Optimizing Lifelong Health and Well-Being: A Health Enhancing Model of Therapeutic Recreation

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The Optimizing Lifelong Health through Therapeutic Recreation model is presented and discussed as part of the ongoing dialogue regarding new approaches to conceptualizing and delivering therapeutic recreation services. Through the elements of selecting, optimizing, compensating, and evaluating (Baltes & Baltes, 1990), therapeutic recreation specialists work with individuals who have illness, disease, and/or lifelong disability to achieve and maintain leisure lifestyles that will enhance their health and well-being across the life course. Strengths of the model, as well as ideas for its continued developed, are addressed.

KEY WORDS: *Therapeutic Recreation, Selective Optimization with Compensation, Health Enhancement, Life Course Approach, Healthy Leisure Lifestyle*

Therapeutic recreation (TR) service delivery is based on the assumed need for intervention with the intent of influencing the individual's personal and/or leisure functioning (Wilhite & Keller, 1992). Early leaders (Avedon, 1974; Ball, 1970; Frye & Peters, 1972;

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Gunn & Peterson, 1978) conceptualized the desired outcome or result of TR intervention along a hierarchical continuum of care where achieving higher order needs presupposes the achievement of needs at lower levels. The individual's needs determine the level of care, a specific site or setting for care (ranging from most restrictive to least restrictive), and the range of possible TR service components (e.g., assessment, treatment/rehabilitation, education, recreation participation). Different outcomes are indicated at each point of the continuum, and the individual enters the continuum at any point appropriate for his/her need.

One early interpretation of recreation service also recognized the potential influence of TR in optimizing lifelong health and well-being through an emphasis on health enhancement. Reynolds and O'Morrow (1985) reported that the American Medical Association designated recreation service as an allied health field in 1961 partly as a result of the contribution of recreation to the prevention of illness or further disability, and the promotion of health of persons with physical, psychological, mental, or social disabilities. While Austin (Austin, 1997, 1998; Austin & Crawford, 1996) advanced concepts of health enhancement, prevention and health promotion have received limited attention to date and have been concerned primarily with reducing secondary disability and higher health care costs (American Therapeutic Recreation Association/National Therapeutic Recreation Society, 1993; Coyle, Kinney, Riley, & Shank, 1991; Shank, Coyle, Boyd, & Kinney, 1996). TR services may be ideally suited to address health enhancement needs. Guidelines for extending TR beyond acute care and rehabilitation to include preventive education and health maintenance, however, are lacking (Coyle, Boyd, Kinney, & Shank, 1998). In addition, research has not yet supported this notion (Gerber, 1994/1995).

The purpose of this paper is to initiate a dialogue about the incorporation of health enhancement concepts into TR practice and to propose a non-linear model of TR that is grounded in a life course perspective which merges health enhancement and self-care approaches. This discussion will allow therapeutic recreation specialists (TRSs) to consider various ideas with the recognition that many new ways of delivering TR services will be necessary in the next century. The paper is based on a rationale that encompasses three broad areas discussed in the following sections: health enhancement, reform in health and human services, and the life course perspective.

Health Enhancement

Health enhancement includes a variety of behaviors individuals may use to prevent health risks, maintain or promote health, and facilitate functional interdependence (Commission on Accreditation of Health Care Facilities, 1997; Ory, DeFriese, & Duncker, 1998; World Health Organization, 1983). These behaviors are often undertaken by individuals with the assistance and support of others, whether they are formal service providers, such TRSs, or informal service providers, such as family and friends. This concept implies both individual- and societal-level health enhancement interventions. Clients, support networks, environmental factors, and situational contexts converge to either facilitate or impede health enhancement efforts (Stoller, 1998).

Recent literature that has helped inform the idea that TRSs should adopt a health enhancement focus is found in the agenda setting document, *Healthy People 2000* (U.S. Department of Health and Human Services, 1990). This document directed health care providers and organizations, both public and private, to consider disease/illness prevention, health education, and health promotion as central directions for their efforts. To facilitate personal control over achieving a healthy quality of life, *Healthy People 2000* encouraged the development of strategies to promote actions by individuals, families, communities, and health care providers that will "... reduce prevent-

able death and disability, enhance the quality of life, and greatly reduce disparities in the health status of populations within our society" (U.S. Department of Health and Human Services, 1990, p. 1).

Preventing secondary consequences or reducing further impairment are other important dimensions of health enhancement. People who already experience disabling or dysfunctional conditions have accentuated needs for the prevention of secondary concomitant conditions and the promotion of optimal health (U.S. Department of Health and Human Services, 1990). Even if disease, illness, and/or disability are not prevented, health promotion is still viable. Regardless of the individual's condition, improvement is often possible, and health and well-being can exist in the presence of disability (Coyle et al., 1998; Rakowski, 1994).

Currently, many TRSs are attempting to incorporate a health enhancement focus as suggested by a joint position paper on TR's response to health care reform (American Therapeutic Recreation Association/National Therapeutic Recreation Society, 1993). In addition, as reported by Coyle et al. (1998), the Commission on Accreditation of Rehabilitation Facilities (1997) has developed standards for preventing health risks, optimizing function, and enhancing health. TRSs are being challenged to participate in the development of practice and research models based on principles of health enhancement (Coyle et al.).

Reform in Health and Human Services

Today, treatment and rehabilitation occur very quickly in health care facilities. TRSs have questioned their ability to provide comprehensive, integrated, and systematic TR services, based on traditional models, because of shortened lengths of stay. The effectiveness of TR programs, particularly long-term efficacy, is difficult to assess under these conditions. Moreover, helping clients to preserve both immediate and long-term health and well-being is troublesome as they transition into their communities. Unless average lengths of stay are extended, which seems unlikely, it appears that TR may need to rethink its traditional role in acute care settings by working to establish and expand a health enhancement role in a variety of alternative post-acute and community-based services.

A very important health enhancement outcome relevant to TR is the reduction in the lifelong resources that individuals require (Breske, 1995). This goal is especially pertinent as cost containment may be of concern when adopting a health enhancement model that includes prevention and health promotion (Chapel & Stange, 1997; Rakowski, 1994). For example, high levels of recidivism are extremely costly to clients, insurers, and health care systems. If prevention and health promotion services are provided, after discharge or during transition, more costly services may be avoided (Breske, 1995; Landrum, Schmidt, & McLean, 1995). Additionally, the restructuring of health services in response to managed care has placed a greater emphasis on client self-reliance. This development has occurred at the same time that individuals with disabilities have begun demanding a greater voice in determining appropriate health and human service interventions (Coyle et al., 1998). By adopting a health focus, TR can be more responsive to individual needs and changes in health and human services.

Life Course Perspective

Illness, disease, or disability, and the associated decisions that are required by clients and care providers, are ongoing processes. Individuals who have illness, disease, or disability continue to develop and grow over the life course (Seltzer, Krauss, & Janicki, 1994) and reinvent themselves again and again in response to changing needs, resources, health status, and environments. During this process, clients are "constantly constructing, updating, or reconstructing representations of settings and feelings, [and] generating and executing procedures for coping, evaluating or apprais-

ing outcome" (Leventhal, Leventhal, & Schaefer, 1992, p. 115). Over the life course, people may become aware of changes in their resources, within themselves and within their environments, and employ strategies to conserve and use available resources in response to these changes (Baltes & Baltes, 1990). Lifelong learning and adaptation through maximizing or optimizing assets and resources (e.g., physical, mental, social) is an essential reality.

As central goals and preoccupations shift through the life course, so the contexts and aims of leisure may change (Kelly, 1996). Leisure participation may influence health and well-being by helping to facilitate coping behaviors in response to the changes and transitions that individuals experience over the life course, including those caused by illness, disease, or disability (Coleman & Iso-Ahola, 1993; Kleiber, 1985). As suggested in *Healthy People 2000,* when people engage in healthy leisure lifestyles, they actively participate in their own well-being (see also, Caldwell, Smith, & Weissinger, 1992; Coleman & Iso-Ahola, 1993; Geba, 1985; Ragheb, 1993). Over the life course, individuals establish, modify, or discard leisure roles, discovering a symmetry which will continue to optimize their well-being. In this sense, TR may be uniquely positioned to help coordinate changes related to achieving optimal health, functional interdependence, and well-being, thus increasing quality of life (Coyle et al., 1998).

In summary, current changes in the foci of health and human service pertain to (a) expanded definitions of health to move from a concern for eliminating or controlling disease to a concern for prevention and health promotion, (b) the need for individuals to be empowered to assume some degree of responsibility for their own health, and (c) the need for flexible and responsive service provision. Using a life course perspective that emphasizes personal control over the changes encountered as one ages and deals with various life stresses (including illness, disease, and/or disability), TR services can offer an important contribution to health enhancement.

Optimizing Lifelong Health and Well-Being

The model suggested in this paper is "The Optimizing Lifelong Health through Therapeutic Recreation" (OLH-TR) model (see Figure 1). This model is grounded in Baltes' and Baltes' (1990) developmental theory of human aging/adaptation (Baltes, 1980; Baltes & Baltes, 1987; 1990; Freund & Baltes, in press a; Freund & Baltes, in press b). In addition, the model is influenced by the contributions of others, including those who have described previous TR practice models (e.g., Atchley, 1989; 1993; Austin, 1998; Brill, 1990; Carter et al., 1995; Howe-Murphy & Charboneau, 1987; Stumbo & Peterson, 1998).

Baltes and Baltes (1990) described their theoretical approach to human aging/adaptation as "selective optimization with compensation." While they considered this principle to be a prototypical strategy for successful aging, they suggested that the process of selective optimization with compensation was actually an ongoing, lifelong process that intensified in later life. The model describes a process whereby people become active agents in securing and maintaining their own well-being over time while maximizing their individual capabilities for growth and creative adaptation. A critical concept in this theory is that health enhancement strategies are client-initiated and reflect self-determined decision-making processes (Baltes & Baltes, 1990; Royer, 1995).

The OLH-TR model is supported by three basic principles adapted from Baltes and Baltes (1990). First, engagement in a healthy leisure lifestyle reduces the probability of pathology or secondary consequences of disability across the life course. An ultimate goal is to facilitate the adoption of healthy leisure lifestyles that prevent or minimize the impact of disabling or dysfunctional conditions, or secondary consequences for those persons who

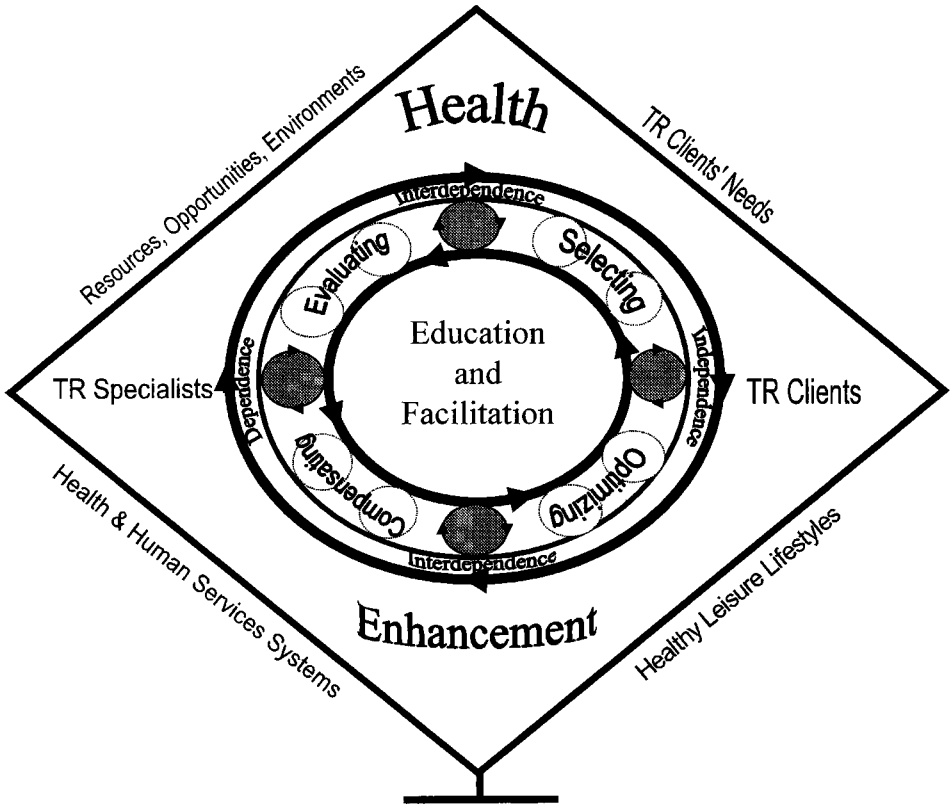

FIGURE 1. OPTIMIZING LIFELONG HEALTH AND WELL-BEING THROUGH THERAPEUTIC RECREATION MODEL.

already experience a chronic or disabling condition, while promoting optimal health and well-being. A second basic principle of the model is that strengthening optimal health and well-being can be achieved by individualizing resources and opportunities. Resources and opportunities may be strengthened through a variety of educational, motivational, and health-enhancing activities. The third basic principle is that individuals must be prepared to alter leisure choices or find substitutes, when necessitated, by changing personal and environmental characteristics across the life course. Thus, healthy leisure lifestyles include a flexibility that enables individuals to make continuous accommodations to internal and external changes. A central task of the TRS is to help facilitate these adjustments while still allowing for maximum client choice, control, and preservation of selfhood (Baltes & Baltes, 1990).

Elements of the OLH-TR Model

Baltes (1980) and Baltes and Baltes (1987; 1990) described three interacting elements of their developmental model: selecting, optimizing, and compensating. These elements have been adapted and a fourth, evaluating, added in the OLH-TR model. These four elements are primary activities undertaken by TR clients in conjunction with TRSs using a systematic approach (i.e., assessment, program planning,

implementation, evaluation) to individualized program planning. These activities are intended to achieve and maintain leisure lifestyles across the life course that will enhance clients' health and well-being.

Selecting involves focusing resources on functional domains that match environmental demands with the client's capacities, skills, and motivations, and that support efforts to achieve, maintain, or regain leisure lifestyles that optimize health. The selection of target activities or functional domains with clients encourages optimal satisfaction and motivation through exercising maximum personal control and choice. TRSs can educate individuals in understanding that they may need to alternately restrict or expand activities according to changes in health status and environmental situations. The selection of activities involves goal setting. As people move through the life course, selecting achievable goals on which to focus attention is critical (Freund & Baltes, in press b). The process of selection helps people direct their energies so that efficient attention can be devoted to certain domains or activities. This focused selection, however, may come at the expense of other, sometimes valued activities. The role of a TRS is to assist clients with this decision-making process.

For example, consider Jim who has pursued running as a way to achieve and maintain physical fitness, be with friends, and reduce stress. After experiencing a spinal cord injury, a TRS might help him come to the realization that he wants to continue this activity with adaptations. Accomplishing this goal may require considerably more time and energy than before his injury; thus, Jim may choose to give up or cut down participation in other activities he also values (selection).

Optimizing focuses on actively and selectively engaging in activities that maximize general personal and environmental resources while making it possible for clients to pursue their chosen leisure pursuits. In the example noted above, Jim will need to gain knowledge about wheelchair road racing techniques; begin training appropriately; and learn about other optimizing conditions such as general fitness, balanced nutrition, and adequate rest and recovery time. Through the use of educational strategies, the TRS can assist Jim in gaining information and skills he will need to engage in wheelchair road racing.

Compensating includes psychological, social, and technological compensatory efforts that are adopted when certain behavioral abilities are lost, or are reduced below the minimum level required for desired leisure functioning. Compensating might mean substituting one activity for another, or making adaptations so the activity can be accomplished (e.g., using external aids). In order to continue participation in running, Jim will need to compensate for physical functioning losses. By working with a TRS, Jim might first need to accept that running will not be sustained in exactly the same manner as before his spinal cord injury (Lee, Dattilo, Kleiber, & Caldwell, 1996). Jim will use a wheelchair which accommodates his needs. He will need to learn strategies for reducing further the impact of physical functioning losses such as through the use of appropriate clothing and other accessories, or through knowledge of how to avoid or treat injuries. Jim may also need help with transportation or other types of support. By combining the interactive elements of selecting, optimizing, and compensating, Jim is able to engage in an activity that creates a level of satisfying performance and promotes health and well-being.

Evaluating addresses aspects of inputs (costs) and outputs (outcomes) as clients select, optimize, and compensate. Clients learn and implement decision-making skills centered around optimizing lifelong health and gather information from each element in order to make a judgement about the next. Personal meaning and well-being are evaluated in light of evolving changes/transitions and their consequences. With a TRS, clients can learn how to decide whether continuing a certain activity is desirable. In the example, Jim may someday decide that the efforts required to continue

running outweigh the benefits. At this time, reexamination of the elements of selecting, optimizing, and compensating is required so that a healthy leisure lifestyle may be recreated. He may choose to limit running while alternately expanding participation in other physical activities. The TRS might help to educate Jim about alternative leisure options and resources. He may choose to engage in swimming to promote physical fitness and social interaction.

Focus of the TR Intervention

The role of a TRS based on the OLH-TR model is derived from an educational and facilitative perspective (see Figure 1). The education focus of the TR intervention is on opportunities for acquiring awareness, knowledge, and understanding of various leisure options for minimizing health risks and promoting health. The facilitation focus is on experiences for clients to apply the learning, to enable leisure to occur, and to advocate on the client's behalf. These two foci are oriented toward and intertwined with a variety of health enhancement outcomes including prevention, health promotion, habilitation, rehabilitation, and palliative care.

TR clients are continually engaged in the four elements of selecting, optimizing, compensating, and evaluating. Individuals consider and act on changes indicated by the interaction of these elements with (a) their evolving needs; (b) the resources, opportunities, and environments available to address these needs over the life course; (c) the goal of achieving/maintaining healthy leisure lifestyles; and (d) the environments in which they and others interact to obtain desirable outcomes. The elements are not entirely distinct and some blurring between elements can occur.

The OLH-TR model recognizes that independent leisure functioning (i.e., with minimal support from TRSs and other care providers, family, friends) is not always possible or desirable. Thus, during the process of selecting, optimizing, compensating, and evaluating, individuals learn (a) that interdependent leisure functioning (i.e., with optimal support from TRSs and other care providers, family, friends) might be ideal and (b) that interacting cooperatively with others in a self-determined manner enables goal attainment. This perspective allows individuals with varying abilities to maintain maximum levels of personal control and active decision-making over the life course.

In the OLH-TR model, the capacity for self-reinvention as the essence of a healthy, interdependent leisure lifestyle over the life course is paramount (Brill, 1990). Individuals do not achieve healthy leisure lifestyles by moving from a position of dependence to one of independence and remaining there (a linear concept present in some continuum models). TRSs help clients achieve a balance between dependence (with maximum support) and independence through selecting, optimizing, compensating, and evaluating leisure choices throughout life. Individuals who achieve interdependence will be self-determined, taking responsibility for their behaviors while making choices in light of self and others' abilities and needs. Interdependence allows clients to develop mutually supportive relationships that may be sustained throughout life (Gilligan, 1982).

The notion of interdependence or balance is illustrated in Figure 1 by depicting the elements of the model as ball bearings. Ball bearings (in this case, selecting, optimizing, compensating, and evaluating, or, the actions taken by clients) turn clockwise which enable the outside of the mechanism (in this case, the outer circle of the figure representing the achievement of interdependence) to turn clockwise. The inside of the mechanism (the inner circle of the figure representing educating and facilitating, or, the actions taken by TRSs) revolves in the opposite direction portraying the creation and maintenance of balance or interdependence as clients and TRSs work together.

Individuals, over the life course, possess a range of ability for interdependence and this

requires adaptations to needs. Individuals are required to move back and forth from dependence to independence in order to maintain optimal health and well-being. If the focus of the TR intervention as guided by the model becomes unbalanced, dependence or independence may result and the "diamond" may shift to the left side of the outer circle (increased dependence) or to the right side (increased independence). Too much of either tends to be negative (Brill, 1990).

A Systems' View of the OLH-TR Model

Basic systems theory provides a framework for understanding the traditional process of therapeutic recreation (i.e., assessment, program planning, implementation, and evaluation) and for appreciating the elements of selecting, optimizing, compensating, and evaluating. As illustrated in Figure 2 (adapted from Wilhite & Keller, 1992), the assessment and individual program planning phases of the TR process are aspects of the selecting element during which information is fed into the system, goal setting is accomplished, and target activities or functional domains are selected. During optimizing, TRSs and clients implement the individual program plan as engagement in selected activities occurs. Implementation continues as TRSs and clients consider compensatory strategies which may be adopted to enable ongoing engagement in desired leisure choices. Evaluating the consequences of participation produces information that is put back into the system at each element and may lead to modifications.

Strengths of the Model

In summary, the OLH-TR model emphasizes the interrelatedness of all aspects of TR clients (i.e., mental, physical, social, psychological, cultural, spiritual) and the interdependency between clients, others, and their environments. This perspective of TR service delivery represents a departure from traditional medical models and is more conducive to accounting for diverse personal, social, and cultural needs; understanding the value of optimizing and nurturing environments; and allowing for changes in personal aspirations and goals throughout life. The educational and

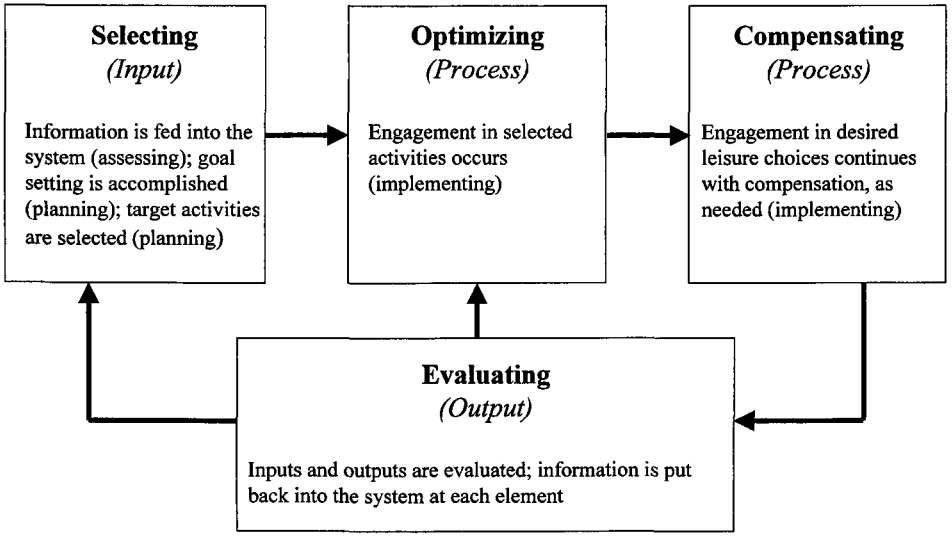

FIGURE 2. A SYSTEMS' VIEW OF THE OLH-TR MODEL.

facilitative emphases of the TR intervention are important because they support the focus of personal responsibility and empowerment for health and well-being.

Within this holistic and evolutionary view of health, the primary concern of TRSs is to provide educational opportunities and to design and/or facilitate supports and experiences that will promote healthy leisure lifestyles with individuals throughout their lives, not just at a particular moment in time or in a particular service setting. Education or facilitation can be accomplished in a way that is consistent with goals related to improving functional abilities or preventing further loss to physical, psychological, or social well-being. Thus, participating with a TRS, clients learn decision-making processes and skills (e.g., selecting, optimizing, compensating, evaluating) that can be applied in many situations under differing conditions during the life course.

The health enhancement aspect of the model is beneficial to a variety of potential recipients of TR service. For example, using TR interventions to prevent alcohol or drug abuse, eating disorders, violence, and mental health problems among at-risk individuals is a worthy and achievable focus. In addition, this model also takes into account the needs of individuals who will not "get better" or return to a "productive" life (e.g., those with dementia, terminal illness, progressive disease/disability, chronic and severe mental illness). As illustrated in the example of Jim, individuals with physical disabilities, such as spinal cord injury, may experience chronic illness and disability over the life course. Common complaints such as fatigue, pain, changes in function, urinary tract infections, and skin that breaks down more readily than in the past seem to be related to the duration of the disability (Trieschmann, 1987). As these individuals experience "losses," a reorientation of goals, and strategies to achieve these goals, is possible through the elements of selecting, optimizing, compensating, and evaluating. Thus, a process of active and selective engagement in healthy leisure lifestyles is facilitated.

For individuals to achieve the benefits of healthy leisure lifestyles, some level of active engagement must be present. Therefore, a focus on maintaining engagement in recreation and leisure across the life course is an important aspect of the model. TR programs and services could focus on enhancing specific functional skills, teaching strategies for conserving energy, reducing health risk factors, preventing secondary problems, and reducing or eliminating negative life stressors. TR interventions, with this health enhancement focus, may thus enable clients to assume increased responsibility, exert more control, and maintain interdependence throughout life. Increased control appears to have strikingly positive effects on the health and well-being of people over the life course (Rodin, 1986a; 1986b).

Continued Development of the Model

In this discussion, terms such as leisure, quality of life, health, well-being, prevention, health promotion, and interdependence are not thoroughly defined. Continued exploration and understanding of these and other terms are needed to understand fully TR clients' and TRSs' experiences and beliefs, and to operationalize the model. Further, additional work remains to incorporate the needs of accountability structures in health and human services that demand outcomes that have monetary as well as non-monetary value.

In this model, as in most existing models of TR, additional development is needed to address satisfactorily clients' and TRSs' unsuccessful attempts to achieve optimal health and well-being. While the suggested approach is grounded in an ethic of empowerment, what happens when clients cannot or will not espouse health and accept personal responsibility for achieving and maintaining it across the life course? Alternately, what happens when TRSs do not embrace fully their responsibility as agents of change at both the individual- and societal/environmental-level?

This model is offered as a piece of the ongoing dialogue about TR service conceptualization and delivery as we approach the 21st century. It is foolhardy to adopt one approach without close scrutiny, thought, and testing in the field. It is also possible that one model/approach may not be adequate to cover the diversity of who TR serves and what TR does. We believe the model contributes to this ongoing discussion.

References

Atchley, R. (1989). A continuity theory of normal aging. *The Gerontologist, 29,* 183–190.

Atchley, R. (1993). Continuity theory and the evolution of activity in later adulthood. In J. Kelly (Ed.), *Activity and aging: Staying involved in later life* (pp. 5–16). Newbury Park, CA: Sage.

American Therapeutic Recreation Association & National Therapeutic Recreation Society. (1993). *Therapeutic recreation: Responding to the challenges of health care reform.* Hattiesburg, MS: American Therapeutic Recreation Association and Arlington, VA: National Therapeutic Recreation Society.

Austin, D. R. (1997). *Therapeutic recreation: Process and techniques* (3rd ed.). Champaign, IL: Sagamore.

Austin, D. R. (1998). The health protection/health promotion model. *Therapeutic Recreation Journal, 32*(2), 109–117.

Austin, D. R., & Crawford, M. E. (Eds.). (1996). *Therapeutic recreation: An introduction.* (2nd ed.) Needham Heights, MA: Allyn & Bacon.

Avedon, E. M. (1974). *Therapeutic recreation service: An applied behavioral science approach.* Englewood Cliffs, NJ: Prentice-Hall.

Ball, E. L. (1970). The meaning of therapeutic recreation. *Therapeutic Recreation Journal, 4*(1), 17–18.

Baltes, P. B. (1987). Theoretical propositions of life-span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology, 23,* 611–626.

Baltes, P. B., & Baltes, M. M. (1980). Plasticity and variability in psychological aging: Methodological and theoretical issues. In G. E. Gurski (Ed.), *Determining the Effects of Aging on the Central Nervous System* (pp. 41–66). Berlin: Schering.

Baltes, P. B., & Baltes, M. M. (1990). Selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.) (pp. 1–34), *Successful Aging: Perspectives from the Behavioral Sciences.* New York: Cambridge University Press.

Breske, S. (April, 1995). In come outcomes: Strategies to help you in the climb to stay on top. *Advance for Directors in Rehabilitation, 4*(4), 14–18.

Brill, N. (1990). *Working with people: The helping process* (4th ed.). White Plains, NY: Longman.

Caldwell, L. L., Smith, E. A., & Weissinger, E. (1992). The relationship of leisure activities and perceived health of college students. *Society and Leisure, 15,* 545–556.

Carter, M. J., Van Andel, G. E., & Robb, G. M. (1995). *Therapeutic recreation: A practical approach.* Prospect Heights, IL: Waveland Press.

Chapel, T. J., & Stange, P. V. (1997). Is altruism killing prevention? When health systems take on the role of public health provider. *Healthcare Forum Journal, 40*(5), 46–50.

Coleman, D., & Iso-Ahola, S. (1993). Leisure and health: The role of social support and self-determination. *Journal of Leisure Research, 25*(2), 111–128.

Commission on Accreditation of Rehabilitation Facilities. (1997). *Standards manual and interpretative guidelines for medical rehabilitation.* Tucson, AZ: Author.

Coyle, C., Boyd, R., Kinney, W., & Shank, J. (1998). The changing nature of therapeutic recreation: Maintaining consistency in the face of change. *Parks & Recreation, 33*(5), 57–63.

Coyle, C. P., Kinney, W. B., Riley, B., & Shank, J. W. (1991). *Benefits of therapeutic recreation: A consensus view.* State College, PA: Venture.

Freund, A. M., & Baltes, P. B. (in press a). Selection, optimization, and compensation as strategies of life-management: Correlations with subjective indicators of successful aging. *Psychology and Aging.*

Freund, A. M., & Baltes, P. B. (in press b). The orchestration of selection, optimization, and compensation: An action-theoretical conceptualization of a theory of developmental regulation. In W. J. Perrig & A. Grob (Eds.), *Control of Human Behav-*

ior, Mental Processes, and Consciousness. Mahwah, NJ: Erlbaum.

Frye, V., & Peters, M. (1972). *Therapeutic recreation: Its theory, philosophy, and practice.* Harrisburg, PA: Stackpole Books.

Geba, H. B. (1985). *Being at leisure playing at life: A guide to health and joyful living.* La Mesa, CA: Leisure Science Systems International.

Gerber, L. (1994/1995). Keynote address for the first annual ATRA research institute. *Annual in Therapeutic Recreation, 5,* 1–4.

Gilligan, C. (1982). *In a different voice.* Boston: Harvard University Press.

Gunn, S. L., & Peterson, C. A. (1978). *Therapeutic recreation program design: Principles and procedures.* Englewood Cliffs, NJ: Prentice Hall.

Howe-Murphy, R., & Charboneau, B. G. (1987). *Therapeutic recreation intervention: An ecological perspective.* Englewood Cliffs, NJ: Prentice-Hall.

Kelly, J. R. (1996). *Leisure* (3rd ed.). Needham Heights, MA: Allyn & Bacon.

Kleiber, D. A. (1985). Motivational reorientation in adulthood and the resource of leisure. *Advances in Motivation and Achievement, 4,* 217–250.

Landrum, P. K., Schmidt, N. D., & Mc Lean, A. (1995). *Outcome-oriented rehabilitation: Principles, strategies, and tools for effective program management.* Gaithersburg, MD: Aspen.

Lee, Y., Dattilo, J., Kleiber, D. A., & Caldwell, L. (1996). Exploring the meaning of continuity of recreation activity in the early stages of adjustment for people with spinal cord injury. *Leisure Sciences, 18*(3), 209–225.

Leventhal, H., Leventhal, E., & Schaefer, P. (1992). Vigilant coping and health behavior. In M. Ory, R. Abeles, & P. Lipman (Eds.), *Health, behavior and aging* (pp. 109–140). Newbury Park, CA: Sage.

O'Morrow, G. S., & Reynolds, R. P. (1989). *Therapeutic recreation: A helping profession* (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Ory, M. G., DeFriese, G. H., & Duncker. (1998). Introduction: The nature, extent, and modifiability of self-care behaviors in later life. In M. G. Ory & G. H. DeFriese (Eds.), *Self-care in later life: Research, program, and policy issues* (pp. xv–xxvi). New York: Springer.

Peterson, C. A., & Gunn, S. L. (1984). *Therapeutic recreation program design: Principles and procedures* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Ragheb, M. (1993). Leisure and perceived wellness: A field investigation. *Leisure Sciences, 15,* 13–24.

Rakowski, W. (1994). The definition and measurement of prevention, preventive healthcare, and health promotion. *Generations, 18*(1), 18–23.

Reynolds, R. P., & O'Morrow, G. S. (1985). *Problems, issues, & concepts in therapeutic recreation.* Englewood Cliffs, NJ: Prentice-Hall.

Rodin, J. (1986a). Health, control, and aging. In M. M. Baltes & P. B. Baltes (Eds.), *Aging and the Psychology of Control* (pp. 139–165). Hillsdale, NJ: Erlbaum.

Rodin, J. (1986b). Personal control throughout the life course. In R. Abeles (Eds.), *Implications of the Life Span Perspective for Social Psychology* (pp. 103–120). Hillsdale, NJ: Erlbaum.

Royer, A. (1995). Living with chronic illness. *Research in the Sociology of Health Care, 12,* 25–48.

Seltzer, M. M., Krauss, M. W., & Janicki, M. P. (Eds.). (1994). *Life course perspectives on adulthood and old age.* Washington, DC: American Association on Mental Retardation.

Shank, J. W., Coyle, C. P., Boyd, R., & Kinney, W. B. (1996). A classification scheme for therapeutic recreation research grounded in the rehabilitative sciences. *Therapeutic Recreation Journal, 30*(3), 179–196.

Stoller, E. P. (1998). Dynamics and processes of self-care in old age. In M. G. Ory & G. H. DeFriese (Eds.), *Self-care in later life: Research, program, and policy issues* (pp. 24–61). New York: Springer.

Stumbo, N. J., & Peterson, C. A. (1998). The leisurability model. *Therapeutic Recreation Journal, 32*(2), 82–108.

Trieschmann, R. B. (1987). *Aging with a disability.* New York: Demos.

U.S. Department of Health and Human Services, Public Health Service. (1990). *Healthy people: National health promotion and disease prevention objectives.* DHHS Publication No., (PHS) 91-50213.

World Health Organization. (1983, November 21–25). *Health education in self-care: Possibilities and limitations.* Report of a scientific consultation. Geneva, Switzerland.

Wilhite, B. C., & Keller, M. J. (1992). *Cases and exercises in therapeutic recreation.* State College, PA: Venture.