

Special Issue Editors' Notes

A Second Generation of Active Living Research

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INTRODUCTION

Research on active living has grown significantly since its early days, now over a decade ago. What began as a plausible assertion—that the design of physical environments could encourage physical activity—is now a robust area of research inquiry. Today, active living research boasts an annual conference, several special journal issues dedicated to this topic (including this one), and a new generation of researchers drawn from very diverse disciplines who are committed to this field. Though it is still far from standard practice, the idea of engineering communities to naturally promote physical activity is no longer a radical notion.

Active living research has also grown in maturity. Building on the first wave of studies, this second generation of research is more focused on specific populations and settings, more sophisticated in its theorizing, and more connected to planning and design practice. The 13 articles in this special issue represent some of the best of this second generation of active living research.

The papers in this special issue of *American Journal of Health Promotion* were presented at the Third Annual Active Living Research Conference that was held in Coronado, California, February 17 through 18, 2006. The conference was designed to attract the best research to be submitted, and the best of those submissions were invited to prepare papers for consideration for this special issue. Thus, this set of papers from transdisciplinary research teams illustrates the breadth and quality of the current state of the science of this vibrant but still-new field of study.

CHARACTERISTICS OF THE CURRENT GENERATION OF ACTIVE LIVING RESEARCH

Focus on Vulnerable Populations

Today, researchers readily acknowledge the complexity of the physical environment/physical activity relationship.

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Community design may indeed impact opportunities for physical activity, but it does so in ways that vary by population, setting, and type of activity. Increasingly, active living research targets the most vulnerable groups in society, including children, older adults, and low-income populations. These groups have perhaps the greatest need for increased physical activity. They are also more dependent on their local environments and the opportunities that these do—or do not—afford.

In this special issue, Chanam Lee explores the relationship between income level, health status, and active living.¹ Using survey results and objective Geographic Information Systems (GIS) data from Seattle, Washington, she reports that poor individuals are more likely to live in places that support activity for transportation, and are more likely to be physically active for travel. Her findings confirm that those with higher health risks are less active for either travel or recreation. Lee finds that the social environment—the perceived number of people walking and biking in the neighborhood—is especially important for supporting recreational physical activity. In contrast, physical environment features, such as household density and traffic volume, are more closely linked with activity for travel. Her findings argue for a careful assessment of neighborhood population characteristics and physical activity objectives as the basis for any physical environment interventions.

Several authors in this issue examine physical activity and obesity among children. Lawrence Frank, Jacqueline Kerr, Jim Chapman, and James Sallis investigate specific urban form characteristics associated with walking among youth by examining travel diary data and objective neighborhood environments for over 3000 5- to 20-year-olds in the Atlanta area.² Their findings confirm existing reports of low levels of walking among children, both in terms of frequency of walking and in distance walked. For younger children (those under 12), living near a park or open space was the single most important urban feature linked to walking. A broader range of urban features was related to walking among older youth (those aged 12 to 20). Their findings attest to the importance of nearby recreation opportunities for younger children especially.

Sanne de Vries, Ingrid Bakker, Willem van Mechelen, and Marijke Hopman-Rock's study of children's physical activity in The Netherlands extends the range of physical environment features that are examined in terms of active living.³ Among the Dutch children in their study, physical activity is associ-

ated with a wide range of built environment features, including housing type, green space, traffic levels, and even dog waste on the street and sidewalk. Car parking lanes emerge as one feature that is highly associated with physical activity among children. Such parking lanes, most common in neighborhoods with marked “slow traffic” zones, are often emptied of cars during daytime hours, providing a convenient place for outdoor play. Their findings push our thinking about the possible forms that activity-friendly environments may take.

Gilbert Liu, Jeffery Wilson, Rong Qi, and Jun Ying investigate two key environmental features—neighborhood “greenness” and the type of nearby food retail outlets—related to child obesity.⁴ The thinking is that neighborhood greenness may influence kids’ levels of physical activity. Also, living near fast-food outlets may encourage unhealthy eating habits, whereas living near supermarkets may provide healthier alternatives. Liu and colleagues’ findings show that, for children in densely-populated regions, increased vegetation near the home is indeed associated with lower risk of overweight. Surprisingly, though, in lower-density regions, living near a large, brand-name supermarket—and not a fast food restaurant—is associated with risk for overweight. Clearly, we need more research to understand the impact of the local food environment on overweight among children.

Examines a Wide Range of Settings

Since its inception, active living research has explored diverse types of settings that might support physical activity as part of daily life. This emphasis acknowledges that people live, work, and play in a wide range of different types of places, and that the features that support active living will vary across settings.

The focus on diverse place types continues in this second generation of research, and is exemplified by the studies in this special issue. Andrew Rundle, Ana Diez Roux, Lance Freeman, Douglas Miller, Kathryn Neckerman, and Christopher Weiss examine obesity and environmental characteristics in high-density neighborhoods in New York City.⁵ Their focus on urban neighborhoods allows us to explore some of the environmental features—public transportation, mixed land use, higher densities—that are often associated with active living. Rundle and colleagues find that bus and subway stop density, mixed land uses, and population density are negatively associated with obesity among the New Yorkers in their study. Their findings provide compelling evidence for the links between land use and transportation planning and health outcomes.

Trails are a popular recreational amenity for communities across the country. Kim Reynolds, Jennifer Wolch, Jason Byrne, Chih-Ping Chou, Guanjun Feng, Susan Weaver, and Michael Jerrett identify the features of urban trails that support trail use.⁶ Not all trails or trail segments are used to the same extent. Good trail design is essential for encouraging use. Reynolds and colleagues find that features such as views, high numbers of other users, lighting, and trailside facilities such as cafes are associated with higher trail usage. Trail designers can exploit these findings as evidence to support the construction of high-quality trails that maximize use.

Stairs have been identified as an important indoor setting for physical activity. Researchers have identified many features—convenience, comfort, safety, aesthetics—that may impact individuals’ decisions to take the stairs. In her paper, Gayle Nicoll compares the relative importance of various aspects of stair design.⁷ She finds that the visibility of stairways and the orientation and location of stairs within a building (measures of convenience and legibility), are more important for stair use than are qualities such as stairway lighting, views, or maintenance. These findings attest to the importance of planning for active living early in the design process, when the fundamental programming decisions for a building are made.

Researchers continue to examine active living in schools, parks, and neighborhood settings, as other studies in this special issue attest. In addition, researchers are increasing their scrutiny of the local food environment, and its contributions to the energy balance equation. Research on food environments is likely to grow with the support of the new Healthy Eating Research program by The Robert Wood Johnson Foundation, which focuses on healthy eating in youth and its environmental and policy correlates.

Investigates Links between Physical Environments and Physical Activity

Since the beginnings of active living research, studies have adopted social ecological models that acknowledge active living as the result of factors at many levels: societal, community, social and physical environment, and individual. Increasingly, researchers are moving beyond these broad models to specify the critical links that are necessary for active living to occur. This focus recognizes that the physical environment/physical activity relationship may be indirect. Current research explores what must change, and strategies for implementing change, to support active living.

Media consumption—TV, computers, and other mediated forms of communication—is an oft-reviled demon in the struggle to promote active lifestyles. Edward Maibach’s article in this issue reviews the evidence on the influence of media on physical activity.⁸ He finds support for the argument that media time displaces time that would be spent in physical activity. The relationship between media and physical activity is less well understood than one might imagine, however. Maibach argues that media may be an underutilized ally in promoting physical activity. He offers an agenda for research that will increase our understanding of the role of media as a barrier and a resource for active living.

Matthew Coogan, Karla Karash, Thomas Adler, and James Sallis take on another popular demon—our love affair with our cars—that may discourage active living.⁹ Their findings from a survey of 865 adults in 11 major metropolitan areas show that decisions to walk for travel are more influenced by our attachment to private automobiles than by the qualities of surrounding neighborhoods. We are reminded from these results that built environment changes to support active living must be accompanied by attitude changes. Living in activity-supportive environments will not guarantee a shift in travel mode choice for many individuals.

Active living, and especially walking for travel and recreation, may follow from individuals’ social connection to

the places where they live. Jennifer Tilt, Thomas Unfried, and Belen Rocca examine links between sense of community, quality of life, and walking in a sample of 529 adults living in Seattle.¹⁰ They find that higher rates of walking are associated with sense of community and with quality of life. Of course, it is likely that walking also helps to build these positive connections to our communities.

Researchers now acknowledge that both objective and subjective characteristics of the physical environment impact active living. Crime and fear of crime are two of the most important issues in this regard. It may matter less whether a place is actually safe in terms of promoting physical activity. People with choices are unlikely to be active there unless they also perceive that place to be safe. Anastasia Loukaitou-Sideris and John Eck tease apart the relationship between crime prevention and active living in their paper in this issue.¹¹ They argue for situation-specific, evidence-based strategies that target the worst locations first. Such a focus will especially serve low-income and other vulnerable populations, who have the fewest choices for active living.

The concerns faced by schools and other community institutions may also shape local opportunities for active living. John Spengler, Sarah Young, and Leslie Linton explore one such issue—concerns over liability—and its impacts on use of school facilities for physical activity.¹² Their paper identifies the liabilities that schools face in allowing public access to school property such as gyms, tracks, fields, and playgrounds. They investigate joint-use agreements as one mechanism for helping schools to serve as community resources for physical activity.

Increasingly, researchers are focusing on the practical strategies that make places more activity supporting. In this issue, Semra Aytur, Daniel Rodriguez, Kelly Evenson, Diane Catellier, and Wayne Rosamond turn attention to the role of county-level land use planning and active communities' environments.¹³ They find an association between supportive land use and transportation plans and participation in physical activity in these communities. Their results begin to establish a connection between specific policy instruments and health outcomes. Further research is needed to extend these studies to the local level, where most land use planning decisions are made.

AGENDA FOR THE NEXT GENERATION OF ACTIVE LIVING RESEARCH

This second generation of active living research reflects a growing understanding of the links between physical activity and community environments. As a research community, we can be proud of how far we have come in such a short period of time.

Continued advances in active living research are needed. At present, the amount of variance accounted for in the behavior-environment relationship is small to moderate. As the state of the science continues to improve, it will be increasingly important to move beyond primarily cross-sectional studies to more experimental and quasi-experimental studies. Also, through the development of more sophisticated conceptual models and the application of more sophisticated statistical modeling procedures, our under-

standing of the behavior-environment relationship should improve.

Additionally, there is a need to more fully explore the commingled findings and paradoxes that are emerging in this body of literature. For example, lower-income people often live in more dense areas, they tend to get more transportation and incidental forms of physical activity in their daily lives, and they are less reliant on laborsaving devices. Yet epidemiological studies regularly find that low income is a health risk factor. More research is needed to specify the potential of active living for diverse populations and settings, so that interventions can be wisely targeted.

Much work is still needed to translate this growing body of evidence into actual planning and design practice. In particular, research is needed that frames its outcomes in terms of the dilemmas that local decision makers face. In new communities, for example, is the provision of sidewalks more important than the planting of street trees in terms of promoting walking for recreation? What levels of population density, and what types of mixed use, are sufficient to generate meaningful levels of walking for travel? What are the best practices for supporting recreational opportunities in built-out cities? How about in low-income communities? How can we improve both the real and perceived safety of the built environment (e.g., neighborhoods, parks, play spaces, schools)?

Asking the right questions to shape planning and design practice will require increased collaboration between active living researchers and the community leaders and land use professionals they seek to support. This next research frontier may be less familiar terrain for many academic researchers. Its importance for environmental change, however, cannot be overestimated.

THE AMERICAN JOURNAL OF HEALTH PROMOTION'S INTERESTS

The *American Journal of Health Promotion* has an established record in the area of health promoting community design, which includes active living research. For example, in the September/October 2002 issue of the *Journal* a new editorial section, "Health Promoting Community Design," was added. Jo Anne Earp, ScD, was added as the editor for this new section, and Richard Killingsworth, MPH and Robin Moore, MCP were added as associate editors. A call for manuscripts was also announced in this issue for a forthcoming special issue of the *Journal* devoted to health promoting community design.

In the January/February 2003 issue of the *Journal*, Killingsworth published a Critical Issues and Trends paper outlining a new paradigm for promoting healthy and active communities.¹⁴ He also introduced the first article ever published in the *Journal's* new editorial section.¹⁵ This was around the same time that Hill and colleagues published their oft-cited paper, "Obesity and the environment: Where do we go from here?" in the journal *Science*.¹⁶

In September/October 2003, the special issue of the *Journal* on health promoting community design was published.¹⁷ In his Editor's Notes column, Michael P. O'Donnell, Editor in Chief, stated, "Rarely do we see a true paradigm shift. This is one of those times."^{18(p.iv)} Around this same

time, the *American Journal of Public Health* published a special issue of their journal devoted to the built environment and health (September, 2003).

Clearly there remains growing interest in health promoting community design, and the *American Journal of Health Promotion* is poised to continue being a leading outlet for the dissemination of high-quality research in this area. This collaborative project in partnership with Active Living Research is yet another example of this. An important element of this partnership is the arrangement to provide free access to electronic versions of all the papers published in this special issue through www.activelivingresearch.org.

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