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To cite this article: John L. Crompton (2008) Empirical Evidence of the Contributions of Leisure Services to Alleviating Social Problems: A Key to Repositioning the Leisure Services Field, World Leisure Journal, 50:4, 243-258, DOI: [10.1080/04419057.2008.9674564](https://doi.org/10.1080/04419057.2008.9674564)

To link to this article: <https://doi.org/10.1080/04419057.2008.9674564>



Published online: 11 Mar 2011.



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Empirical Evidence of the Contributions of Leisure Services to Alleviating Social Problems: A Key to Repositioning the Leisure Services Field

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Abstract

Relatively concise executive summaries are provided of the scientific evidence supporting the leisure services field's contributions to seven elements of alleviating social problems: reducing environmental stress, community regeneration, cultural and historical preservation, facilitating healthy lifestyles, alleviating deviant behavior among youth, raising levels of educational attainment, and alleviating unemployment distress. By aligning with these seven issues which are increasingly prominent on political agendas, it is suggested that leisure services can be repositioned from being relatively discretionary services to being a central element in the strategies used by government entities to address these issues of concern.

Keywords: *leisure services; alleviating social problems; social exclusion*

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In an earlier edition of this journal (Vol 50, 3), the author suggested that in order to enhance their funding and support from taxpayers and elected officials, parks needed to be repositioned from being perceived as discretionary services to being perceived as alleviating problems which are of central concern to society. That paper argued that parks were central to environmental sustainability which is emerging as a prominent concern on the political agendas of many societies.

This paper examines another emerging political issue, that of alleviating social problems, and suggests how leisure services can be repositioned to align with this issue and, thus,

enhance their funding status. In the past decade, there has been a quantum increase in the scientific evidence that has emerged supporting the role of leisure services in alleviating social problems. The evidence suggests leisure services can make positive contributions to reducing environmental stress, cultural and historical preservation, facilitating healthy lifestyles, alleviating deviant behavior among youth, raising levels of educational attainment, and alleviating unemployment distress. The intent of this paper is to provide the field's advocates with a synthesis of these empirical findings which they can use to effectively make their case with legislative bodies.

Reducing environmental stress

Environmental stress is a condition experienced daily by many who live or commute in urban or blighted areas. The stress may involve both psychological emotions, such as frustration, anger, fear, and coping responses, and associated physiological responses that use energy and contribute to fatigue. Its detrimental impact to health and well-being may be manifested in characteristics such as headaches, tension, short temper, aggressive temper, low morale, and increase in number of sick days away from work.

Surroundings influence individuals' outlooks on life, their sense of well-being, and ultimately their attitude and behavior toward others. Different outdoor environments can have quite different influences on inflicting or ameliorating stress, and parks and natural vegetation have long been known to have a restorative effect by fostering psychological well-being. In 1865 Frederick Law Olmsted wrote insightfully about stresses associated with cities and job demands and argued that viewing nature was effective in inducing recovery from such stresses. He asserted that such an environment, "employs the mind without fatigue and yet exercises it; tranquilizes it and yet enlivens it; and thus, through the influence of the mind over the body, gives the effect of refreshing rest and reinvigoration to the whole system" (Olmsted, 1865, p. 21). Olmsted's strong belief that natural landscapes had a restorative effect bringing "tranquility and rest to the mind" formed an important part of his influential justification for providing parks in American cities.

In the penultimate decade of the twentieth century, Olmsted's intuitions received scientific credibility when E O Wilson hypothesized the existence of biophilia, "the innately emotional affiliation of human beings to other living organisms" (Wilson, 1993, p. 31). The theory proposes that there is an inherent need to affiliate with life and lifelike processes. It suggests that human identity and personal fulfillment somehow depend on a relationship with nature, and that the natural world exerts an influence on emotional, cognitive, aesthetic and even spiritual development.

Building on this hypothesis, others have postulated an affinity for nature that goes beyond living things to include streams, ocean waves and wind. The principles of biophilia can be transposed into urban contexts and embraced in "restorative environmental design" to ameliorate the impact of environmental stress. Empirical research in recent years has consistently produced evidence to support the contention that nature enhances health. Evidence is available from four aspects of the natural world – animals, plants, landscapes and wilderness experiences (Frumkin, 2001).

A consistent finding reported in more than 100 studies of recreational experiences in urban nature areas is that stress reduction, often expressed in terms such as "relaxation" and "peacefulness," is one of the most important verbally expressed perceived benefits associated with park and recreation services. Urban settings that prominently include vegetation are less stressful than settings which lack a natural component. Such settings for urbanites may include, for example, viewing trees or flowers through a window in a workplace or residence, lunching in a park, or driving on a tree-lined boulevard or on roads with landscaped vegetation medians:

Stress managers will tell you that one of their most successful techniques for reducing stress is visualization. If you ask them what people visualize when they wish to relax, they never say parking lots or freeways or baseball stadiums. What do they mention? ... forests and mountains and sea-coasts. So, if this is what reduces stress and gives people a sense of emotional stability, why not take it seriously? Maybe what we need in every city are more parks and gardens and more places where people can physically connect with what is natural and peaceful rather than with purely imaginary landscapes or some form of virtual reality (Roszak, 1995, p. 24).

Conclusions demonstrating the therapeutic value of natural settings have been derived not only from psychological studies but also from physiological measurements of cardiovascular activity, including heart rate; skin conductance, which the autonomic nervous system

controls; muscle tension, which the central nervous system controls; and pulse transit time (a non-invasive measure that correlates highly with systolic blood pressure).

In an early classic study of this genre it was reported that hospital patients recovering from surgery had shorter post-operative hospital stays, lower intakes of potent narcotic pain drugs, and far fewer negative comments in nurses' notes, if their windows overlooked a small stand of deciduous trees rather than a brown brick wall (Ulrich, 1984).

Authors of studies researching patient anxiety in a dental clinic who used self-analysis and heart-rate data reported that patients felt less stressed on days when a large mural depicting a natural scene was hung on a wall of the waiting room than on days when the wall was blank (Ulrich et al., 1991).

Findings like these from studies of health-care facilities are paralleled by results from prisons suggesting that cell-window views of nature are associated with lower frequencies of prisoner stress symptoms, such as digestive illness and headaches, and with fewer sick calls (Ulrich et al., 1991). In aggregate, these physiological studies strongly suggest that recuperation from stress occurs much faster and more completely when individuals are exposed to natural rather than urban environments. A leading research team in this field concluded "that even short duration leisure contact with nature might be important to many urbanites in fostering restoration from mild stressors such as daily hassles or annoyances" (Ulrich et al., p. 224).

Parks aptly have been described as "still eyes in the hurricane" of the city; as safety valves for the release of the tensions of modern life; and as the city's lungs which enable people to breathe in relaxation and escape pressure. When overcrowded; surrounded by a harsh, callous, and perhaps deteriorating physical environment; or harassed; human beings frequently show traits of aggression. This has led to the following suggestion:

It is time to consider the environmental conditions that may promote hostility and anti-social behavior. This is not meant to minimize the negative impacts of chronic

unemployment, drug addiction, broken homes and the general feeling of hopelessness that pervade many inner-city communities. Nevertheless, many urban problems may come down to a simple question: Are our attitudes and behaviors resulting from them being influenced by the physical environment in which we live and work? ... It is surprising that programs that permit residents to introduce nature into inner-city neighborhoods are rarely listed among priority approaches for addressing urban problems (Hull, 1994, p. 52).

The cost of environmental stress in terms of work days lost and medical care is likely to be substantially greater than the cost of providing and maintaining parks, urban forestry programs, and oases of flowers and shrubs. The harshness of the physical environment in many urban areas may contribute to the sense of social deprivation, anger, and aggressive temper that lead to anti-social behavior.

Community regeneration

It is not possible to breathe new life into run-down areas without investing in leisure services. In some cases, facilities such as parks, aquariums, marinas, sports complexes, museums, cultural centers and tree plantings and landscaping are the driving force which stimulate regeneration of an area. In other cases, these facilities are components in the mix of amenities that are needed to revitalize an area.

Over 80 percent of Americans live in metropolitan areas, many of which are engaging in regeneration efforts. Most people don't want to leave the place they are living; rather they want it to be upgraded so their quality of life is improved. Most recreation activity takes place close to home, so facilities and services which facilitate it are an integral component of successful regeneration efforts. The key requirement for sustainable communities is that they have a sense of place, and leisure services contribute to this through their roles in facilitating socialization and restoration, and the creation of physically vibrant and attractively designed park and open space areas.

Many prominent regeneration efforts have focused on the reclamation of rivers in urban

areas. America's great cities grew up on rivers, but they subsequently abused them, so by the 1960s many urban rivers were heavily polluted while factories or train tracks claimed the riverbanks (Poole, 1996). As a consequence, many urban river neighborhoods were abandoned to the poor and powerless. In 1964, the Cuyahoga River in Cleveland notoriously burst into flames when sparks from a passing train ignited the polluted water. Many other rivers were abandoned. These became dumping grounds for household trash and garbage, and a city's sewers (Poole, 1996).

The Clean Water Act of 1972 stimulated a renaissance in the US. The iconic San Antonio River Walk in Texas became a model which inspired other cities to act, but much of the stimulus was powered by a groundswell of grassroots support. Today, for example, it is estimated there are 500 local river groups in the US working on reclaiming metropolitan rivers. Greenways and trails along rivers capitalize on local restoration efforts and on improved water quality. They symbolize the renaissance of neighborhoods.

Because of their high visibility, parks may be viewed as the "coal mine canary" communicating both a neighborhood's level of vibrancy and safety, and the ability and interest of its governing body to create neighborhoods offering a high quality of life. The status of parks is a signature statement of the status of a neighborhood. If the parks are dilapidated, desolate and empty, then these adjectives probably characterize the community and the potency of its governing entity. Similarly, if they are appealing, well-maintained and occupied, then the community and council are likely to be perceived as being vibrant and effective. Renovation of a park can be an effective catalyst for regeneration because it is a highly visible, relatively fast way of demonstrating concern and commitment to improvement.

Cultural and historical preservation

It has been suggested that those who are unaware of their history forever remain children. Children have no context, no road map, and no parameters to guide their actions, because they have no institutional memory. As a

result, their actions typically are characterized by trial and error, inefficiency, and a relatively long learning curve. "History is a road map. It tells us who we are, how we got where we are, and where we ought to be going" (Sessoms, 1992, p. 47).

The social merit rationale for investing in cultural and historical preservation (CHP) in the US was articulated in 1966 in the landmark National Historic Preservation Act (NHPA) which declared that, "the historic and cultural foundations of the Nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people." CHP tells the story of a community's, or of the nation's, cultural and historical evolution. CHP is a tangible manifestation of the past which molded the present. As such, it offers a community's residents a context for evaluation and appreciation of their contemporary environment and lifestyles. For example, the benchmarks that CHP sites offer provide the context for the following evaluation of contemporary urban development:

Regretfully, we must recognize the essential tawdriness of much contemporary design and construction. Much of it is junk. It assaults our senses. Thus, we seek to preserve the past, not only because it is unique, exceptional, architecturally significant, or historically important, but also because in many cases what replaces it is inhuman and grotesque" (Stripe, 2003, p. xiv).

In recent years, the concept of CHP has expanded from a focus on individual structures to protection and interpretation of the larger culture that produced them. This was exemplified by the initiation of the National Heritage Area (NHA) program by the US National Park Service in the 1980s. The US National Park Service defines a NHA as:

A place where natural, cultural, historic and recreational resources combine to form a cohesive, distinctive landscape arising from patterns of human activity shaped by geography.

By 2006, over 40 NHAs had been established. The NHAs provide a vehicle for managing regional resources in a holistic, organic, co-operative way.

The NHAs also exemplified the convergence of interests between CHP and land conservation. The land has shaped much of human culture, and people have shaped the land. All of America's landscapes hold the imprints of human occupation. Consequently, preserving the natural landscape and ecological resources, *ipso facto* protects parts of the cultural heritage (Stripe, 2003). It is unlikely that there is a single "natural area" in North America that has not been subject to human culture and human imprints. Thus, it is appropriate that CHP is increasingly conceptualized as a component of the larger movement supporting environmental protection and sustainability.

The purpose of sustainable development is to retain that which is important, valuable and significant. Its definition is, "the ability to meet our own needs without prejudging the ability of future generations to meet their own needs" (Rypkema, 2006, p. 38). Almost by definition, CHP is sustainable development and development without CHP is not sustainable.

Initially, CHP was promoted primarily as an effective counter to the destruction of central cities, but as cultural homogeneity has increased CHP has been recognized as a vehicle for maintaining difference, distinctiveness, individuality and personal identity. In recent decades, diversity has become a CHP imperative and it has become much more inclusive, going beyond the traditional Eurocentric view of preservation.

The proliferation of nationally franchised restaurants, hotels, shopping malls and box superstores has resulted in there being little differentiation among places. CHP enhances the richness, diversity, distinctive character and authenticity of places. Indeed, it is likely to be central to creating the "sense of place" which attracts people, businesses and visitors to an area.

There is a burgeoning interest in heritage tourism and, because these visitors typically spend more than most other categories of visitors, they are especially targeted by tourism agencies. However, CHP usually only transposes into heritage tourism when a community preserves entire districts not just isolated structures.

In the past, few accepted the idea that preserving historic buildings could be profitable. Today few question it. In addition to heritage tourism, there are five other types of potential economic benefits that may be associated with CHP. First, it is likely to be a central feature of community preservation. Consider the following testimony:

I visit 100 downtowns a year of every size, in every part of the country. But I cannot identify a single example of a sustained success in downtown revitalization where historic preservation wasn't a key component of that strategy. Not one. Conversely, the examples of very expensive failures in downtown revitalization have nearly all had the destruction of historic buildings as a major element" (Rypkema, 2006, p. 31).

Second, much of the growth in new jobs comes from small businesses and, typically, rents in CHP area buildings are lower than in new buildings so they are disproportionately influential on the incubation of new businesses. Third, for the same reasons CHP neighborhoods often provide much of a community's affordable housing. Fourth, CHP is consistent with the "smart growth" agenda which emphasizes the costs and diseconomies associated with sprawl and the economic benefits of leveraging existing infrastructure.

A final economic benefit emanates from the concept of "embodied energy." This identifies the total expenditure of energy involved in the extraction, manufacture, distribution, disposal and possible reuse of products involved in the creation of a building. When historic structures are destroyed, the embodied energy incorporated within them is wasted. The embodied energy required for products obtained from distant or remotely manufactured and transported sources tends to be much higher than that involved in locally or regionally derived products and materials. The World Bank notes, "the key economic reason for the cultural patrimony case is that a vast body of valuable assets, for which sunk costs have already been paid by prior generations, is available. It is a waste to overlook such assets" (Rypkema, 2006, p. 30). The issue has been summarized in the following terms:

Razing historic buildings results in a triple hit on scarce resources. First, we are throwing away thousands of dollars of embodied energy. Second, we are replacing it with materials vastly more consumptive of energy. What are most historic houses built from? Brick, plaster, concrete, and timber – among the least energy consumptive of materials. What are major components of new buildings? Plastic, steel, vinyl, and aluminum – among the most energy consumptive of materials. Third, recurring embodied energy savings increase dramatically as a building's life stretches over 50 years. You're a fool or a fraud if you claim to be an environmentalist and yet you throw away historic buildings and their components (Rypkema, 2006, p. 31).

Facilitating healthy lifestyles

The US currently spends 14% of its Gross National Product on health care which is more than any other nation. Since the highest expenditures are on people in the oldest age cohorts and the number of elderly is growing rapidly, health care costs are unlikely to decline. Indeed, the recent "epidemic" of obesity, with its associated illnesses, suggests these costs will increase substantially without

proactive action. There are two alternate paths available to address this issue. The prevailing approach is to invest in increasing the supply base i.e. more physicians, drugs, equipment and hospitals. The alternative path is to reduce the demand for medical services by investing in prevention since much of the demand results from poor lifestyle choices.

Health is not merely the presence or absence of disease but a continuum representing all levels of vitality from the utmost to the lowest endpoint (euphoria to death!) (Godbey, 1997). Further, health refers not only to physical well-being but also to the status of a number of related processes. It involves a holistic integration of the physical, emotional, spiritual, intellectual, and social dimensions of people's lives. If any of them are unbalanced, then it can lead to individuals seeking help from the health-care system. Frequently, the popular view of the contribution of park and recreation agencies to health is limited to their potential for improving physical fitness through exercise. This is a myopic perspective because their role in facilitating positive emotional, intellectual, and social experiences is well documented.

There has been growing recognition that the key to curtailing health care costs lies in

Figure 1. Are Inadequate Residential Environments Contributing to Children's Obesity?

Obesity in children is not a disease, yet the government, doctors, drug companies and many therapists are treating it as if it is. I believe that the poor environment in which our children are forced to grow up is causing obesity; most children no longer play out as they have done for countless generations.

A parallel can be drawn with the filthy state of London in the mid-nineteenth century, when people were dying from dysentery and cholera. No doubt all sorts of potions, therapies and cures were peddled, and I assume the government at the time would have listened to those appearing to have remedies (they were, after all, key stakeholders). They would have encouraged businesses to develop these remedies – perhaps they even gave grants to voluntary organizations – and they may well have encouraged people to eat more healthily.

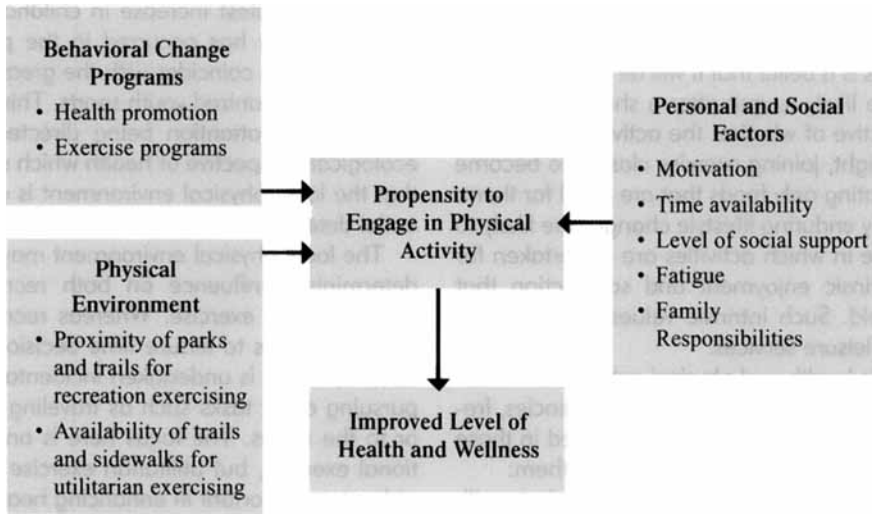
However, the problem only began to be addressed when they got a man called Bazalgette to build sewers. A healthy environment was thereby created and there was a massive leap forward in health improvements and a significant reduction in disease.

Equally, we now need to create a healthy environment for our children. A medical model of drugs, surgery and therapies is as useful for the vast majority of children as the quack remedies offered in previous centuries.

There is no evidence that our calorific intake has risen. Fifty years ago children were encouraged to eat the fat on meat because it was 'good for you' and sugar was not felt to be dangerous so copious amounts were sprinkled on breakfast cereals and stirred into drinks. A healthy diet is important but will not solve the obesity problem.

Children need and want to play out; they are not couch potatoes but couch prisoners. Often they are confined at home because their local environment is not conducive to encouraging them to exercise.

Figure 2. Factors Influencing Propensity to Exercise



Source: Whewey, R (2007).

prevention of illness so it does not have to be treated by the expensive medical system. The case is articulated in Figure 1. Other than having the right parents and genetic make-up, the most important determinants of health are daily behaviors and habits. Empirical evidence demonstrating the nexus between exercise and health has been established unequivocally. Thus, for example, the landmark report by the US Surgeon General stated, "Americans can substantially improve their health and quality of life by including moderate amounts of physical activity in their daily lives" (p. 3). It stated, "health benefits appear to be proportional to the amount of activity; thus, every increase in activity adds some benefits" (US Department of Health and Human Services, 1996, p. 2).

Figure 2 suggests that propensity to engage in physical exercise is a function of personal and social factors, behavioral change programs, and the physical environment. The personal and social factors have been documented and reviewed elsewhere (Salis, Bauman & Pratt, 1998; Seefeldt, Mulina & Clark, 2002). For the most part, these are not subject to influence by leisure service agencies so they are not discussed in this paper. However, these agencies do have substantial opportunities for enhancing health and wellness

through behavioral change programs and the provision of proximate parks, trails and open spaces to facilitate recreational exercise.

The model in Figure 2 refocuses the common implicit assumption that physical activity is a conscious, discretionary lifestyle choice, by suggesting leisure services agencies can have a deterministic impact in influencing that choice. The model recognizes that while being physically active ultimately is a matter of personal choice, this choice is likely to be influenced by health promotion campaigns and the availability of structured exercise programs. Similarly, a growing number of studies show that people who reside or work in activity-friendly environments are more likely to be active. Thus, the challenge for leisure service agencies is to create environments that make it easier for individuals to elect to exercise.

Many leisure service agencies offer an array of structured exercise programs in recreation centers, aquatic facilities, gymnasiums or parks, and a range of athletic facilities and programs. Increasingly, these are being offered in partnership or association with other organizations in a community whose missions are complementary. These partnerships recognize that such programs are likely to be more effective in facilitating health and wellness if the exercise program is linked with

other components such as nutrition and education to address the issue holistically.

If people's main motivation for engaging in activities is a belief that it will be good for them, they are likely to quit after a short time period irrespective of whether the activity is dieting to lose weight, joining exercise classes to become fit, or eating only foods that are good for them. The only enduring lifestyle changes are likely to be those in which activities are undertaken for the intrinsic enjoyment and satisfaction that they yield. Such intrinsic values are a central goal of leisure services.

While health and physical activity have been traditional goals of leisure service agencies, frequently they have not been positioned in those terms. There is a need to reposition them:

Citizens will be much more likely to willingly pay for such services if they understand that paying more for such services means paying less (saving) for health care. While documenting specific health benefits is important, it is more important that the public and political decision-makers first understand the concept – public recreation, park and leisure services are health services. These services provide sustained opportunities by which citizens can increase their physical fitness, reduce stress, reduce substance abuse, meditate, learn new skills which lead to higher self esteem, lessen social isolation and depression and do many other things which improve health (Godbey, 1991, p. 74).

This perspective subsequently was validated by a national survey which reported that the most frequently cited benefit associated with visiting local parks was related to exercise; "In terms of types of benefits, exercise and health related benefits are overwhelmingly first" (Godbey, Graefe & James, 1993, p. 111). This led the researchers to conclude, "While local recreation and park agencies are sometimes only beginning to think of themselves as health or wellness organizations, perhaps the public already does so" (p. 111).

The traditional behavioral change programs of health promotion and structured physical activity offerings will continue to play a role in encouraging healthy lifestyles, but the rising obes-

ity levels demonstrate they are insufficient. Indeed, the greatest increase in childhood/adolescent obesity has occurred in the past two decades which coincides with the greatest ever increase in organized youth sports. This has led to increasing attention being directed to an ecological perspective of health which suggests that the local physical environment is an influential determinant of physical activity.

The local physical environment may exert a deterministic influence on both recreational and utilitarian exercise. Whereas recreational exercise relates to leisure time decisions, utilitarian exercise is undertaken incidentally while pursuing other tasks such as traveling to work or to the stores. The focus here is on recreational exercise, but utilitarian exercise may be at least as important in enhancing health since it is integrated into other activities and so circumvents the issue of limited time which surveys report is a major barrier to engaging in physical activity programs.

Conceptually, it seems likely that environmental influences such as the proximity of parks, trails and exercise facilities to people's residences or work places will have a direct role in changing habitual behavior patterns and an influence on their propensity to engage in recreational exercise. If people don't have access to such public amenities and cannot afford private memberships, then it seems likely they will have a higher probability of going without exercise.

Proximity to parks is a key determinant of park use. For example, a major study in Los Angeles reported, "Most park users (81%) live within one mile of the parks, and only 19% of park users live more than one mile from the park. Proximity to parks matters" (Cohen, et al. 2006, p. 116). However, use also is influenced by quality of a park in terms of its safety, level of maintenance, lighting, shaded walkways and aesthetics. Thus, the Los Angeles study concluded, "Perceptions of environmental aesthetics and convenience are associated with increased level of walking for exercise" (p. 116).

Most people who use parks engage in at least moderate levels of physical activity. Walking is the most commonly reported physical

activity and, thus, likely to be the most influential in changing physical activity levels. Making parks an inviting place for walking should be a high priority.

The following examples of results from individual studies are indicative of the findings which have emerged:

- Based on objective accelerometer data, 37 percent of residents of the most walkable neighborhoods in Atlanta met physical activity recommendations, compared to just 18 percent of those living in low-walkability neighborhoods (Frank, et al. 2005a).

- 20,000 adolescents mapped their distance from homes to facilities for physical activities. The study concluded that teens who lived in areas with seven or more facilities were 32 percent less likely to be overweight and 26 percent more likely to be highly active than those who lived in areas with no facilities (Gordon-Larsen, et al. 2006).

- Older women who lived within walking distance of trails, parks or stores recorded significantly higher pedometer readings than women who did not. The more destinations that were close by, the more they walked (King, et al. 2003).

The conclusions of four different teams of authors who reviewed and synthesized the research findings on the impact of the physical environment on exercise suggest there is an emerging consensus that routine physical activity is shaped by local environments:

- "The studies provide evidence that creating activity-friendly communities will increase levels of recreational physical activity" (Lee & Moudon, 2004, p. 166).

- The Centers for Disease Control determined that creating and improving places to be active can result in a 25 percent increase in the percentage of people who exercise at least three times a week (Centers for Disease Control and Prevention, 2002).

- There is strong evidence that "program/facility access, opportunities to be active, and time outdoors" is associated with physical activity for both children and adolescents (Sallis, Prodraska & Taylor, 2000, p. 969).

- "Clearly, the proximity of safe and well-maintained urban parks and trails has a rela-

tionship to active living in communities" (Henderson, 2007, p. 207).

Although evidence of a direct link between proximity of leisure service facilities and propensity to exercise is emerging, the research literature investigating this relationship is embryonic. Only since the start of the new millennium have researchers begun to investigate it. At this time, the research is not sufficiently advanced to draw an unequivocal direct connection flowing from physical environment, through physical activity, to level of obesity. Nevertheless, results from the pioneering studies are sufficiently robust for one research team to conclude:

The built environment may be contributing to the obesity epidemic, because obesity is more prevalent in areas where land use makes it difficult to walk to destinations and where there are relatively few recreational resources. The built environment has emerged as a high priority for public health (Frank et al., 2005b, p. 118).

A major challenge facing leisure service agencies is to establish formal linkages between their mission, facilities, programs and expertise, and those of the medical community. Since the medical community generally recognizes the merits of physiotherapy and therapeutic recreation, extending the vehicles for rehabilitation to embrace physical activity does not require additional conceptual justification. Moving from offering related but unconnected services to address health problems, to a mode of "joined-up thinking" where these complementary services collaborate closely, would appear to be a logical evolutionary stage.

Such linkages have been operationalized in some countries. In the United Kingdom, for example, linkages were initiated around 1990 and the National Health Service now requires its hospitals and physicians to collaborate with qualified fitness and leisure providers such as leisure service agencies to address issues such as obesity and lack of exercise. There are approximately 1,200 exercise referral schemes whereby physicians refer patients to facilities such as recreation centers or gyms for supervised exercise programs. Reviews of these collaborations "found that exercise referral schemes in primary care can result in sustain-

able improvements in physical activity and indicators of health; that they play a part in wider physical activity promotion and can contribute to tackling social exclusion" (National Health Service, 2001, p. 4). These referrals include provision of health insurance to cover the cost of at least the initial stages of the exercise program charged by the program provider.

It has been reported that in the context of alleviating depression, referrals to physical exercise programs have a success rate of 60-85 percent, while anti-depressant drugs effectively treat only 20-40 percent of patients. Several reasons are suggested to explain this positive impact of exercise including an increase in the release of endorphins and encephalons, chemicals that may promote feelings of well-being and pain relief; and a diversion from preoccupation with negative thoughts that is characteristic of depression (Inclusive Fitness, 2006).

The potential economic benefits accruing from investments in preventative actions by leisure service agencies have been expressed in the following terms:

The cost-to-benefit ratios are compelling. For an annual tax fee of \$50 to \$60 per person, a typical local park and recreation agency provides a wide array of health-enhancing services. The amount paid for a typical heart bypass operation (\$60,000, for example) would fund local government park and recreation services for approximately 1,200 people for one year at \$50 per person per year. Of those 1,200 people, 948 would use such services, based on national data relating to the use of public park and recreational facilities; the non-users would also derive considerable benefits. If you were in charge of improving health and wellness services for the American public and had a shrinking pool of money to do so, who ya gonna call? (Godbey, 1997, p. 105)

Alleviating deviant behavior among youth

The potential of recreation programs to contribute to alleviating juvenile delinquency was the primary rationale for establishing recreation as a public service in the US in the

field's formative years. Leisure service agencies remain well positioned to be a primary community resource for addressing this issue for at least three reasons.

First, leisure centers and park areas (where many gangs and deviant youth congregate) are distributed widely across communities, and thus can be used as service centers for addressing gang- and youth-related problems. Second, an agency's personnel are experienced in establishing empathetic relationships with their clients. Third, recreational activities are inherently appealing to large segments of youth in general, including at-risk youth and, thus, offer a vehicle for assessing and positively influencing social behavior.

A number of program evaluations suggest that participation can lead to increased engagement in learning, social skills development, decreased deviancy, and a range of other positive outcomes. For example, an experienced, roving leader who works with at-risk youth testified:

I'm interested in the whole kid, in helping him do better in life. Recreation is just the hook to get into a relationship with them. It is what I use to collar them. If I organize a basketball game, they are there. You have to have some way to get them in. If I told them to meet me in church or school, I wouldn't get any of them, but ask them to play basketball and they will be there. However, slowly but surely I can then get them into different community organizations as our relationship strengthens (Crompton & Witt, 1997, p. 90).

The peak hours for juvenile crime and experimentation with drugs, alcohol, cigarettes and sex are between the hours of 3 p.m. and 6 p.m. Prevention efforts have two dimensions: (i) occupying youth in activities so time and opportunity are not available to engage in negative behavior; and (ii) using the activities as a medium through which to teach the skills necessary to avoid the negative behavior when they are not in the park and recreation setting.

The diversity of program formats, contexts and clientele groups which characterize preventive efforts with "at risk" youth make it difficult to draw generalizable quantitative conclusions

Figure 3. The Return on Investment in Effective Juvenile Crime Prevention Programs

The city of Fort Worth used a holistic approach involving coordinated action from a number of city departments to address the problem of serious gang-related crime. The Fort Worth Parks and Community Services Department (which includes recreation) played a central role in the effort. The table shown below reports data that compare the number of serious offenses the year before the program was launched with the number two years after the initiative was implemented.

The 22% improvement, reflecting 152 fewer offenses, was dramatic. If they had been committed by 100 young people, for example, and if all of these individuals had been arrested and incarcerated then, using Texas Youth Commission's data which report the annual cost of incarcerating a youth is \$43,000 per year, the cost of incarcerating all 100 of them for one year would have been more than \$4.3 million. Given the gravity of the offenses, it appears reasonable to hypothesize that each of the individuals could have been incarcerated for an average of 10 years. With this assumption, the costs then escalate to \$43 million (ignoring the time value of money). The total investment of city funds in this at-risk youth initiative was \$430,000 and \$678,000 in years 1 and 2 of the program, respectively. This was supplemented with \$156,000 and \$278,000 in the respective years from private sources. Thus, the return on each dollar invested by the city was \$39 (\$43 million ÷ \$1.108 million). These calculations do not take into account cost savings that are also likely to have accrued from at-risk youth not engaging in other less serious crimes not considered in the exhibit. This level of return made the investment unbeatable! Certainly the level of return makes it easy for elected officials to justify to their constituents the use of tax money to retain and expand their investment in this program.

about their levels of effectiveness. Most of the empirical evaluations that have been published have been in the form of case studies (Witt & Crompton, 1996; Witt & Crompton, 2002). The conclusions drawn from these studies are that preventative programs offered by leisure service agencies are effective when they incorporate a preponderance of the following elements: positive interactions and relationships with adult leaders; leadership opportunities for youth; intensive and individualized attention to participants; a sense of group belonging; engagement in challenging tasks and activities; youth input into program decisions; and opportunities for community service.

The potential return to jurisdictions investing in prevention programs can be calculated by tracking reductions in crime and ascribing a financial value to them. An example of how to do this is given in Figure 3.

The exactness of the numbers is not important. It does not matter if in some jurisdictions juvenile incarceration costs are lower, if city investment is greater, or if the magnitude of crime reduction is lower. The magnitude of the return on investment is so large that even quite major changes in the variables are unlikely to affect the principle.

An estimate of the costs imposed upon society (in 2001 dollars) by the average career criminal, the average heavy drug user, and

the average high school dropout is shown in Table 1 (Cohen, 1998). These numbers represent the lifetime costs of these behaviors. From society's perspective, any leisure services intervention program that can prevent such behavior is likely to be cost effective.

The California After School and Education Act invests \$433 million per year in after school programs that service 485,000 students in grades K – 9. This represents about 10 percent of the students enrolled in California public schools. With the local match, the cost per student was \$1,350 per year and the costs are projected out over the 9 years for which stu-

Table 1. Change in the Number of Serious Gang-Related Offenses Committed in Fort Worth

Type	Year Before the Initiative	Year of the Initiative	% of Change
Murder	37	29	-22%
Aggravated Sexual Assault	3	10	+233%
Robbery	116	83	-28%
Aggravated Assault	421	319	-26%
Burglary	43	27	-37%
Theft	35	35	---
Auto Theft	25	25	---
TOTALS	680	528	-22%

dents are eligible (costs and benefits in the calculation are calculated in present values to correct for the time value of money). A comprehensive analysis of the costs and benefits of the program reported the results shown in Table 1. The authors concluded:

The net benefit of each participant is between \$79,484 and \$119,427. In other words, each dollar invested in an at-risk child brings a return of \$8.92 to \$12.90. Much of this remarkable benefit is derived from diverting a relatively small portion of at-risk youngsters from a future path of crime. An at-risk child who becomes a career criminal costs society anywhere from \$1.4 million to \$1.7 million over his or her lifetime. Therefore diverting even less than one percent of participating at-risk youth from a life of crime saves several times the cost of the program (Brown, et al. 2002, n.p.).

Parks and urban forestry also appear to have potential for contributing to alleviating deviant behavior among youth. There is evidence that the presence of urban vegetation is related to lower crime rates. In a study of 98 apartment buildings in Chicago, it was found that the greener the immediate surroundings of a building, the lower the crime rate (Kuo & Sullivan, 2001). Those buildings surrounded by open grassy areas and canopy trees had the lowest crime rates, suggesting that vegetation is likely to reduce crime most when it affords fewest opportunities for concealment. Green spaces are likely to decrease crime because they encourage residents to interact, whereas sterile, paved areas are often viewed as "no-man's lands" without a pedestrian presence and in which criminals feel safer (Kuo, 2003). It also has been found that the closer trees are to residential buildings the more people spend time outside (Kuo, et al. 1998).

Raising levels of educational attainment

In the past decade, there has been a movement to increase the amount of time that children are involved in educational activities beyond regular school hours in order to enhance their levels of educational achievement. The intent is to compensate for the lack of support for

education in the homes of many youth. Recreation has proved to be an effective "hook" for persuading many to participate in these after school programs. They are permitted to engage in the recreation activities only after they have completed the "enrichment" part of the program which may consist of completing their homework with or without assistance; receiving tutoring in academic and/or life skills; or engaging in activities designed to achieve developmental outcomes.

Often these programs are jointly offered by the school district and the leisure services agency, with school teachers being responsible for literacy, math and other academic aspects, while the leisure agency offers the enhancement and recreation components. There is growing evidence that quality after school opportunities matter – that they complement environments created by schools and families and provide important "nutrients" that deter failures and promote success (National Institute on Out-of-School Time, 2005). In all cases, the availability of caring adult leaders and the purposive structure of programs to achieve the desired outcomes are critical to the success of these efforts.

The scientific literature evaluating the success of these programs has been reviewed elsewhere and its findings are encouraging. It includes a meta-analysis of 56 studies which found that such programs had positive effects on the achievement of low achieving or at-risk students in reading and mathematics; that the timeframes within which these programs are held (i.e. after school or summer) do not influence their level of effectiveness; and that these programs need not focus solely on academic activities to have positive effects on student achievement (Mid-Continent Research for Education and Learning, 2004). Another review of 35 studies reported that the test scores of low income, at-risk youth improved significantly in both reading and mathematics following their participation in after-school programs (Lauer, et al. 2006).

There remains a profound gap between the knowledge and skills most students learn in school and the knowledge and skills they need for a successful career in the 21st century. Stu-

dents need to learn academic content through real-world examples, applications, and experiences both inside and outside of school (National Institute on Out-of-School Time, 2005). After school programs can serve as an entry point for many children and youth both to develop 21st century skills, and to expand their exposure, and increase their ability, to navigate new forms of technology. After school computer clubs are often the most popular after school activities and can serve as an entry point to other academic learning experiences. Other research suggests that applications focused on multimedia projects, which are often highly attractive to teens, can lead to success in high-order thinking, problem solving, and synthesizing different points of view (National Institute on Out-of-School Time, 2005).

The research literature demonstrates that improvements in academic performance are likely to be associated with three factors: (i) the quality and quantity of the academic elements in the program; (ii) the capacity of the recreational components in the after school program to improve students' attendance in regular school hours; and (iii) gains in personal and social skills, and in self-esteem which encourage students to recognize the importance of good academic performance. This latter factor has been described in the following terms:

After school programs may offer intangibles such as – the opportunity to engage in activities that help young people realize they have something to contribute to the group; the opportunity to work with diverse peers and adults to create projects, performances and presentations that receive accolades from their families and the larger community; and the opportunity to develop a vision of life's possibilities that, with commitment and persistence, are attainable (National Institute on Out-of-School Time, 2005, p. 6).

While research confirms academic performance is likely to improve given the presence of some combinations of these factors: "It seems unrealistic to expect large impacts on academic achievement. Unless time spent in an after school program is extraordinarily more benefi-

cial than time spent in the classroom, dramatic impact is unlikely" (Gayle, 2004, p. 4).

Alleviating unemployment distress

Unemployment is usually an unpleasant, unwelcome experience that is personally devastating to individuals, often leads to deterioration in their physical and mental health, and increases the likelihood that these disaffected people – especially the young unemployed – will engage in behavior that is disruptive to society. Leisure services' contributions to alleviating unemployment distress may take the form of creating job opportunities *and* of creating recreational opportunities targeted at this group.

The field is well positioned to create meaningful construction, renovation, repair and maintenance projects that can absorb relatively large numbers of people who are unemployed. Park and conservation work is relatively labor intensive. It offers many opportunities for unskilled people, or those who need new skills to enter the workforce and subsequently to develop vocational skills which will expand their employability options.

The model for these park programs that exemplified their potential value to society in the US was the Civilian Conservation Corps, established in response to massive unemployment emanating from the Great Depression of the early 1930s. Between 1933 and 1942, more than 6 million young men were involved in the program. Their legacy is evident in many hundreds of parks in the US today and often is denoted by a plaque recognizing their work.

In contemporary times in the US, the Youth Conservation Corps has provided similar opportunities, albeit on a smaller scale. The program's goal is to move young people from unemployment into full-time work. Young people aged 16 to 25 are organized into crews, with each crew working under the supervision of an adult leader. The corps members generally receive stipends of around the minimum wage, and are required to participate in classes in basic education, life skills and job preparation. They undertake highly visible projects such as streambank stabilization, trail building, facility construction, tree planting, and community environmental education.

The field's other role in alleviating unemployment distress is to offer recreation programs targeted at this group:

Participation in recreational programs cannot be a satisfactory substitute for a job. What work removes, leisure cannot replace. This is most obvious in the case of income, and indeed the poverty of the unemployed is a prime constraint on their leisure. Far from taking on new and varied leisure interests to absorb the time freed from work, financial restrictions mean that for most unemployed people, previous leisure patterns are curtailed (Glyptis, 1989, p. 158).

Further, many of those who are most likely and frequently to be unemployed are not leisurely literate; that is, they do not have a repertoire of recreational skills or interests. Nevertheless, park and recreation services targeted at the unemployed can fulfill some of the functions traditionally supplied by employment for some individuals and, thus, contribute to alleviating this social problem:

- At the simplest level, they can fill time. This may reduce the potential for societal disruption: "That 'the devil makes work for idle hands' has long been feared to be more than merely proverbial, and so 'idle hands' must be provided with things to do and reasons to get involved" (Glyptis, 1989, p. 131).

- Everyone needs to feel needed. Many people derive this feeling from their jobs. Employment provides both a social setting and an identity to people in their broader social relationships. Thus, when people are introduced for the first time, one of the opening questions is likely to be, What do you do? Inability to offer a work-related response to the question often leads to problems of self-worth and identity. Park and recreational programs may partially alleviate this by fostering an interest and involvement in something the individual perceives to be worthwhile. This may incorporate the development of skills, achievement of results, and a sense of purpose (Glyptis, 1989).

- Most people are accustomed to organizing their daily and weekly routines around externally imposed time constraints. Structure is regarded by many as a basic human need, and the loss of structure has been found by

some to be the most psychologically destructive consequence of unemployment. Participation in regularly scheduled recreation programs may provide some semblance of this structure (Glyptis, 1989).

- Becoming unemployed disrupts social networks in that social interaction with colleagues disappears and the perception of a stigma or embarrassment associated with unemployment may disrupt existing social activities. Recreation and park activities offer an opportunity to foster and nurture new friendships and a sense of belonging (Havitz, Morden & Samdahl, 2004).

- Unemployment often leads to individuals engaging in fewer active, out-of-home and social activities, and increasing their passive, solitary and home-based activities. Recreation activities may counter some of this trend to passivity and facilitate proactive progression toward attaining personal goals (Havitz, Morden & Samdahl, 2004).

If financial barriers to participation can be removed, it seems likely that park and recreational programs can have some mitigating effect on the experience of unemployment because:

The losses incurred in unemployment are closely matched in typical motivations for taking part in leisure activities. Quests for identity, purpose, activity, social contacts, self-confidence, self-esteem, relaxation, and physical and mental well-being – and even, at the most basic level, the search for something to do – are the established stock-in-trade of the psychology of leisure. If unemployment leaves these needs unmet, leisure ought partly at least to be able to fulfill them (Glyptis, 1989, p. 92).

Concluding comments

The cumulative and holistic impact of the issues discussed in this paper on individuals may lead to social exclusion. Social exclusion is a shorthand term used to describe what can happen when people or areas suffer from a combination of linked problems such as unemployment, poor skills, low incomes, unfair discrimination, poor housing, bad health and family breakdown (Social Exclusion Unit, 2004).

These issues are often linked and mutually reinforcing. However, many people may be exposed to one or two of these social problems, and the impact of them may not be sufficiently great to reach the chronic problem level which is described by the term social exclusion. The potential of the leisure services field to alleviate social exclusion was summarized in a policy document in the following terms:

Arts, sport and leisure activities ... have a role to play in countering social exclusion. They can help to increase the self-esteem of individuals; build community spirit; increase social interactions; improve health and fitness; create employment and give young people a purposive activity, reducing the temptation to anti-social behavior (Coalter, 2002, p. 8).

During the past decade many in the US population have experienced enhanced health and prosperity, but these advances have not been equally distributed. There has been a growing polarization between those with the skills and qualifications to participate in a knowledge-based economy and those without. This has profound consequences for the distribution of wealth and opportunity.

The challenge for public entities is to assist vulnerable groups in becoming employable and to engage in civic life and civil society. It involves bringing marginalized residents into the mainstream to strengthen community cohesion. Leisure service is potentially a strong vehicle for facilitating enhanced connectedness and alleviating alienation. These marginalized residents have to feel empowered which means going beyond participation, to engagement in co-creation of programs through being involved in their production.

In a seminal paper in the parks and recreation literature, Gray and Greben (1974) lamented, "We are not identified with the major problems which confront our total American Society" which they characterized as a "deep concern and disappointment" (p. 33). Thirty years later, many would observe that a similar lamentation could be made.

This paper has sought to demonstrate that the opportunity to reposition the field so it is "identified with the major problems" is avail-

able. The issues of reducing stress, community regeneration, cultural and historical preservation, facilitating healthy lifestyles, alleviating deviant behavior among youth, raising levels of educational attainment, and alleviating unemployment distress feature with increasing prominence on the political agenda. Aligning with these issues, and demonstrating that investments in leisure service yield good economic returns, is likely to move leisure services from being relatively discretionary services to being central elements in the repertoire of strategies used by government entities to address these issues of concern.

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