

# Summary of Health Outcomes in Therapeutic Recreation

## Introduction

Consumers, administrators, and providers of health care are challenged to make informed choices regarding a wide array of treatment approaches and interventions. Critical to this process is an evaluation of the efficacy of given interventions in terms of health outcomes. Increasingly, such evaluation has become a key area of focus for health care accrediting agencies, third party payers, and consumer advocacy groups.

This summary will describe the body of research documenting the health outcomes of the activities and interventions included in the scope of practice of recreational therapy, highlighting specific, structured interventions delivered by formally trained and qualified recreational therapy professionals. The intent is to enhance awareness of the multiple benefits of recreational therapy, and to demonstrate its value as a treatment and rehabilitation service.

The studies addressed in this summary are cited and discussed in Temple University's 1991 publication entitled *Benefits of Therapeutic Recreation: A Consensus View*, a document containing the conference proceedings from Temple's National Consensus three-year grant received by Temple University's Program in Therapeutic Recreation, from the United States Department of Education's National Institute on Disability and Rehabilitation Research (Grant No. H133B80048). The question addressed through this grant was whether, and to what extent, recreational therapy interventions affect medical outcomes, and, by implication, whether the profession of recreational therapy merits the support of the medical community and inclusion as a viable treatment and rehabilitation service.

The Consensus Conference convened several teams of expert delegates, each of whom conducted an extensive literature search regarding 1) documented outcomes of a range of activities and interventions contained within the scope of recreational therapy practice; and 2) efficacy studies documenting the outcomes of specific interventions delivered by formally trained and qualified recreational therapy professionals. The *Benefits of Therapeutic Recreation*, subsequently published by Idyll Arbor, Inc., is regarded within the discipline of recreational therapy as a definitive and comprehensive reference.

## Foundations of Recreational Therapy Practice

The discipline of recreational therapy embraces a definition of "health" which includes not only "the absence of illness", but extends to include enhancement of physical, cognitive, social, and affective development, such that persons may participate fully and independently in chosen life pursuits. Correspondingly, recreational therapists conceptualize the scope of "health care" as extending beyond acute care, to encompass a continuum of services, including rehabilitation, ongoing health maintenance, and preventive education and intervention.

Therapeutic interventions address the individual as well as the quality of his/her environment and support systems, in order to maximize both physical health and

psychosocial well-being. Interventions take place in inpatient, transitional, and home-or-community-based settings, and include structured activities which target reduction of specific symptoms or enhancement of specific functional skills; education which proactively addresses personal health maintenance skills, prevention, health promotion, and reduction of health risk factors; and guided participatory experiences which address psychosocial health and quality of life.

## **Outcomes of Recreational Therapy Interventions in Physical Medicine**

Forty-four million Americans are permanently physically disabled, as a function of congenital conditions, acquired disease, or traumatic injury. Recreational therapists are currently employed across the continuum of physical medicine and rehabilitation settings, from acute inpatient, to subacute rehabilitation, to outpatient and home-or community-based. Therapists work with individuals with diverse diagnoses, including but not limited to spinal cord injury; stroke; traumatic head injury; cardiac disorder; diabetes; chronic pain; visual and hearing impairment; asthma; cystic fibrosis; cancer; and HIV/AIDS.

Recreational therapy interventions address restoration of physical and/or cognitive functioning; ongoing health maintenance and self-management; prevention; community functioning and re-integration; and psychosocial well-being. Interventions include structured activities which enhance specific functional skills; organized sports and fitness activities; adventure or challenge activities; lifestyle/behavioral and family education; and supported community re-integration activities.

The literature on rehabilitation and physical activity exercise yields multiple studies documenting the positive health outcomes resulting from exercise, fitness, and relaxation interventions. These outcomes are critical to a comprehensive awareness of the efficacy of recreational therapy with this population, since physical conditioning, structured sports and fitness programs, and relaxation and stress management are often interventions of choice delivered by recreational therapists. The outcomes identified in the literature include:

- **Improvement in Physical Health Status:** Participation in various exercise and fitness activities resulted in significant improvements in cardiovascular and respiratory functioning, and increased strength, endurance, and coordination for persons with disabilities including paraplegia, cystic fibrosis, and asthma.
- **Reduction in Complications Related to Secondary Disability:** Physical activity has been demonstrated to reduce secondary medical complications arising from spinal cord injury and other physical disabilities. For example, decubitus ulcers and urinary tract infections were significantly reduced in a group of wheelchair athletes, as compared to non-athletes.
- **Improvement in Long-Term Health Status and Reduction in Health Risk Factors:** Lowered cholesterol levels, reduced heart disease risk, and improved ability to manage chronic pain were reported for persons with physical disabilities. Further, in a group of individuals with spinal cord injury, activity level was found to be significantly related to survival rate.
- **Improvement in Cognitive Functioning:** Enhanced attention, memory, perception, and organization skills were documented for persons with traumatic head injuries who participated in recreational activities and tasks focused upon

using and developing these skills.

- **Improvement in Psychosocial Health and Well-Being:** Decreased depression, improved body image, and increased acceptance of disability have been reported for physically disabled participants in fitness and athletic activities.
- **Reduction in Reliance Upon the Health Care System:** Participation in exercise and other physical recreation interventions by persons with physical disabilities resulted in reduced use of asthma medication, and in decreased anxiety and stress of a magnitude equal to or greater than that accomplished through medication. A group of wheelchair athletes demonstrated a re-hospitalization rate which was one-third that of a matched group of non-athletes.

Research addressing the role of activity and recreation in the rehabilitation and ongoing health status of persons with physical disabilities, as well as research addressing the efficacy of specific recreational therapy interventions have identified the following health outcomes:

- For individuals with spinal cord injuries, active involvement in recreation post-injury was positively related to **life satisfaction, high-quality social relationships, and low levels of depression.**
- Participants in various adapted adventure activities including hiking and camping demonstrated significantly increased **self-efficacy, self-confidence, and acceptance of disability.**
- Recipients of individualized recreational therapy services in an inpatient rehabilitation setting demonstrated significantly greater self-esteem at discharge, as well as **ability to utilize activity to cope with stressors related to hospitalization,** as compared to a group of matched controls not receiving recreational therapy services.
- A structured community transition intervention for physically disabled persons resulted in significant decreases in **social isolation,** and significant increases in **perceived quality of life.** These results support a related study of a structured community integration intervention which reported significant improvement in **community functioning and barrier management.**

### **Outcomes of Recreational Therapy Interventions with Older Adults**

The health care needs of older adults are an emerging national priority, and will continue to make significant demands upon the health care system, as well as to present challenges to providers to offer effective and cost-efficient care. Data indicate that an average of \$5,360 per older adult are expended each year in health care costs.

Medical disorders of older adulthood are diverse, and may affect functioning in physical, cognitive, and psychiatric/psychosocial domains. Recreational therapists are currently active in the continuum of health care settings, including acute care and rehabilitation; extended care and skilled nursing; adult day care; outpatient and community-based care; and home-based care. Therapists treat such medical disorders as stroke; cardiac dysfunction; cancer; Alzheimer's disease and other degenerative cognitive disorders; and psychiatric disorders.

Recreational therapy interventions address restoration of functioning; health

maintenance and reduction of health risk factors; and psychosocial health concerns. Interventions include fitness and movement activities; reality orientation and sensory stimulation; activities promoting socialization, choice, and self-expression; various daily living activities; and health and lifestyle education.

Numerous efficacy studies reflect the multiple outcomes of those interventions contained within recreational therapy's scope of practice. While the specific interventions in these studies were delivered by a variety of health care professionals, their outcomes are relevant to an understanding of the benefits of recreational therapy for older adults, as all interventions delivered were typical of those delivered by recreational therapists. These outcomes include:

- **Reduction in Symptom Levels for Chronic or Degenerative Disorders:** Older adults with arthritis or osteoporosis participating in physical activities demonstrated decreased pain and stiffness; increased mobility and muscular strength; and increased bone strength.
- **Improvement in Physical Health and Reduction in Health Risk Factors:** Participants in a variety of physical recreation, exercise, and fitness interventions experienced significantly increased cardiovascular fitness; decreased body weight and body fat; decreased blood pressure; and increased flexibility, strength, ambulation, and range of motion.
- **Improvement in Cognitive Functioning:** Cognitively impaired older adults participating in activities focused upon reality orientation, sensory simulation, and environmental awareness demonstrated significantly increased alertness and awareness of their surroundings; reduced confusion and disorientation; improved memory, attention span, and problem solving skills; and reduced reliance upon medication.
- **Improvement in Psychosocial Supports and Psychological Health:** Participants in a variety of social, expressive, artistic, or home- and nature-based activities demonstrated decreased loneliness and increased affiliation with others; increased verbal interaction; improved morale and life satisfaction; enhanced perceptions of personal control and competence; increased relaxation and ability to effectively manage stress; and reduced levels of depression.

### **Outcomes of Recreational Therapy Interventions with Persons with Psychiatric Disabilities**

The benefits of activity for persons with mental health disabilities have been frequently and abundantly cited in psychiatric literature. Whether due to genetic or biochemical origins, or to traumatic life events, persons with psychiatric disabilities come to treatment settings with needs for both primary symptom reduction and ongoing lifestyle and psychosocial education.

Recreational therapists are members of psychiatric and mental health treatment teams in a range of rehabilitation settings including acute inpatient; subacute residential; community-based transitional; and outpatient. Therapists work effectively with children and adults with schizophrenia; depression; mania; eating disorders; traumatic stress disorders; and anxiety disorders. Therapists address primary psychiatric symptoms,

prevention and mental health maintenance, and strengthening of psychosocial supports.

Recreational therapy interventions include structured activity focused upon symptom reduction; education addressing social skills, stress management, and health maintenance; community functioning and integration activities; adventure/challenge activities; and family interventions.

Numerous studies attest to the positive psychiatric health outcomes resulting from participation in structured physical, social, and recreational activities. These outcomes include:

- **Decrease in Manifestations of Stress and Depression:** Multiple studies of persons diagnosed with depression who participated in structured physical and stress management activities reported significant decreases in depressive and stress-related symptoms, including tension, negative thinking, sleep disturbances, impaired concentration, subjective stress, and anxiety. One study reported maintenance of these improvements at 6 and 21-month intervals.
- **Improvement in Social Interaction Skills:** Persons with psychiatric disabilities participating in social skills training interventions demonstrated increased assertiveness and social interaction skills.

Several studies regarding the efficacy of specific recreational therapy interventions with psychiatrically disabled persons yield crucial data regarding health outcomes:

- Structured recreational therapy interventions with schizophrenic adults resulted in **significant decreases in primary schizophrenic symptoms**, including **hallucinatory speech and behavior, inappropriate laughter, and other bizarre behaviors.**
- Structured lifestyle education and recreational activity programming with psychiatrically disabled adults resulted in a significant increase in **quality of discretionary time use.**
- Adolescents and adults with psychiatric disabilities who participated in a challenge/adventure intervention demonstrated significantly increased **communication and cooperation skills**, and reported increased levels of trust.
- Structured recreation interventions with children in inpatient settings and their families resulted in significant increases in **cooperative interaction and positive communication, parenting skills, familial self-esteem, and family-staff interactions.**

### **Outcomes of Recreational Therapy Interventions with Persons with Addictions**

Epidemiologists estimate that there are currently, approximately one-half million opiate addicts in the United States. It is estimated that, by 1995, 11.2 million Americans will manifest signs of alcohol dependence; The cost of these addictions to the health care system is estimated to be over 200 billion dollars per year.

Health care needs for persons addicted to substances include immediate detoxification and related health issues, and extend to ongoing treatment concerns related to recovery,

relapse prevention, and establishment of sober lifestyle alternative. Working in settings ranging from short-term detoxification and treatment, to transitional residential programs, to outpatient clinics, recreational therapists most often concentrate their efforts on strengthening those skills which will enhance the process of recovery and prevent relapse.

Recreational therapy interventions for addicted persons are largely educational in nature, addressing communication skills; self-exploration and values clarification; problem solving and decision making; community resource awareness and involvement; stress management; and prevention of relapse. Other interventions may involve adventure or challenge activities, and supported community-based recreation.

Active involvement in recreation has been demonstrated to relate positively to the following health outcomes for persons with substance addictions:

- **Improvement in Ability to Manage Stressors which Threaten Sobriety:** Persons with active recreational involvements were reported to possess increased skills at managing stressors, anxiety, and boredom, and to utilize their recreation as a positive alternative to continued substance use.
- **Improvement in Social Interaction and Social Networks:** Persons with active recreational involvements were reported to demonstrate improved communication skills, social interaction, and trust.
- **Enhancement of Sober Lifestyle and Identity:** Individuals receiving community resource education demonstrated increased use of those resources for social and recreational purposes, as well as improved use of time.

While relatively few studies have addressed the efficacy of specific recreational therapy interventions, promising data have been generated in terms of health outcomes:

- Participants in a comprehensive recreation and lifestyle education intervention with adult women demonstrated significant improvements in **ability to structure time, ability to cope with substance-related stressors, and communication and socialization skills**. The study identified further significant gains in **self awareness** and **decision making skills**.
- A study of the physiological and psychological effects of recreational therapy interventions with persons recovering from alcoholism reported improvements in **mood state** and **immune system response**.

### **Outcomes of Recreational Therapy Interventions in Pediatrics**

Recreational therapists play a critical role in the rehabilitation of children undergoing medical treatment for acute, chronic, or rehabilitative needs. Working primarily in hospital settings, therapists address primary symptoms in terms of restoration or maintenance of functioning, as well as psychosocial concerns related to fear, anxiety, and coping with medical and surgical procedures.

Interventions within recreational therapy's scope of practice in pediatric settings may include individualized bedside play or small group activity; physical play focused on

restoration or maintenance of functioning; educational play focused upon understanding and mastery of upcoming surgical procedures; dramatic or expressive play focused upon coping with fear and anxiety; and family and/or sibling play. Such interventions are delivered by a variety of professionals, including recreational therapists, child life specialists, and other allied health professionals.

The following outcomes of physical, educational, and expressive play interventions in pediatric settings have been identified:

- **Overall Improvement in Physical Health Status:** Children with asthma who participated in structured physical activities demonstrated significantly increased tolerance and endurance and reduced heart rate.
- **Reduction in Medical Complications and Increase in Rate of Healing:** Children with burns who participated in structured games demonstrated improved mobility and range of motion, decreased loss of function, and increased rates of healing. Further, children recovering from surgery receiving play interventions demonstrated increased rates of healing, as well as improved appetite and strength.
- **Alleviation of Delays in Development Resulting from Illness or Neglect:** Children who were hospitalized for malnutrition and received structured play interventions demonstrated significant improvements in coordination, hearing and speech, and locomotion, in contrast to malnourished hospitalized children who did not receive such interventions.
- **Enhancement of Ability to Cope with Hospitalization and Medical Procedures:** Children receiving pre- surgical play interventions demonstrated reduced anxiety regarding upcoming medical procedures. Similarly, children receiving expressive play interventions demonstrated improved coping with medication and related side effects post-surgery.
- **Improvement in Familial Coping:** Parents participating with their children in therapeutic play activities demonstrated reduced impatience and anxiety regarding their children's hospitalizations.

### **Outcomes of Recreational Therapy Interventions with Persons with Developmental Disabilities**

Persons with developmental disabilities, impaired in intellectual, social, maturational and physical functioning, represent a significant population of individuals residing in public, private, and community-based facilities. Recreational therapists work with developmentally disabled persons in all of these settings, including large public institutions; community-based programs and group homes; community recreation centers; summer camp programs; and educational and/or vocational programs.

Recreational therapists address development in physical, cognitive, social and behavioral domains, with the objective of enhancing age-appropriate and autonomous community functioning, as appropriate to the individual's potential. Interventions may include structured skills education; age-appropriate play and social opportunities; community functioning education; integrated experiences with same-age peers without developmental disabilities; and individualized coaching toward progressive integration into normal community settings. The following outcomes of a variety of interventions

included in recreational therapy's scope of practice have been documented:

- **Improvement in Physical Functioning:** Participants in physical recreation activities demonstrated improvements in perceptual-motor skill, balance, agility, and athletic skill.
- **Improvement in Cognitive Functioning:** Participants in activity and recreational skills training demonstrated increased attention span, problem solving, and decision making skills.
- **Improvement in Communication and Social Skills:** Participants in social skills training activities demonstrated increased skills in conversation, assertion, cooperation, and competition.
- **Reduction in Non-Adaptive or Inappropriate Behavior:** Participants in structured physical and social activities, especially those encouraging choice and control, demonstrated significant decreases in self-stimulating, stereotypic, self-abusive, or other non-adaptive or inappropriate behavior.
- **Increase in Age-Appropriate Behavior in Community:** Participants in social and activity skill training interventions demonstrated increased age-appropriate choices and activity participation in integrated community settings.
- **Enhancement of Friendship and Social Support Networks:** Participants in integrated camping experiences demonstrated increased social interaction skills and friendships with both developmentally disabled and non-developmentally disabled peers.

The efficacy of structured recreational therapy interventions has been addressed in several studies, yielding the following health outcomes:

- Integrated recreational programs were demonstrated to significantly increase **social skills and interaction, recreational skill acquisition, and friendships with non-developmentally disabled peers.**
- Structured educational interventions addressing recreational, social, decision making, and community functioning skills were demonstrated to result in significant increases in **assertiveness, initiation, and engagement in activities of choice, to reduce inappropriate or stereotypic behaviors, and to increase age-appropriate behaviors.**

## Summary

Recreational therapy interventions are supported by a growing body of literature attesting to their effectiveness in producing desired health outcomes. Awareness of these outcomes is critical to the process of making informed health care choices. As is evident for every disability group discussed, interventions contained within recreational therapy's scope of practice are effective in alleviating primary symptoms of illness or disability, as well as in promoting and enhancing ongoing health maintenance, independent functioning, overall quality of life. Recreational therapy interventions result in positive health outcomes in psychosocial, attitudinal, and lifestyle domains, which may so often be determining factors in an individual's ability to successfully cope with disability and return to a productive and personally fulfilling life. Ultimately, such outcomes result in reduced reliance upon costly and intensive medical care alternatives.

Recreational therapy interventions result in significant health outcomes in the process of treatment and rehabilitation, making them crucial services within a truly comprehensive continuum of health care.

**Note:** All studies and data summarized in this document are further detailed and discussed in:

Coyle, C.P., Kinney, W.B. Riley, B., & Shank, J.W. (Eds.) (1991). *Benefits of Therapeutic Recreation: A Consensus View*, Ravensdale: Idyll Arbor, Inc.