989	0.972
4	0.988	1.000	0.988	0.884	0.988	0.977	0.971
5	1.000	1.000	1.000	0.966	0.989	0.989	0.991
6	0.976	0.964	0.964	0.869	0.976	0.964	0.952
7	0.989	0.966	0.966	0.773	0.966	0.955	0.936
8	0.989	0.966	0.989	0.828	0.954	0.943	0.944
9	0.963	0.988	0.988	0.877	0.988	0.951	0.959
10	1.000	1.000	0.976	0.927	0.951	0.951	0.967

Outcome Subscale

Period	O1	O2	O3	Mean Percentage of Positive Responses
1	0.898	0.841	0.955	0.898
2	0.930	0.919	0.919	0.922
3	0.933	0.900	0.967	0.933
4	0.953	0.941	0.953	0.949
5	0.899	0.910	0.978	0.929
6	0.940	0.929	0.917	0.929
7	0.943	0.909	0.886	0.913
8	0.920	0.908	0.907	0.912
9	0.926	0.889	0.926	0.914
10	0.951	0.939	0.939	0.943

Vita

Fritz Brown was born in Fairhope, Alabama on August 8, 1966. Fritz grew up in Baldwin County which is bordered by the Gulf of Mexico and Mobile Bay. After graduating from Fairhope High School in 1984, Fritz engaged in the pursuit of arcane knowledge until beginning college in 1987. Fritz attended the University of South Alabama in Mobile, Alabama and earned a B.A. in 1992 with a double major in Anthropology/Psychology. While at the University of South Alabama Fritz met his future wife, Catherine M. Tuohy, while working as a counselor at Camp ASCCA (Alabama Special Camp for Children and Adults), an Easter Seals summer camp for persons with disabilities. Fritz and Cathy returned to Camp ASCCA the following summer, and were wed on St. Patrick's Day in 1990. Fritz and Cathy decided to pursue graduate degrees at the University of Tennessee and moved to Knoxville, Tennessee in 1992. While Cathy earned her M.S. in Recreation at UTK, Fritz worked at the Helen Ross McNabb Center, a community mental health center. Fritz entered the UTK program of Recreation and Leisure Studies in the fall of 1995, officially receiving his M.S. in Recreation, Tourism, and Hospitality Management in August, 1997.