Exploring the Relationship between Park Prescriptions, Park Utilization, and Healthy Days

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Background

Healthy recreation is associated with physical, mental, and spiritual health, as well as social well-being[1]; and there is evidence to suggest that exposure to natural environments may have a variety of positive health benefits as well.[2,3] One way to facilitate healthy recreation, in a natural environment, is through park prescriptions (Park Rxs); a prescription written by a medical provider to spend time in an outdoor setting. A variety of Park Rx programs exist, but relatively little empirical evidence has been published on the value of Park Rxs.[4,5]

Objective

To prescribe park activity in a clinical setting; and measure baseline park utilization, attitudes and intentions related to park activity, and health-related quality of life (HRQOL) among patients who received a Park Rx.

Methods

Study Design: Cross-sectional survey

Study Period: May 01, 2016 to October 31, 2016

Data Source and Collection: Baseline survey data was collected from 399 patients, who received a Park Rx during a regularly scheduled visit to their primary care provider in Plantation, FL.

Survey Measures:

- Patient characteristics: age and gender
- Park utilization: Measured the frequency, type, and barriers to park activity
  - In the last 30 days, how many times have you been to a park? (0, 1-5, 6-10, more than 10 times; referred to as park *visits/month* in Results)
  - What type of activities do you generally do at the park? (Socialize, Walk with a pet, Sit and relax, Walk/Exercise, Play games, Participate in a structured group, Attend and education a class, Other)
  - What is the biggest barrier to you going to the park? (Time, Transportation, Mobility, Safety, No one to go with, No park nearby, Other)
- Attitudes and intentions: Adapted from the Theory of Planned Behavior; designed to measure attitudes and intentions related to park activity
  - For me, going to the park would be… (1, useless – 7, worthwhile)
  - For me going to the park would be… (1, unhealthy – 7, healthy)
  - If I wanted to, I could easily go to the park in the next month. (1, strongly disagree – 7, strongly agree)
- HRQOL: Measured by Healthy Days; a validated HRQOL measure developed by the Centers for Disease Control and Prevention[6]
  - Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 was your physical health not good? (1-30 days)
  - Now thinking about mental health, which includes stress, depression, and problems with emotions, for how many days during the pat 30 was your mental health not good? (1-30 days)
  - During the last 30 days for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation? (1-30 days; Referred to as *Obstacle Days* in Results)

Analysis: Descriptive statistics, and ANOVA were used to measure and compare survey responses.

Results

Table 1. Participant Characteristics

Characteristic	Overall
Total, N	399
Age, mean (SD)	60.8 (17.50)
Gender, n (%)	
Female	232 (58.1)
Male	62 (26.3)
Healthy Days, mean (SD)	
PUHD	7.3 (9.88)
MUHD	6.9 (9.48)
Obstacle Days	5.5 (9.46)

Percentages may not sum to 100 due to missing values

Table 2. Park Utilization

Park Utilization	Overall
Total, N	399
Frequency, n (%)	
0 visits	169 (42.7)
1-5 visits	140 (35.4)
6-30 visits	86 (21.7)
Type*†, n (%)	
Walk/Exercise	225 (56.3)
Socialize	108 (27.0)
Relax and read	95 (23.8)
Barriers*, n (%)	
Time	132 (42.7)
Mobility	43 (14.5)
No one to go with	37 (12.5)

* 3 most common choices reported; † Categories were not mutually exclusive, participants could select more than one option; Counts may not sum to total due to missing values

Figure 2. Unhealthy Days by Park Utilization

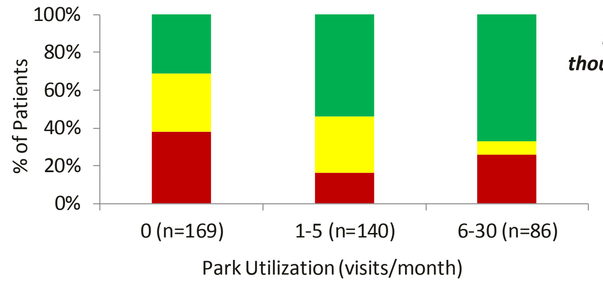
	Park Utilization (visits/month)		
Unhealthy Days	0*	1 to 5	6 to 30
PUHD, mean (95% CI)	10.1 (8.6-11.6)	5.9 (4.3-7.5)†	4.0 (1.9-6.1)†
MUHD	8.2 (6.79-9.74)	6.3 (4.73-7.89)	5.7 (3.69-7.72)
Obstacle Days	7.7 (6.28-9.18)	4.9 (3.42-6.51)	2.3 (0.40-4.37)†

* Comparison group; † p< 0.05; CI, confidence interval; MUHD, mentally unhealthy days; PUHD, physically unhealthy days

Those who reported 0 park visits also reported 4.2 more Physically Unhealthy Days than those who reported going to the park 1-5 times.

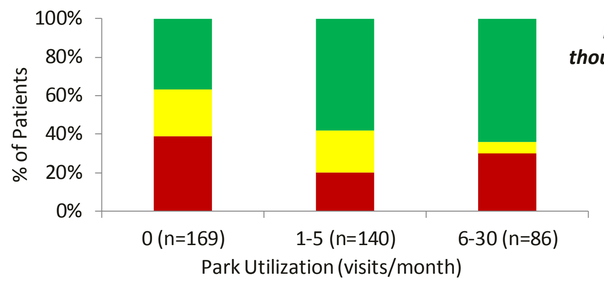
Figure 2. Attitudes and Intentions by Park Utilization

For me, going to the park would be:
1= useless – 7= worthwhile ■ 1-3 ■ 4-6 ■ 7



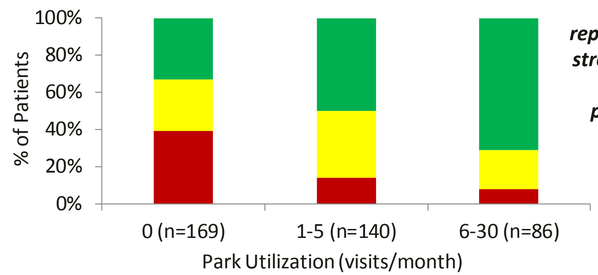
31% of those who reported 0 park visits, thought going to the park would be worthwhile.

For me, going to the park would be:
1= unhealthy – 7= healthy ■ 1-3 ■ 4-6 ■ 7



37% of those who reported 0 park visits, thought going to the park would be healthy.

If I wanted to, I could easily go to the park in the next month:
1= strongly disagree – 7= strongly agree ■ 1-3 ■ 4-6 ■ 7



33% of those who reported 0 park visits also strongly agreed that they could easily go to the park, if they wanted to.

Conclusions

- Park visits were associated with fewer Unhealthy Days.
- Park-related attitudes and intentions indicate there may be opportunities to increase future park use.
- The relationship between Unhealthy Days and park utilization suggests that efforts to increase park use, potentially through prescribing park activity, could be an effective strategy for improving HRQOL.
- Further research is needed to quantify the impact that Park Rxs have on utilization and ultimately on health outcomes.

Limitations

- Findings are subject to limitations inherent to self report survey data (e.g., recall bias, acquiescence bias, extreme responding).
- This study included patients from a select clinic and may not be generalizable to all populations.
- The cross-sectional nature of the data prevents inference of a temporal or causal relationship between measures.

References

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