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Family Recreation Zones as a Supportive Environment for Physical Activity in the Opinion of Its Users

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Abstract

The main purpose of this study was to examine how the relatively new initiative supporting active leisure of people, i.e., Family Recreation Zones, is perceived by its users. Data were collected from 215 persons aged 13 to 96 ($M=44.19$, $SD 18.08$). For nearly nine in ten persons Zones are the only space where they spend their leisure time actively. The main attractors are free access and the open air. Interestingly, for many respondents the proximity of playgrounds was not a benefit but rather a barrier to visiting Zones. Other barriers were the season of the year, a modest range of exercise devices, their damage, poor illumination, a perceived lack of safety and a lack of professional support during exercising.

Keywords: *physical recreation, outdoor gyms, adults*

Introduction

Physical activity influences many parameters of physical and mental health, being a preventive factor of many non-communicable diseases, such as cardiovascular disease, depressive and anxiety disorders, hypertension, osteoporosis, or type-2 diabetes, to name but a few (Dishman, Washburn, Heath, 2004). Even though the awareness of many of these benefits is common, many people are inactive or insufficiently active (Drygas, Kwaśniewska, Kaleta et al. 2009).

The reasons for this reality may be discerned in the quite low dependence of physical activity on cognitive factors, such as knowledge of or beliefs in the

benefits of physical activity (Nahas, Goldfine, Collins, 2003). In fact, it depends on many factors, some of which are related to the individual themselves, while others are linked to the environment in which they live. Although the former, and especially psychological factors, like beliefs, emotional states or values are important determinants of active leisure, they can only explain a small part of the variability in these kinds of behaviors (Bourdeaudhuij, Sallis, Saelens, 2003). What is at least equally important is the environmental context, also referred to as “behavior setting” (Blanchard et al. 2005), comprising physical and social facilitations and/or impediments to physical activity.

The physical environment, primarily including community design and recreational facilities, such as parks or cycle lanes, etc., may play an important role in initiating and consolidating active leisure habits (McElroy, 2002). Some authors claim that the physical environment may be an even stronger determinant of physical activity behaviors than cognitive factors (Owen et al. 2004, Spence, Lee, 2003), and as a consequence most interventions aimed at increasing physical activity should be targeted at modifying the social and physical surroundings of people, and not the people themselves. Even if such an opinion is somewhat exaggerated, taking into account that people living in the same area also present various recreation habits (Ball, 2006), and a small range – usually up to a dozen or so per cent – of variance explained by environmental variables (Bourdeaudhuij, Sallis, Saelens, 2003, Duncan, Spence, Mummery, 2005), it is undoubtedly true that living in a “facility-rich environment” (McElroy 2002), also called an “incentive environment” (Stahl et al. 2001), facilitates active leisure behaviors.

It is hypothesized that at least two kinds of factors are crucial in that influence. Firstly, such an environment is a source of “visual reminders that prompt exercise behavior” (McElroy, 2002, p. 28), i.e. constant contact with physical activity facilities, like footpaths, cycle lanes, outdoor gyms, etc., draws people’s attention to behaviors related to them and therefore may increase the probability of its undertaking. Secondly, it reduces a common barrier to physical activity – the lack of facilities nearby.

Among many initiatives aimed at modifying the environment that could enhance physical activity in the Silesian Region there is the creation of so-called “Family Recreation Zones” (FRZ), i.e. areas where playgrounds and exercise facilities such as “outdoor gymnasiums” are placed next to each other. In theory, their purpose is to enhance or even allow for the practice of physical activity by people who are insufficiently active because of family obligations related to child care, distance to other facilities like fitness centers, or lack of finance, etc. The reviews of studies on environmental characteristics and physical activity, conducted by

Duncan et al. (2003) and Kaczynski and Henderson (2008), indicated that proximity to recreation facilities, like public park areas, can have a positive influence on physical activity.

Therefore, the purpose of this study was to examine who makes use of the facilities in the Family Recreation Zones and how they use them and what the perceived benefits and shortcomings of that kind of recreation settings are.

Material and Methods

The data for this study were collected at the end of March and the beginning of April 2014, during a period of fine spring weather with daily temperatures from 14 to 22 degrees Celsius (according to archival data from the service [weatheronline.com](http://www.weatheronline.com)). One of the authors made observations and interviewed FRZ users in five FRZ located in Katowice over a two-week period in two-hour intervals: 1. in the forenoon 10.00 a.m.–12.00, 2. in the earlier afternoon 1.00–3.00 p.m., and 3. in the later afternoon 5.00–7.00 p.m. The interview questionnaire consisted of items measuring the perception of the usefulness of the exercise devices placed in the FRZ (assessed on a four-point scale from 1 – unnecessary to 4 – very useful), the intentionality of using the FRZ, the frequency of visiting the FRZ and the time spent during an average visit, the perceived benefits and shortcomings of the FRZ.

Descriptive statistics (means and standard deviations) were used to describe the data. Differences between males and females and between age groups in respect of the frequency of visiting the Zones were assessed by conducting Pearson's χ^2 or χ^2 with the Yates correction, if at least one of the expected frequencies was less than 5. The effect size of the Chi-square test was determined by calculating Cramer's Phi (for contingency tables 2 x 2) or Cramer's V (for contingency tables larger than 2 x 2). In comparison of the assessments of exercise devices t-tests were used. Analyses were conducted using the Statistica 10.0 for Windows (Statsoft).

Results

During the period of observation, the FRZ were visited by 231 persons (or about 16 persons a day), 215 of whom agreed to take part in the survey. Their ages ranged from 13 to 96 ($M=44.19$, $SD 18.08$). Most of the park users were categorized as adults (20–65 years of age, $n=167$), followed by 34 senior adults (over 65 years of age; including 12 elderly persons, i.e. 75+ persons, two of whom were 80 and 96),

and 14 teenagers (13–19 years of age). Among all the FRZ users 45.12% (n=97) were men and 54.88% (n=118) women.

The most frequently visited time periods – as could be expected – were afternoon and evening hours, regardless of the age and sex of the visitors, although in the case of the former a tendency toward a significant difference between the distribution of zone users and time-periods of observation was seen. For exact data see Table 1.

Table 1. Number and percentage of respondents using Family Recreation Zones within day-time periods according to sex and age

	Morning n (%)	Afternoon n (%)	Evening n (%)	χ^2	<i>p</i>	Cramer's V
Total	33 (15.35)	93 (43.26)	89 (41.40)			
Sex						
Male	13 (13.40)	44 (45.36)	40 (41.24)	0.62	0.733	0.054
Female	20 (16.95)	49 (41.53)	49 (41.53)			
Age						
Youth	1 (7.14)	3 (21.43)	10 (71.43)	8.66	0.070	0.146
Adults	23 (13.77)	76 (45.51)	68 (40.72)			
Seniors	9 (26.47)	14 (41.18)	11 (32.35)			

Over a quarter of the respondents reported visiting the Family Zones every day or nearly every day and a similar percentage reported visiting them 2–3 times a week. Daily or nearly daily visits to the Zones were reported by the adults and senior adults, but although the difference between the three age groups was statistically significant, the magnitude of the effect was small. Differences between the males and females were insignificant. For exact data see Table 2.

Table 2. Frequency of using Family Recreation Zones declared by the respondents

	Female		Male		Sex diff.	Youth		Adults		Seniors		Age diff.
	n	%	n	%		n	%	n	%	n	%	
6–7x/wk	32	27.1	33	34.0	$\chi^2 = 7.50$; $p=0.112$; Cramer's V=0.054	2	14.3	49	29.3	14	41.2	$\chi^2 = 22.19$; $p=0.004$; Cramer's V=0.0146
4–5 x/wk	26	22.0	13	13.4		7	50.0	24	14.4	8	23.5	
2–3 x/wk	27	22.9	30	30.9		3	21.4	47	28.1	7	20.6	
1x/wk	22	18.6	18	18.6		0	0.0	35	21.0	5	14.7	
First time	11	9.3	3	3.1		2	14.3	12	7.2	0	0.0	

For 128 (87.07%) persons benefiting from the FRZ facilities these places are the only places in which they do exercise. The remaining users (12.93%) also attend gyms (n=59, including 32 women), fitness centers for aerobics and dance classes (n=12, including 9 women) and swimming pools (n=12, including 9 women). One in four people regularly exercising in the FRZ (n=39, 26.53%) stated that the systematic nature of their visits was linked to looking after children playing in nearby playgrounds. The mean age of this group was 40.87 with more women (n=27, *M* age 44.12) than men (n=12, *M* age 35.17).

The time of exercising in the FRZ ranged from 10 to 120 minutes a day (*M*=57.15 min., *SD* =35.95), with no significant differences between the women and men (58.86 min. in the former and 55.07 min. in the latter group, $t=-0.77$, $df=213$, $p=0.443$).

Over 65% (n=140) of the respondents declared that they used every device in a given FRZ, 12.09% (n=26) used only one favorite device (usually for arm and leg presses), and the remaining 33.33% (n=49) used two devices (the most popular devices were arm/chest press devices – 23 indications, seated rower – 13 indications, pull-up bar – 11 indications, stepper – 16 indications, air walker – 6 indications, air skier – 7 indications, and orbitrek – 5 indications). In the assessment of practical utility, the most positive indices were obtained by the lat pull-down (*M*=3.29 *SD*=0.53), air skier (*M*=3.23 *SD*=0.50), and air walker (*M*=3.18 *SD*=0.42). The worst ratings, which may be verbalized as “rather useless devices,” were given to the steering wheel machine (*M*=2.13 *SD*=1.05), the device whose catalogue name is “klucznik” (*M*=2.54 *SD* 0.78) and the bicycle (*M*=2.67 *SD* 0.75). There were some differences in ratings given to individual devices by the men and women. The former gave significantly higher ratings to such devices as pulling bars, leg presses, bench presses, and the grinder or arm wrestler, which promote strength or resistance exercises.

The most important benefits of the FRZ were: free entry (n=114, 53.02%), outdoor location (n=66, 30.70%), home proximity (n=15, 6.98%), playgrounds nearby (exercising while children are playing (n=11, 5.12%), and health (n=6, 2.80%). There was a statistically significant difference between the men and women in the perceived benefits. Free entry was more important for the men ($\chi^2=5.54$, $p=0.019$, $\Phi=0.026$), and exercising outdoors was more important for the women ($\chi^2=7.60$, $p=0.004$, $\Phi=0.039$). However, in both cases the magnitude of the association was weak.

The most commonly cited disadvantages were weather-dependence (n=150; 69.77%), narrow choice of facilities (n=80; 37.21%), too many small children nearby (n=37; 17.21%), lack of maintenance of the facilities (being damaged or

vandalized) (n=34; 15.81%), poor level of illumination (n=20; 9.3%), fears for one's own safety (n=19; 8.8%), lack of professional advice on how to carry out the exercises (n=11; 5.12%), lack of a roof over the facilities (n=10, 4.65%), and too many people (n=3; 1.39%). There were no statistically significant differences between the men and women in the disadvantages cited, although in the case of the lack of professional advice a tendency toward significance was observed ($\chi^2=3.57$, $p=0.059$), with a relatively higher number of women indicating this disadvantage.

Discussion

The presented study was designed to describe the demographic characteristics of Family Recreation Zone users, and how they perceive that kind of recreation setting. In a two-week, six-hour-a-day observation period the Zones were visited by about sixteen persons. This number might be regarded as far from satisfactory, but the research was done in the springtime and in fine, sunny weather conditions. The age of the visitors suggests that this kind of recreation setting is attractive mainly for adults, irrespective of sex. Considering that nearly nine in ten persons declared that outdoor fitness areas are the only space where they exercise, it can be said that they are an important environmental variable contributing to the physical activity level of adults and older adults.

The factors that make the areas attractive for working out are free access (indicated by over half of the respondents) and the open air. Interestingly, for many respondents the proximity of the playgrounds was not a benefit, and it should be remembered that these facilities are supposed to be recreation facilities for whole families, especially enabling people with small children to work out while their children are playing nearby. For nearly 20% of the respondents, the presence of small children was regarded as a shortcoming of the Zones, which runs counter to the idea serving as the basis for investing in such settings. This does mean that outdoor fitness areas may be designed as recreation settings independent of playgrounds, as an alternative for people who prefer to exercise alone or with other adults rather than in the company of small children.

Another frequently cited barrier to using FRZ was the season of the year, a modest range of training devices, damaged devices, poor illumination, a perceived lack of safety and a lack of professional support during exercising. A few conclusions for institutions taking care of zones with outdoor fitness equipment may be drawn: firstly, the number of exercise facilities should be varied enough to meet the expectations of the users (some kinds of equipment are chosen more

often than others); secondly, safety issues should be carefully taken into account, especially appropriate lighting and surveillance by police services, and thirdly, giving consideration to the possibility of hiring an in situ fitness instructor, similar to the initiative of “housing estate coaches” operating in some cities in Poland. They could offer exercise advice to persons with little knowledge about how to exercise properly, how to make plans for health-enhancing physical activity, etc., which would make the use of FRZ more rational.

Conclusion

In conclusion, this study revealed that Family Recreation Zones can be a valuable initiative on the map of environmental recreation facilities in urbanized areas. In particular, they can be a valuable factor initiating and facilitating physical activity among adults and seniors. However, if the hopes set on such places are to be fulfilled, they should be safe, well maintained and well managed.

Some limitations of the study should also be mentioned. First of all, the study was conducted in the springtime and the time of observations only lasted 6 hours a day. As a result, the number of people visiting Family Recreation Zones was limited and their perceptions about these areas could be biased. However, the authors believe that the information obtained may be valuable to people and institutions deciding where and how to structure outdoor recreation facilities.

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