

Social Ecological Constraints to Park Use in Communities with Proximate Park Access

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Abstract

Evidence correlates physical activity, psychological restoration, and social health to proximity to parks and sites of recreation. The purpose of this study was to identify perceived constraints to park use in low-income communities facing significant health disparities, but with proximate access to underutilized parks. The authors used a series of focus groups with families, teens, and older adults in neighborhoods with similar demographic distribution and parks over 125 acres in size. Constraints to park use varied across age groups as well as across social ecological levels, with perceived constraints to individuals, user groups, communities, and society. Policies and interventions aimed at increasing park use must specifically address constraints across social ecological levels to be successful.

Key Words: Parks, social ecological systems, constraints, health disparities, low-income communities

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Introduction

Environment and community health research has shown significant correlation between proximity to public parks and increases in physical activity and positive impacts on physical, social, and psychological well-being (Kaczynski, Potwarka, Smale, & Havitz, 2009; Maller, Townsend, Pryor, Brown, & St Leger, 2006; Maroko, Maantay, Sohler, Grady, & Arno, 2009; Mayer, Frantz, Bruehlman-Senecal, & Dolliver, 2008; Potwarka, Kaczynski, & Flack, 2008; Van Herzele & de Vries, 2011). Most of these studies have focused on individual-level correlates (Ries, Yan, & Voorhees, 2011). A common constraint identified by proximate individuals who do not use parks has been perceived crime and safety (Leslie, Cerin, & Kremer, 2010; Weiss et al., 2011). To date, few studies have attempted to better understand the link between perceived crime, safety, and park non-use (Weiss et al., 2011). No studies have taken research a step further to investigate social ecological drivers and constraints to park use that may extend beyond the individual to the community and regional policy context. There is a need for understanding park use from a social as well as environmental perspective. Understanding gaps that exist from the perspective of social norms and issues around perception of safety, affordances, and amenities across age groups and ecological levels is critical to improving access and use of existing park resources for community well-being.

Parks, open space, and health research has focused on individual-level correlates, benefits, and constraints. Using surveys and observations researchers have found that parks provide a resource for vigorous and moderate physical activity, especially for individuals living within half a mile of a park (Han, Cohen, & McKenzie, 2013; Kaczynski et al., 2009). Up to 50% of weekly vigorous physical activity is performed within parks (Han et al., 2013). Individual-level surveys have also found parks to benefit social

capital through feelings of safety, control, cohesion, and interaction (Baur & Tynon, 2010; Broyles, Mowen, Theall, Gustat, & Rung, 2011) and to be associated with psychological restoration (Hipp & Ogunseitan, 2011; Nordh, Alalouch, & Hartig, 2011). Missing is an understanding of park non-use, its relation to well-being, and the scale of this relationship.

Given benefits of park access and use, constraints to park use need be taken seriously by municipal, park management, and public health professionals. Common individual-level constraints to park use include time, fear of crime, transportation, lack of a companion, and lack of recreation equipment (Scott & Munson, 1994; Shores, Scott, & Floyd, 2007; Stodolska & Shinew, 2010; Wilhelm Stanis, Schneider, & Pereira, 2010). Park-level constraints have also been identified including lack of maintenance and crowding (Hung & Crompton, 2006; Kerstetter, Zinn, Graefe, & Chen, 2002; Mowen, Payne, & Scott, 2005). Godbey, Wilhelm Stanis, Mowen, and others have framed their work on constraints by identifying interpersonal, intrapersonal, and structural constraints to physical activity and leisure within park settings (Crawford & Godbey, 1987; Mowen et al., 2005; Wilhelm Stanis et al., 2010).

Low-income communities of color face both disparities in park proximity and use as well as disparities in health outcomes. Adjusting for 'social access', Weiss and colleagues (2011) found that low-income neighborhoods in New York City had access to the fewest acres of parks and fewest park facilities. When controlling for income, Suminski et al (2012) found that Midwestern communities of color had the least access to parks and number of amenities within parks. Similar results have been found across the US and UK with various communities of color and across income levels (Abercrombie et al., 2008; Mitchell & Popham, 2007; Moore, Diez Roux, Evenson, McGinn, & Brines, 2008; Stodolska & Shinew, 2010). Simi-

larly, persons from low-income backgrounds and communities of color are particularly at risk for inactivity, obesity, diabetes, and related negative health consequences (Flegal, Carroll, Ogden, & Curtin, 2010; "National Center for Health Statistics Health, United States, 2008 with Chartbook," 2008).

A broader understanding of constraints to use of health resources (parks) in communities facing health disparities is warranted. With the present study we advance the understanding of constraints to park use, and thus healthy behaviors, by incorporating viewpoints and constraints across different age groups at similar parks located in low-income communities of color. We put forward perceived constraints to park use nested in the context of social ecological systems, with constraints affecting individuals, user groups, behavior settings, communities, and society as a whole. A more nuanced understanding of constraints can lead to better attribute, policy, and programmatic solutions to increase park use by proximate communities facing health disparities.

The present qualitative work only became nested in the context of social ecological systems via inductive analysis. Bronfenbrenner (1977) outlines four social ecological behavior settings or environments; micro, meso, exo, and macro. Micro environments or systems are between the individual and the direct setting (here a park). The micro setting is a specific place with defined features. The meso-system incorporates the interactions across major micro-settings such as a park, school, work, and home. The exo-system builds upon the meso-system to include formal and informal settings such as neighborhoods, government, and media. Finally, macrosystems incorporate culture, including social and economic systems.

The aims of the present study were to explore constraints to park use in low-income communities of color with proximity to parks, but where park use is uncommon and salutary health behaviors and outcomes generally asso-

ciated with park proximity are limited. This juxtaposition of proximity and poor outcomes points to a gap in current research and policy efforts concerning parks and health, highlighting a lack of consistency needed in solidifying the causal pathway between exposure to parks and beneficial health behaviors and outcomes.

Methods

The primary objective of the associated research was identifying explanations for the underutilization of two greater St. Louis, Missouri, parks located in low-income communities of color. Through a series of age-dependent focus groups, the qualitative approach focused on the perceived physical, social, and psychological benefits of parks. The focus groups discussed specific attributes and affordances, or lack thereof, in the parks and participants reacted to their most frequented places (non-park) in an effort to satisfy health and recreational needs associated with physical, social, and psychological well-being.

Study Sites

The City of St. Louis, Missouri, is rich in terms of number of parks. According to the '2010 City Park Facts,' from The Trust for Public Land, the city of St. Louis has 9.6 acres of park per 1,000 resident, 50% more than Los Angeles and more than double both New York City and Chicago (Trust for Public Land, 2010). St. Louis also has significant adverse health indicators, including a crude death rate 14% higher than the rest of Missouri and 32% higher than the U.S. and heart disease mortality 1.4 times the rate of the U.S. African American populations in St. Louis face higher rates of heart disease, cancer, cardiovascular disease, diabetes mortality, and have a life expectancy 6.3 years fewer than White populations (City of Saint Louis Department of Health, 2007). Physical proximity to parks, or the lack thereof, is not the culprit of the health disparities. Thus, the impetus to begin to understand constraints associated with access and

use of parks within St. Louis, particularly parks embedded in areas with a high proportion of low-income households and communities of color facing health disparities.

Communities living in two distinct St. Louis neighborhoods were selected for this study. Park A and Park B are located at the heart of predominantly low-income communities of color in the city and county of St. Louis. The two communities are comparable in their high rates of poverty, high proportion of minority residents, and existing plans for expanded or improved parks and open space. Both parks are over 125 acres in size, defined as a community park by the National Recreation and Park Association. Both parks are severely under used as expressed by the alderman near Park A and Park B superintendent. According to the 2000 US Census, the census tract surrounding Park A has a poverty rate of 27% (compared to 21% city-wide and 13% for Missouri) and is 99% non-White (US Census, 2011). Park A is a city park and Park B is a county park located approximately 4.5 miles west of Park A. Park B has recently been linked with a local university via a greenway. The greenway will continue to be extended to link the park with other area amenities including transit and commercial areas. According to the US Census, the census tract surrounding Park B is 92% non-White with 30% of the population living below the federal poverty rate (US Census, 2011).

Focus Groups

Three age group-specific focus groups per park were conducted in community buildings neighboring the parks. The groups were youth, families, and older adults, and the group size ranged from six to twelve individuals, with the exception of one youth focus group that included sixteen local high school students. The ideal size for focus groups is 4-12 participants (Tang & Davis, 1995). The age group designations were selected to separate unique user groups; teens, families with children under 13 years of age, and older adults. The combination of parents

and children under 13 was partially due to the age at which parental consent is required for participation in research studies.

The focus groups were designed to be discussions about the parks, how the residents used the parks, where and when they used the parks, why they did not use the parks, and what would need to change for them to use the parks effectively. Each focus group followed the same outline of questions, which were provided to the participants. Focus groups began with introductions and basic information including distance from home to the park of interest. The first set of discussion items were around the park and participants feelings toward the park, past use, and current use or non-use. The second segment of the focus groups was framed to ask the participants questions about their favorite places to visit in their respective neighborhoods. An example of a question that was asked is "If you are not visiting the park for exercise and relaxation, where are you visiting?" In general, participants were questioned about their favorite places for physical activity, leisure, socializing, and psychological restoration.

The focus groups were scheduled for two hours, from 6pm-8pm. The lead author facilitated each focus group with assistance and annotation from two of four co-researchers. Dinner was provided for participants and at the completion of the two hours participants were provided a \$10 gift certificate to a local market. All focus groups were digitally recorded and transcribed verbatim for analysis by the research team. All procedures were approved by the university's Institutional Review Board.

Recruitment and Study Sample

Participants were recruited with the assistance of two community gatekeepers, or community organizers living and working in the neighborhood (Jensen, 2008). The gatekeepers posted and passed out recruitment fliers as well as hosted the focus groups in their buildings. Posted materials and gatekeepers informed interested parties to contact the research team

for additional information. The research team fielded calls, explained the study, and maintained lists of participants until there were at least eight available per focus group. The gatekeepers were not present during the actual focus groups.

In total, 53 individuals participated in this study, with an age range of 7 – 95 years old. Nineteen teenagers (11 – 18 years of age) participated in the two youth focus groups. Twelve individuals participated in the two family focus groups, which included at least one parent or guardian with at least one child. Twenty older adults participated in the senior focus groups (19 of 20 were over the age of 60 years old). All individuals were African American and resided in the same neighborhoods as the parks of interest.

Data Analysis

Inductive and thematic analysis was conducted across the focus group transcripts, using a framework approach to classify data according to key themes and emergent categories (Ritchie & Lewis, 2003). Each research team member (n=5) read through all six transcripts once all transcription was complete. Themes were recorded and shared with the research team to develop a consistent coding scheme to be used within NVivo 8 (Ayres, Kavanaugh, & Knafl, 2003; Zayas, Gulbas, Fedoravicius, & Cabassa, 2010). One team member present at the focus group and one not present then coded each transcript using the developed parent and child nodes.

There were three broad categories of original interest, as structured in the focus group questions: current park use, constraints to park use, and desired changes in parks for the benefit of physical, psychological, and social well-being. As the nodes for coding the data were identified, several distinct patterns were recognized. Constant comparison was used to further investigate these patterns first between age groups and later across social ecological systems in a matrix form similar to that used by Zayas and

colleagues (2010).

Results

In the process of performing the inductive analysis, it became salient that constraints in local park use were not only perceived by individuals and across age groups, but constraints also intersect with social ecological systems. Though some specific constraints were unique to the individual and to the specific neighborhoods and parks, there were mostly shared constraints. In total, perceived constraints addressed in the six focus groups affected and organized into the social ecological categories; micro, meso, exo, and macro (Bronfenbrenner, 1977). Micro constraints are perceived constraints to individuals utilizing the parks. Meso constraints affect interpersonal specific user groups across behavioral settings. Exo constraints equally confine park use by all members of the community and macro constraints are society-level constraints on park use.

Micro

There are several perceived individual-level constraints. These constraints were identified as keeping individuals from using the park and are a narrative acknowledged in several focus groups and moves beyond crime and safety constraints in parks-based literature (Raymore & Scott, 1998). In Park A, cleanliness and lack of maintenance constrained the use of the park for multiple participants. Individuals spoke of specific uses and instances of constraints to these uses due to lapses in maintenance and overall park cleanliness. In reference to sidewalks with gaps and in disrepair, three youth in the teen focus group relayed;

Y1: "We had to get off our bikes, and get on the bikes, and get off, and get on.";

Y2: "People fight over the swings." Y1: "Yeah, there need to be more swings.

Right, like a lot of swings. Y3: "New slides because they cracked open and stuff." Y2: "Like people can cut themselves on rocks and glass." Y3: "It's six swings, but four work because they

thrown them around and they get stuck. We just spent time on the swings; the ones we have left."

Individuals felt their specific experiences in the park were constrained when use was limited by lapses in maintenance.

In Park B the primary perceived individual constraint was the design of the park entrance. The park has a bottleneck design, with a one-half mile driveway to access the primary usable spaces of the park. Individuals perceived this long entrance as separating them from the usable spaces of the park and thus enough a constraint to limit use. A parent stated; *"It's kind of dangerous for the kids to walk there because it's such a long stretch and it's only two lanes. There's no patrol or no security up at the park. And that would be my concern."* An older adult echoed the sentiment; *"It's about a mile to get to the park, to get to the events. I would never make it."* Recent improvements to the park include a greenway extension that is separate and one-quarter mile east, of the driveway, but access remains an individual constraint due to safety concerns associated with limited visibility of the greenway.

Meso

Focus groups also perceived constraints to park use specific to user groups and between behavioral settings. A perceived lack of structure to Park A specifically limited use by older adults. With limited community settings for social engagement, the older adults turned to the park, where they may have engaged socially at a younger age. Older adults reported going to the park the most, but their most common use was driving to the park with friends and remaining in their car, parked and sitting by the park's lake. Several older adults socialized with their peers in their cars each morning. One older adult said; *"Seniors [would] love to go and sit and fish for a while. [The park needs] more tables with bench seats on the other side to get people out of their car."* Teens living near Park B all attended the same public high school which has removed

physical education from their curriculum. One interaction in the teen focus group proceeded: Y1: *"What's recess?"* Y2: *"We all in high school, we don't have recess."* Y3: *"We don't even get to go outside. We don't even go outside."* The lack of physical education and time spent outdoors during structured school time may have led to additional comments about why the students do not access the park. Y4: *"It's not so much that there's something there that I would change, it's just that I just don't go."* Y5: *"Right. It's hot, bugs, and stuff."* Y6: *"I mean there's nothing that I want to change, I just don't go. It ain't me."* The meso, perceived user group and behavior setting constraints are limiting entire age groups from park use, forcing them to find other outlets for well-being or constraining these efforts.

Exo

The two separate neighborhoods identified distinct community-level constraints that were consistent across age groups. Park A is accessible from a freeway exit and thus the community perceives there are many "outsiders" that use their park for inappropriate reasons. This exo-level system has led to safety concerns. A parent at the family focus group stated; *"Like on the weekend, the whole crowd of different people from different places, other places, they come to our park and when they come to our park they hang out and they doing things in the pavilion. What they shouldn't be doing in the pavilions."* Another parent echoed the sentiment; *"When I was a kid, every weekend, I would ride across the street. We looked forward to going to the park, you know? It was all kinds of cheap activities. But now it's a totally different set of people."* An older adult reported; *"There is homeless people everywhere. And they grab a ticket, they catch a bus, they come out this way for a night and stay on the benches and then go back downtown. And they can, they can, they travel. So, if there is benches, especially in the summertime, you are going to see people lying on top of those benches."*

The teen focus group occurred the day after there was an apparent gun fired in the park. A student shared; *“I was thinking about having my birthday in the park but I changed my mind after what happened.”* The perceived lack of safety constrains many from using the park. An older adult summarized; *“I would love to be able to use [the park]. I would love to, but a lot that needs to be put in place before I feel safe. I don’t feel safe in the park.”*

In contrast, Park B is perceived as a safe environment. In speaking with a park ranger, there has only been one incident report, a car break-in, during the preceding year. The community, however, perceives that local policies and city officials are constraining their use of Park B and other, smaller parks in the community. One parent was frustrated;

Football; there’s a turnout. It’s a very large turnout, but the kids were escorted off the park by the police during practice last year because there was a misunderstanding about the insurance paid on the field. The year before that, the mayor wouldn’t let them use the park so the coaches would take them over on the other side of [the street] where the coach just has an empty lot across the street. So they would practice across the lot.

The same parent continued;

I worked as a park guard. And for what they pay and what you do, it’s not worth it, because you have to tell kids who are like adults, stop cursing, or get off the court. And here it’s daylight and you’re telling me I have to leave the park? And I was like, ‘Uh-huh.’ It’s not worth it and a lot of them have a good point. Why we can’t use this basketball court? This is the only basketball court.

Another parent was frustrated with having to pay to use the community center in Park B; *“Now we live in this community. We shouldn’t have to pay an arm and a leg to use them ban-*

quet rooms at [the park]. So, something interesting; like I just did a birthday party for my grandbaby. Did it in the gym [of a park further away].” At a separate, smaller, park an older adult explained why the picnic pavilion was currently surrounded in caution tape; *“They [youth] were on top of the pavilion the last time we opened it up for the first time. Instead of sitting under, they get on top of it and it has got this plastic dome on top. We don’t want anybody to hurt themselves, so I locked it [park pavilion] back until we can start hiring workers for the different things.”* Policies established to limit liability and assure safe use of parks are now perceived as constraining the beneficial uses desired by residents.

Macro

At the macro level, or societal, constraints were similar across the two parks. One constraint is perhaps unique to this metropolitan area; the perceived diversion of funds and support to larger, more visible parks. St. Louis is fortunate to have two parks with greater than 12 million individual visits during 2010; the city’s Forest Park and the federal Jefferson National Expansion Memorial Park, home to the Gateway Arch. An older adult said; *“But in the end what happened, they put it all [money, improvements] in the riverfront. That’s when the kids started, really started, acting up and so, we were afraid to go to the park.”* Another older adult offered; *“But look what [a neighboring city] has. A park. It’s a charter city. We are a fourth-class city. There’s a difference in the funding.”* A parent in the family focus group stated; *“That’s where the money goes, to beautify Forest Park.”*

Participants also identified three societal level constraints in current park use; increase in portable and personal equipment, proliferation of organized sports for youth, and the current economic downturn. Parents believed kids and families were not using the park because they have equipment at home and don’t need to access the park for play. *“They have it at home,*

you know, in the backyard. Our yards are huge, so we have it at home.” Another said, “I have an exercise bike in the house. I don’t go to the park because it’s dangerous, frankly.” An older adult perceived the lack of basketball in the park was due to organized leagues around the city: “What happened was all this community basketball went to these paying people where they charge you. That’s why we don’t see it [kids playing sports in the park].”

The economy and related unemployment rate was raised by multiple participants. Many parents and older adults spoke about groups of people illegally drinking in the parks and “hanging about.” A parent said; “Now it’s so many people hanging out. Then here there are so many people drinking and drugging where you don’t want to take these kids over there for anything like that because you don’t really know what’s going to happen.” Interestingly, an unemployed male participant, expressed;

We would come here after work and this would be the meet up spot and we would just hang out and enjoy, you know, a little happy hour and kick back in the park and just kick back and relax. And go home to the family after that... Now that most people are unemployed, now it [park] has become like, this is like, the safe haven. Make like a sanctuary, so to speak. You know, where we just come and once again, peace of mind, and get away from home because you’re stuck at home.

These two separate comments, one from a parent and the other from an unemployed, single adult speak to the social ecological challenges facing park administrators (see Table 1).

Discussion

Fifty-three St. Louis region residents with proximate access to large public parks spoke about their use and perceived constraints to use of the parks. Constraints across social ecological systems were identified by each group with constraints affecting individuals, user groups, be-

havior settings, communities, and society as a whole (see Table 1).

Constraints perceived at the individual level are barriers that persons see limiting their own specific use of the park or some constraint to enjoying the full benefit of this community park proximate their home. In this study the most commonly perceived individual constraints were safety, lack of maintenance to the park and associated attributes, and the entrance design to Park B. Micro-system, or individual-level results confirm constraints identified in earlier studies that focused only on this level, including the identification of safety and lack of maintenance (McCormack, Rock, Toohey, & Hignell, 2010; Scott & Munson, 1994; Shores et al., 2007; Stodolska & Shinew, 2010; Wilhelm Stanis et al., 2010). Though an individual park, even at 125 acres, cannot afford every attribute desired, core attributes should be present for individuals to utilize. This includes sidewalks/walking paths, and playground equipment for children. Multiple access points will also increase park use. Park B’s one-half mile spur entrance served as a constraint to individuals’ wishes to access the park and its facilities. Whereas the individual level constraints expressed in this study served to reinforce past parks and health research, the other social ecological constraints add new contextual information.

Specific user groups also perceived constraints in their use of the parks. This held true across each of the three user groups participating in the focus groups; families, teens, and older adults. Older adults reported a lack of amenities and structure in the parks. The older adults were the most frequent users of both parks, with their primary use being social interactions. In Park A, the social interactions were limited to driving to the park, parking the car by the pond, and staying seated in the car to enjoy each other’s companionship. The older adults did not feel there were enough benches, tables, structure, or safety for them to exit their cars and more fully enjoy the park. Parks have been

Table 1. Examples of social ecological constraints to park use in low-income communities of color.

Social Ecological Levels	Micro	Lack of maintenance - <i>"New slides because they cracked open and stuff."</i>
	Micro	Park design - <i>"It's kind of dangerous for the kids to walk there because it's such a long stretch and it's only two lanes."</i>
	Meso	Limited community settings for social engagement - <i>"[The park needs] more tables with bench seats on the other side to get people out of their car."</i>
	Meso	Limited community settings for recreation - <i>"We all in high school, we don't have recess." "We don't even get to go outside. We don't even go outside."</i>
	Exo	Safety concerns associated with 'outsiders' in the park - <i>" Like on the weekend, the whole crowd of different people from different places, other places, they come to our park and when they come to our park they hang out and they doing things in the pavilion."</i>
	Exo	Local policy and insurance constraints - <i>"The kids were escorted off the park by the police during practice last year because there was a misunderstanding about the insurance paid on the field."</i>
Macro	Macro	Diversion of funds from local to regional parks <i>"They put it all [money, improvements] in the riverfront. That's when the kids started, really started, acting up and so, we were afraid to go to the park."</i>
	Macro	Economic downturn - <i>"What happened was all this community basketball went to these paying people where they charge you. That's why we don't see it [kids playing sports in the park]."</i>

shown to increase social capital (Broyles et al., 2011), but to do so visitors must be able to leave their vehicles and interact with others in the park environment. Social interactions among adults in parks have also been shown to increase physical activity within the park (Broyles et al., 2011), an associated outcome not possible with socializing in parked car.

At Park B, teens had limited interest in visiting the park. They reported no outdoor time at their high school and no physical activity time aside from organized sports. Without the appropriate modeling of outdoor behavior and play, these teens were limited in their perceived uses of the park and thus did not visit their community park. Others have reported increased physical and vigorous metabolic-equivalent activity

by youth living proximate parks (Cohen et al., 2006; Committee on Environmental Health, 2009). It is possible that the lack of modeling through school-based physical education is constraining the use and benefits of local parks, an interesting finding worthy of further investigation.

The neighborhood residents also felt constrained in their utilization of the parks because of factors within their own communities. Park A and its surrounding neighborhood have challenges with gang activity and associated crime. Most of the participants, and their families, in the three focus groups at Park A are longtime residents of the neighborhood and perceive the increase in crime and constraints to park use as directly associated with an in-

creased presence of “outsiders” who are bringing with them drugs, drinking, and violent behaviors. The parents and older adults in the focus groups recalled the building of a freeway along the north side of the park and the inclusion of an off ramp directly into the park. This ease of vehicular access is now negatively perceived by the community as it provides people from other communities the ability to come into their park, crowd the park with cars, and engage in unruly behavior. As “outsiders” these visitors are immune to social and peer consequences associated with neighbors observing neighbors. The presence of the freeway along the northern border of the park also limits the defensible space provided by the neighborhood. Without eyes on this section of the park, territoriality can decrease and crime increase (Brower, Dockett, & Taylor, 1983).

Park B participants spoke at length about the constraints associated with local park policies. They were frustrated with paying fees to use pavilions and community space in addition to their frustration with liability issues. Park B and smaller, nearby parks, have strict use hours and require permits for organized events. Residents felt their tax dollars entitled them to access to these parks and pavilions and that if they wanted to play basketball until it was too dark they have the right to do so. The residents expressed a very “us against them” mentality and acknowledged this must change in order to improve use of the park and health in the community.

Finally, a set of societal constraints were discussed in the focus groups. Both neighborhoods sense a diversion of park funds from the local communities to the larger, more visible regional parks. Forest Park and Jefferson National Expansion Memorial Park are highly visited by both locals and tourist. Over the past ten years Forest Park has received a \$100 million restoration and the Jefferson National Expansion Memorial Park is set for a grander renovation in time for the 50th anniversary of the

Gateway Arch in 2015. Though residents expressed appreciation for these regional and national icons, they were again frustrated that their local, walkable parks were not being well-maintained. Other societal constraints referenced were the increase in personal sports and athletic equipment and the proliferation of organized sports for youth. Cost and access to equipment has been identified in previous studies as both a constraint to park use and physical activity (Azar, Ball, & Salmon, 2011; Stodolska & Shinew, 2010). There have been limited studies into the affect that organized sports are having on park-based leisure-time recreation. Cohen and colleagues found that organized sports within parks increased the numbers using parks and energy expenditure (METs) within parks, but there are no studies that have investigated the change park-based physical activity when organized sports remove youth from leisure-time physical activity (Cohen et al., 2013).

The current economic downturn was also raised by participants. While some parks across the US have reported increases in park use associated with families attempting to reduce expenditures (Godbey & Mowen, 2010), the communities in this study have not enjoyed such an increase in park use. Multiple parents and older adults felt the high rate of poverty and unemployment in the community increased the gathering of adult males in the park for drinking and loud socializing. In fact one unemployed adult male reported drinking and listening to music in the park, expressing great appreciation for the park and the relief, restoration, and socialization it afforded him and his friends as they cope with unemployment and associated stressors. This coping included healthy behaviors such as recreation and socializing, but also included drinking illegally and playing loud music. This behavior in turn was a constraint to park use by others in the community. The activities were directly cited by families as a constraint to bringing

their own families into the park for recreation and socializing.

Conclusion

The six focus groups provided rich, qualitative data associated with perceived constraints in park use in these two communities. However, these are only two communities in St. Louis and those who participated perhaps have a high selection bias related to interest in improving the parks and neighborhoods. By using community gatekeepers to identify participants the variety of opinions and perceptions present in the focus groups may have been limited. Indeed, not everyone felt constrained in using the park. However, to increase park use and healthy behaviors in communities it will take the modeling of behaviors by those invested in seeing improvements. Each of the family and older adult focus groups independently brought up the idea of a 'Friends of Park A/B' community group to champion the parks. They wanted to model these groups on the successful Forest Park Forever that has led much of the fundraising associated with Forest Park's improvements.

Considering perceived constraints in park use across social ecological systems is an important insight gained from these focus groups. Park policies, improvements, and interventions need to address each of the social ecological systems in order to more effectively eliminate constraints to park use and subsequent healthy behaviors. This will not be an easy task as system constraints become increasingly difficult to overcome as one moves from the individual or micro, to society or macro system. A first step is to acknowledge the constraints to park use and assure local stakeholders are made aware. As such, the gatekeepers associated with this project have been provided de-identified transcripts of the focus groups and an opportunity to discuss the focus groups with the researchers. Improvements in park use and healthy behaviors will take a fully concerted effort with direct

attention to each system at play.

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