**PARA Related Citations**

* Adamus HJ, Mama SK, Sahnoune I, Lee RE. Evaluating the Quality and Accessibility of Physical Activity Resources in Two Southern Cities. *Am J Health Promot* 2012; 27(1). (in press)
* DeBate, R.D., Koby, E. J., Looney, T.E., Trainor, J.K., Zwald, M.L., Bryant, C.A., & McDermott, R.J. (2011). Utility of the physical activity resource assessment for child-centric physical activity intervention planning in two urban neighborhoods. *Journal of Community Health*, *36:* 132-140.

**Abstract**

Children’s physical activity (PA) may be determined, in part, by environmental influences such as access to diverse and safe places to play. As part of the development of a community-based PA program, a PA asset assessment was conducted in two low-income urban neighborhoods that support elementary schools serving minority youth. Resources were rated using an adapted version of the Physical Activity Resource Assessment (PARA), a multi-dimensional instrument that rates various venues on their features, amenities, and incivilities. Seventy- one child-centric venues (e.g., parks, playgrounds, community centers, sports facilities, fitness centers, etc.) were assessed within a three-mile radius of each school. Community member feedback via interviews with parent– child dyads revealed issues (e.g., bullying) not captured by the PARA that can influence venue use. Whereas the PARA can be a useful needs assessment and program planning tool for community-based PA programs, supplementing PARA data with community-based input may reduce contextual error in program development.

* Findholdt, N.E. (BEAT ALUMNI), Michael, Y.L., Jerofke, L.J., & Brogoitti, V.W. (2011). Environmental influences on children’s physical activity and eating habits in a rural Oregon county. *American Journal of Health Promotion, 26*(2): e74-85.

**Abstract**

PURPOSE. To identify environmental barriers and facilitators of children's physical activity and healthy eating in a rural county. DESIGN. Community-based participatory research using mixed methods, primarily qualitative. SETTING. A rural Oregon county. SUBJECTS. Ninety-five adults, 6 high school students, and 41 fifth-grade students. MEASURES. In-depth interviews, focus groups, Photovoice, and structured observations using the Physical Activity Resource Assessment, System for Observing Play and Leisure Activity, Community Food Security Assessment Toolkit, and School Food and Beverage Marketing Assessment Tool. ANALYSIS. Qualitative data were coded by investigators; observational data were analyzed using descriptive statistics. The findings were triangulated to produce a composite of environmental barriers and assets. RESULTS. Limited recreational resources, street-related hazards, fear of strangers, inadequate physical education, and denial of recess hindered physical activity, whereas popularity of youth sports and proximity to natural areas promoted physical activity. Limited availability and high cost of healthy food, busy lifestyles, convenience stores near schools, few healthy meal choices at school, children's being permitted to bring snacks to school, candy used as incentives, and teachers' modeling unhealthy eating habits hindered healthy eating, whereas the agricultural setting and popularity of gardening promoted healthy eating. CONCLUSIONS. This study provides data on a neglected area of research, namely environmental determinants of rural childhood obesity, and points to the need for multifaceted and multilevel environmental change interventions.

* Temple, V., Rhodes, R., & Wharf Higgins, J. (2011). Unleashing physical activity: an observational study of park use, dog walking and physical activity. *Journal of Physical Activity and Health, 8*(6): 766-774.

**Abstract**

**BACKGROUND:** Walking has been identified as a low resourced yet effective means of achieving physical activity levels required for optimal health. From studies conducted around the world, we know that dog owners walk more than nondog owners. However, this evidence is largely self-reported which may not accurately reflect dog-owners' behaviors. **METHOD:** To address this concern, we systematically observed the use of 6 different public parks in Victoria, British Columbia during fair and inclement weather. Using a modified version of the SOPARC tool, we documented visitors' types of physical activity, and the presence or absence of dogs. The Physical Activity Resource Assessment was used to consider park features, amenities, and incivilities. **RESULTS:** More people without dogs (73%) visited the parks than those with dogs (27%), largely because of attendance at the multiuse sport parks during the summer months. Despite the opportunities to engage in multiple sports, most people used the parks to walk. However, when inclement weather struck, dog owners continued visiting parks and sustained their walking practices significantly more than nondog owners. **CONCLUSION:** Our observational snapshot of park use supports earlier work that dogs serve as a motivational support for their owners' walking practices through fair and foul weather.

* McAlexander, K., Banda, J., McAlexander, J., & Lee, R. (2009). Physical activity resource attributes and obesity in low-income African Americans. *Journal of Urban Health, 86*(5): 696-707.

**Abstract**

More than two thirds of Americans are overweight or obese, and African Americans are particularly vulnerable to obesity when compared to Caucasians. Ecological models of health suggest that lower individual and environmental socioeconomic status and the built environment may be related to health attitudesand behaviors that contribute to obesity. This cross-sectional study measured the direct associations of neighborhood physical activity resource attributes with body mass index (BMI) and body fat among low-income 216 African Americans (Mean (M) age= 43.5 years, 63.9% female) residing in 12 public housing developments. The Physical Activity Resource Assessment instrument measured accessibility, incivilities, and the quality of features and amenities of each physical activity resource within an 800-m radius around each housing development. Sidewalk connectivity was measured using the Pedestrian Environment Data Scan instrument. Ecological multivariate regression models analyzed the associations between the built environment attributes and resident BMI and body fat at the neighborhood level. Sidewalk connectivity was associated with BMI (M=31.3 kg/m2; pG0.05). Sidewalk connectivity and resource accessibility were associated with body fat percentage (M=34.8%, pG0.05). Physical activity resource attributes and neighborhood sidewalk connectivity were related to BMI and body fat among low-income African Americans living in housing developments.

Heinrich, K., Lee, R., Regan, G., Reese-Smith, M., Howard, H., Haddock, K., Poston, W., Ahluwalia, J. (2008) How Does the Built Environment Relate to Body Mass Index and Obesity Prevalence Among Public Housing Residents? American Journal of Health Promotion, 22, (3) 187-194.

**Abstract**

**Purpose.** This study examined associations of environmental variables with obesity prevalence and individual body mass index (BMI) among impoverished residents of public housing developments.

**Design.** Cross-sectional data were drawn from two studies in the same Midwestern metropolitan area of participants within neighborhoods.

**Setting**. Pathways to Health interviewed housing development residents and Understanding

Neighborhood Determinants of Obesity assessed built environment factors in the surrounding

neighborhoods (i.e., 800-m radius from center of housing development).

**Subjects.** Four hundred twenty-one residents participated (mean age = 43.8 years; 72.0% women, 59.6% high school degree, 79.6% African-American). Fifty-five physical activity resources were identified and assessed.

**Measures.** Demographics and measured weights and heights were obtained for participants. The Physical Activity Resource Assessment measured the type, accessibility, features, amenities, qualities, and incivilities of neighborhood physical activity resources. Neighborhood street connectivity was also measured.

**Results.** Average age-adjusted BMI was 31.4 (SD = 1.3), with 45% of residents obese. High negative correlations were found between BMI and street connectivity (p = . 05) and between obesity prevalence and resource accessibility (p = .09), number of amenities (p = .04), and amenity quality (p = .04). Higher resource accessibility, feature quality, number of amenities, and fewer incivilities per resource accounted for 71% of obesity variance (p< .05). Mate gender and higher feature quality, F(11, 407)37.19 and 12.66, p < . 001, predicted lower BMI among residents.

**Conclusion.** Supportive neighborhood environments were related to lower obesity prevalence and lower BMI among residents.

* Heinrich , K., Lee, R., Suminski, R., Regan, G.R., Reese-Smith, J. Howard, H., Haddock, C.K., Poston, W., Ahluwalia, J. (2007) Associations between the built environment and physical activity in public housing residents. *International Journal of Behavioral Nutrition and Physical Activity*, 4 (56): 1-9.

**Abstract**

 **Background:** Environmental factors may influence the particularly low rates of physical activity in African American and low-income adults. This cross-sectional study investigated how measured environmental factors were related to self-reported walking and vigorous physical activity for residents of low-income public housing developments.

**Methods:** Physical activity data from 452 adult residents residing in 12 low-income housing developments were combined with measured environmental data that examined the neighborhood (800 m radius buffer) around each housing development. Aggregated ecological and multilevel regression models were used for analysis.

**Results:** Participants were predominately female (72.8%), African American (79.6%) and had a high school education or more (59.0%). Overall, physical activity rates were low, with only 21% of participants meeting moderate physical activity guidelines. Ecological models showed that fewer incivilities and greater street connectivity predicted 83% of the variance in days walked per week, *p* < 0.001, with both gender and connectivity predicting days walked per week in the multi-level analysis, *p* < 0.05. Greater connectivity and fewer physical activity resources predicted 90% of the variance in meeting moderate physical activity guidelines, *p* < 0.001, and gender and connectivity were the multi-level predictors, *p* < 0.05 and 0.01, respectively. Greater resource accessibility predicted 34% of the variance in days per week of vigorous physical activity in the ecological model, *p* < 0.05, but the multi-level analysis found no significant predictors.

**Conclusion:** These results indicate that the physical activity of low-income residents of public housing is related to modifiable aspects of the built environment. Individuals with greater access to more physical activity resources with few incivilities, as well as, greater street connectivity, are more likely to be physically active.

* Lee, R., Booth, K., Reese-Smith, J., Regan, G., & Howard, H. (2005). The physical activity resource assessment instrument: Evaluating features, amenities and incivilities of physical activity resources in urban neighborhoods. *International Journal of Behavioral Nutrition and Physical Activity, 2*(13):1-9.

**Abstract**

**Background:** Neighborhood environment factors may influence physical activity (PA). The purpose of this study was to develop and test a brief instrument to systematically document and describe the type, features, amenities, quality and incivilities of a variety of PA resources.

**Method:** The one-page *Physical Activity Resource Assessment* (PARA) instrument was developed to assess all publicly available PA resources in thirteen urban lower income, high ethnic minority concentration neighborhoods that surrounded public housing developments (HDs) and four higher income, low ethnic minority concentration comparison neighborhoods. Neighborhoods had similar population density and connectivity. Trained field coders rated 97 PA resources (including parks, churches, schools, sports facilities, fitness centers, community centers, and trails) on location, type, cost, features, amenities, quality and incivilities. Assessments typically took about 10 minutes to complete.

**Results:** HD neighborhoods had a mean of 4.9 PA resources (*n* = 73) with considerable variability in the type of resources available for each neighborhood. Comparison neighborhoods had a mean of 6 resources (*n* = 24). Most resources were accessible at no cost (82%). Resources in both types of neighborhoods typically had about 2 to 3 PA features and amenities, and the quality was usually mediocre to good in both types of neighborhoods. Incivilities at PA resources in HD neighborhoods were significantly more common than in comparison neighborhoods.

**Conclusion:** Although PA resources were similar in number, features and amenities, the overall appearance of the resources in HD neighborhoods was much worse as indicated by substantially worse incivilities ratings in HD neighborhoods. The more comprehensive assessment, including features, amenities and incivilities, provided by the PARA may be important to distinguish between PA resources in lower and higher deprivation areas.

* Booth KM, Lee RE, Haddock CK, Ahluwalia JS, Poston WSC. Environmental determinants of physical inactivity: A primary risk factor for cardiovascular disease. Journal of Coronary Artery Disease 2005; 6:54.

