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Physical Recreation of People with Disabilities – Inhabitants of the Poznań Metropolis. Selected Study¹

Abstract. Presented results are part of a broader study on the metropolitan region as the space of recreational penetration. It employed diagnostic survey and the tool used was the questionnaire prepared by the authors. The purpose of the following paper is to characterize selected aspects of physical recreation only of inhabitants with disabilities of the Poznań metropolis. It presents below only the results concerning the basic information of physical recreation of this social group, without the analysis of the conditionality of the participations in this kind of leisure time activities. The study results indicate that the participation of people with disabilities in physical recreation near and away from their place of residence is low. Respondents prefer weekend activity near their place of residence and the forms of recreation are not very diverse. They usually use small recreation and sports facilities or they use outdoor infrastructure. Enhanced involvement of people with disabilities in physical recreation together with personalized, adjusted to a given dysfunction offer is required.

Keywords: metropolis, metropolitan area, physical recreation, disability

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1. Introduction

A metropolitan area is a highly urbanized region with a system of municipal settlements comprising a number of units, including metropolises [Gaczek 2015: 12; cf. Ni, Kamiya & Ding 2017]. According to Poland's National Spatial Development concept 2030 (KPZK) Poznań is one out of ten metropolises in Poland [KPZK 2011: 192]. This city as an urban core with highly developed metropolitan functions together with surrounding cities, towns and villages (highly urbanized) constitute a functional and spatial zone which is the Poznań metropolitan area [Kaczmarek 2015: 41].

According to the European Observation Network, Territorial Development and Cohesion, Poznań metropolitan area is perceived as, so called, Metropolitan European Growth Area (MEGA), in terms of human potential, competitiveness of urban systems (in infrastructure or a given function), national and European communication networks and scientific development [Interim Territorial Cohesion Report 2004: 90, 98-101]. However, it needs to be stressed that Poznań is not competitive when compared to other cities of a similar size in Western and Northern Europe [KPZK 2011: 22].

It is assumed that contemporary regional development needs to be perceived in terms of economic globalization and metropolization. The latter is connected with "population concentration in highly urbanized (metropolitan) areas in which huge human and economic potential together with economic differentiation generates new needs and requirements, and where accelerated dynamics of social and economic life is in line with activities directed towards enhancing living conditions and functionality of cities" [Kaczmarek, Kaczmarek & Bul 2011: 5].

Therefore, the development of metropolitan areas is mainly associated with the enhancement of those functions which determine social and economic development and have favorable effects on the wealth growth and population potential of the given centers. This concentration of metropolitan functions can enhance the attractiveness of cities as areas offering better work conditions and higher quality of life [Kaczmarek, Kaczmarek & Bul 2011: 21].

The notion of life quality is regarded in many aspects and its analysis is of multi-disciplinary character. Researchers in many scientific domains agree that the scope of this analysis should be two dimensional – it should concern broadly understood objective conditions and subjective welfare. According to Joanna Śniadek and Alina Zajadacz, examining the relations between life quality and tourism and recreation is difficult as, which is also stressed by G.I. Crouch and J.R.B. Ritchie, the development of this sector should result in the development of the local community [Crouch & Ritchie 1997: 137; Śniadek & Zajadacz 2014: 341].

It is assumed in the following paper that the essential aspect connected with the process of metropolization in terms of the changes in the social life together with better living conditions is creating best possible conditions and opportunities for the inhabitants of the metropolis to participate in physical activities. Therefore, the research into the level of participation in those activities, together with their preferred forms and the places where these activities are undertaken is essential.

It is also assumed that physical recreation is understood as various games, exercises and sport disciplines undertaken in one's free time for pleasure, recreation and health reasons together with preventing diseases of affluence and increasing the favorable effect onto the capacity for white and blue collar work [Barankiewicz 1998: 11].

In this article the assumptions mentioned above referred to inhabitants with disabilities of Poznań metropolis. This social group is rarely referred to in the papers concerning the present state and development possibilities in Poznań metropolis.

One should also bear in mind that, together with the ongoing economic and social welfare development, it is leisure time and the way it is used that will influence the perception of life quality [Śniadek & Zajadacz 2014: 343].

2. Defining disability

The accession of Poland into the European Union in 2004 made it necessary to increase interest into the problems of people with disabilities. This process was later enhanced by signing by Poland the Convention on the Rights of Persons with Disabilities in 2007² and its ratification in 2012.³ This fact did not result in the increase in the social awareness of disabilities, nevertheless, it enforced certain actions on the part of administration, local self-government and municipality in terms of life quality improvement of this particular social group.

It needs to be stressed that it is also the growing activity of people with disabilities that really matters. More and more people with disabilities are constantly demanding their rights and they want their specific needs to be fulfilled within the scope of social life together with the rights guaranteed by law and in terms of

² www.mpips.gov.pl/spoleczne-prawa-czlowieka/organizacja-narodow-zjednoczonych/konwencja-o-prawach-osob-niepelnosprawnych/ [access: 6.05.2017].

³ www.mpips.gov.pl/spoleczne-prawa-czlowieka/organizacja-narodow-zjednoczonych/konwencja-o-prawach-osob-niepelnosprawnych/ratyfikacja-konwencji-o-prawach-osob-niepelnosprawnych-przez-polske/ [access: 6.05.2017].

customary law.⁴ The activity of people with disabilities in many spheres results in breaking down the barriers and stereotypes associated with disability⁵. However, the situation of people with disabilities in Poland can still be assessed as difficult and many changes not only on the structural, but also on system and social levels need to be implemented [Kryńska 2013: 12].

In the Act on Social and Vocational Inclusion and Employment of the Disabled (ustawa o rehabilitacji 1997),⁶ three different levels of disability are mentioned: light, moderate and severe and these levels are used for the purposes determined in this act. The classifications of disability levels are diverse and sometimes dependent upon the purposes for which they have been formulated, such as pension or non-pension (for example rehabilitation or education) purposes. The most basic division consists of certified disability (confirmed by a specific certificate) and biological disability, that is the subjective perception of deficiency in performing basic tasks for a given age activities without having certified disability [Jurczewska: Encyklopedia *Dziennika Gazety Prawnej*]. The most commonly referred to classifications of disability are based upon the classification by World Health Organization and by Maria Grzegorzewska and Zofia Sękowska [Żółkowska 2003: 15; Grzegorzewska 1964: 18; Sękowska 1998: 27-28; cf. Brault 2012: 1-3]. In 2013 the International Classification of Functioning, Disability and Health (ICF) was published in Polish. This classification “goes beyond the traditional perception of disability understood in biological terms and moves toward perceiving disability in functional terms taking into account what a person is capable of doing and how he or she can be supported,” which is helpful in “a totally modern perception of disability”⁷ [Prochyra 2013; Dązbłaż 2016].

The very notion of disability which is defined in Poland as “permanent or temporary inability to fulfil social roles due to permanent or long-term impairment, especially if it causes inability to perform work” [ustawa o rehabilitacji

⁴ For example, Karta Praw Osób Niepełnosprawnych [Resolution of the Sejm of the Republic of Poland of 1 August 1997, M.P. of 13.08.1997 No. 50, item 475]; Standardowe Zasady Wyrównywania Szans Osób Niepełnosprawnych, www.mpips.gov.pl/userfiles/File/mps/ONZ.doc [access: 6.05.2017].

⁵ Negative stereotypes of the disabled are still dominant – the common image is as follows: a disabled person is vulnerable, dependent, incapable of taking care of oneself and one’s own interests; people with disabilities are also described as weak, fearful, nervous, withdrawn, insecure and dissatisfied with life [Ostrowska 1997: 76; *Mity i stereotypy...* 2010; Niedbalski 2014: 61].

⁶ Ustawa z dnia 27 sierpnia 1997 r. o rehabilitacji zawodowej i społecznej oraz zatrudnianiu osób niepełnosprawnych, Dz.U. 1997, nr 123, poz. 776 [Act on Social and Vocational Inclusion and Employment of the Disabled, Journal of Laws 1997, No. 123, item 776].

⁷ Except from a statement by Igor Radziejewicz-Winnicki, then Under Secretary in the Ministry of Health during the conference „International Classification of Functioning, Disability and Health” which took place on 9 May 2013 at the offices of Social Security Service at 3/5, Szamockiej Street in Warsaw, www.niepelnosprawni.pl/ledge/x/166805 [access: 7.05.2017].

1997] should also be reviewed. This revision concerns the very definition of a person with disability who, even in the Charter of the Rights of People with disabilities is described as “a person whose physical, psychological or mental ability permanently or temporarily impedes or inhibits everyday life, education, work or the fulfilment of social roles according to legal and customary norms” [Karta Praw 1997]. Academic work also provides similar definitions [e.g., Mikulski & Auleytner 1996: 19].

According to the guidelines of the EU adopted at the European Disability Forum in 1994, a person with disability is “an individual having their full rights in a situation that inhibits him or her due to environmental, economical and social barriers, which he or she cannot – contrary to other people – overcome because his or her disabilities” [Kawwa & Wilmowska-Pietruszyńska 2016: 76].

The quoted above definition is referred to in the following paper. The authors have also adopted, after Joanna Łuczak and Michał Preisler, that the use of the term “a person with disability” is more adequate and in line with European guidelines than a “disabled person” [Łuczak & Preisler 2014: 165]. The following classification of disability has been adopted for the research: motor disability (moving independently, on crutches, in a wheelchair), aural disability (using/not using hearing aid), visual disability (blind/sight impaired) and mental disability [Kirenko & Parchomiuk 2006: 17].

3. Disability in statistical numbers

According to the results of Polish Census of 2011 (NSP) the number of people with disabilities at the end of March was less than 4.7 million, and that constituted 12.2% of the country’s population [NSP 2011: 67]. People with both biological and legal disability took part in the survey [NSP 2011: 34, 67]. 53.9% of women with disabilities and 46.1% of men with disabilities were noted. Almost 79% of all the disabled people, that is, about 3.7 million had their disability certified by a competent authority.⁸

However, it needs to be noted that the questions concerning disability were voluntary and therefore, almost 1.5 million respondents (including those with certified disability) refused to answer them. According to Krystyna Slany this fact has unfavorable effect onto the quality, dependability and adequacy of the gathered information [Slany 2014: 46].

⁸ In Poland there are two distinct case laws presented by different institutions and regulated by distinct legal acts – compare Act on Social and Vocational Inclusion and employment of the Disabled, chapter 2, and Ordinance of Minister of Economy, Labor and Social Policy of 15 July 2003 on Determining Disability and Degrees of Disability, Journal of Laws 2003, No. 139, item 1328.

According to the information in the census it needs to be assumed that the total numbers of men and women with different disabilities in the census of 2011 are underestimated. As a result, the percentage of people with disabilities with relation to the whole population is also too low [NSP 2011: 68].

In Poland, the data concerning people with certified disability are accessible up-to-date and revised quarterly on the website of the Office of the Government Plenipotentiary for Disabled People. The data are prepared on the basis of the Labor Force Survey (BAEL). The most up-to-date data from Labor Force Survey concerning people with disabilities (in particular voivodeships) refer to the fourth quarter of 2016.⁹

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Data concerning Wielkopolska Voivodeship are presented below (Table 1).

Table 1. Economic activity of people with disabilities aged 16 and more in Wielkopolska in 2016 (in thousands)

2016	Total	Active population	
		Total	Including working population
I quarter	355	63	55
II quarter	347	59	53
III quarter	304	53	50
IV quarter	303	46	41

Source: own work on the basis of quarterly data from BAEL for particular voivodeships for the period 2007-2016 as of 28.07.2017, www.niepelnosprawni.gov.pl/p,81,bael [access: 31.05.2017].

According to the data presented by Elżbieta Tonder, Staroste Plenipotentiary for Disabled People¹¹ at the beginning of 2014 there were about 13,000 people with a certified disability in the Poznań District, including about 2,780 with severe degree of disability, 4,070 with moderate degree of disability, 4,820 with light disability and over 1,300 of children under the age of 16. The most common

⁹ www.niepelnosprawni.gov.pl/p,81,bael [access: 31.05.2017].

¹⁰ www.niepelnosprawni.gov.pl/p,81,bael [access: 31.05.2017].

¹¹ Presentation given on 12 December 2014 during conference summarizing the 7th stage of the project "Overcoming Exclusion. Comprehensive Activation of People in Danger of Social Exclusion in Poznań District" realized by District Family Support Centre in Poznań, <http://powiat.poznan.pl/pokonac-wykluczenie/> [access: 31.05.2017].

causes of disability in the Poznań District are motor organ diseases, circulatory system diseases and neurological disorders. People suffering from autism and mental disorders compose the smallest group [Tonder 2014: 1]. Table 2 below presents the numbers of adults with certified disability in Poznań metropolis:

Table 2. Numbers of people with certified disability in Poznań metropolis¹²

Symbol	Municipality	Number of people with certified disability
A	Buk	476
A	Czerwonak	1058
A	Dopiewo	580
A	Kleszczewo	187
A	Komorniki	550
A	Kostrzyn	522
A	Kórnik	700
A	Luboń	1127
A	Mosina	1146
A	Murowana Goślina	676
B	Oborniki	901
A	Pobiedziska	664
C	Poznań	92980
A	Puszczykowo	383
A	Rokietnica	431
	Skoki	lack data
A	Stęszew	652
A	Suchy Las	487
A	Swarzędz	1757
	Szamotuły	lack data
D	Śrem	1362
A	Tarnowo Podgórne	740

A – data of 31 March 2001, B – data of 2014, C – data of 20 May 2002, D – data of 29 April 2013.

Source: own work on the basis of: Tonder 2014 (A); *Strategia rozwiązywania problemów społecznych...* 2014: 45 (B); *Kierunki działań...* 2012: 8 (C); *Powiatowa strategia...* 2014: 18.

Unfortunately, acquiring up-to-date information on the numbers of people with disabilities living in Poznań and in the whole area of the Poznań metropolis is very difficult. Even the Statistical Office in Poznań, or the City Hall websites “Facts and numbers” do not have such data at their disposal.¹³

¹² Distribution on base of information from Poznan Metropolis Portal, www.aglomeracja.poznan.pl/ [access: 25.11.2017].

¹³ www.poznan.stat.gov.pl [access: 31.05.2017]; www.poznan.pl/mim/s8a/ [access: 31.05.2017].

4. Physical recreation of people with disabilities

It was at the very beginning of the twentieth century when physical activity in one's leisure time was considered the basic element of healthy lifestyle. Teresa Wolańska indicated that practising a healthy lifestyle, which includes regular participation in physical recreation, should be "considered an obligation as a factor of positive health" [after: Łuczak & Bronowicki 2010: 20]. A significant role of physical recreation in prevention of civilization diseases together with its positive influence on the quality of ageing is very often stressed in the subject literature. Physical recreation can also have a favourable effect onto person's well-being, it prevents stress and is part of therapy of numerous disorders [Krakała 2008: 14; Osiński 2011: 23].

People with disabilities constitute a social group for which – apart from tourism and sightseeing – physical recreation, due to its health and social functions, plays a significant role [Skalska 2004: 17]. The following objectives of this activity should be taken into consideration:

- therapeutic – supporting treatment and rehabilitation of an individual;
- biological – compensation of morphological losses resulting from a given disability;
- anatomical and physiological – supporting kinesis therapy, that is maintaining proper anatomical relations in the joint area, preventing muscle contractions or atrophy;
- hygiene and health – making daily activity program more attractive;
- educational and psychological – shaping positive personality traits;
- hedonistic – taking pleasure from physical activity;
- social – including individuals into social and cultural life [Lorenzen,¹⁴ after: Łobożewicz 2000: 24-25].

It is also Jana Labudová who stresses that physical recreation should enable a person with disability to:

- broaden cognitive horizons by means of making people acquainted with new objects, equipment and situations together with making new personal contacts,
- improve one's motor disposition,
- develop cognitive and emotional processes,
- improve socialization and develop verbal and non-verbal communication,
- shape proper self-esteem,
- understand social environment in a better way [Labudová 2009: 337].

¹⁴ H. Lorenzen – progenitor of the idea of participation people with disabilities in sports activities

Participation in physical recreation can be of organized character – in sports clubs, or not (sports facilities available to general public or in the open air). However, numerous barriers make it difficult or even impossible for people with disabilities to participate in physical and tourist recreation (e.g., Labudová 2009: 335-336; Preisler 2011: 28; Kubińska, Bergier & Bergier 2011: 191-192; Łuczak & Preisler 2014: 167-168].

Physical exercises and targeted sports activity, including physical recreation, should be inherent to the optimal lifestyle of a person with disability [Labudová 2009: 334]. However, one needs to take into consideration the fact that for the mentioned above objectives to be achieved, particular needs should be satisfied and certain requirements of the participants in physical recreation need to be fulfilled not only with regard to their various preferences but also with regard to their physical limitations.

Creating proper and favorable conditions for the participation of people with disabilities in physical recreation poses a challenge for the state's policy, including government and non-government institutions.

5. Materials and methods

The following study was conducted in Poznań metropolis from March to June 2016 and covered 1584 respondents, 13% of whom were people with disabilities (200 people). The minimum number of questionnaires was calculated on the basis of confidence level of 95% ($\alpha = 0.05$) with the maximum error $\pm 5\%$ (0.05) and equalled 1426 questionnaires. While determining the size and structure of the study sample the data from Statistical Office in Poznań as of 31.12.2015 were used with regard to age and gender and reference to particular municipalities.¹⁵

The survey was conducted by 5 trained interviewers and the tool used was the questionnaire prepared by the authors and consisting of 29 questions, most of which were closed.

SPSS software, in particular significance tests for quantitative variables, was used to analyze the data statistically. T test was used to analyze the significance of the mean differences, while Z test was used for qualitative variables in comparing the significance of variable proportions grids. The obtained results are based on two-sided tests with the significance level $p < 0.05$.

The research topic is the participation in physical recreation of people with disabilities living in the Poznań metropolis. The purpose of the following paper is to characterize the selected aspects of the physical recreation only of the inhabit-

¹⁵ <http://poznan.stat.gov.pl> [access: 31.12.2015].

ants with disabilities of the Poznań metropolis. It presents below only the results concerning the basic information of physical recreation of this social group, without the analysis of the conditionality of the participations in this kind of leisure time activities.

Prior to the study it had been assumed that the level of physical recreation of people with disabilities in the metropolis would not be high and that the highest levels would be in the Poznań municipality. It was also assumed that the forms of the recreation would not be very diverse.

The following research questions were addressed in the paper:

1. How often do respondents participate in physical recreation?
2. Is the level of physical recreation satisfactory for the respondents?
3. What forms of physical recreation are preferred by the respondents?
4. What type of activity and how many times a month do the respondents perform near and away from their place of residence?
5. What sports/leisure facilities do the respondents use most often?
6. How much time (on average) does it take them to get to the place of physical recreation?
7. Do the respondents participate in any form (if yes, what form) of mass sport competitions organized in the Poznan metropolis?
8. How much money a month do the respondents spend on participating in physical recreation?

6. Characteristics of physical recreation of people with disabilities in the Poznań metropolis

6.1. Characteristics of respondents

200 people with disabilities took part in the survey, which is approximately 13% of the total group of the respondents. The questionnaires were filled in by 117 women and 83 men at the age of 23-93. The largest group (47.5%) were people at the age of 65 and older. One person did not fill in the information on their gender and age. The distribution of the respondents in terms of impairment is as follows: 77% respondents have motor disability, 8.5% – vision disability, and 8% – aural disability. The remaining 6.5% respondents either did not give an answer to this question (1.5%) or marked that the question does not apply (5%).

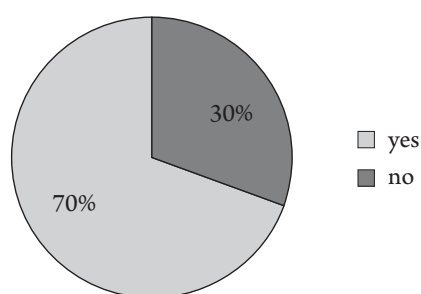
33% of the population sample do not have a certified disability. The remaining 67% declare that their disability is certified by a proper authority, 39% of whom suffer from slight disability, 15.5% – moderate and 9% – from severe disability. The remaining 3.5% of this group did not determine the degree of their disability.

In addition, 48% of respondents are inhabitants of Poznań municipality, while 52% live in municipalities which are part of Poznań metropolis. Their share is 1%-10% depending on a given municipality under study.

6.2. Level and frequency of participation in physical recreation

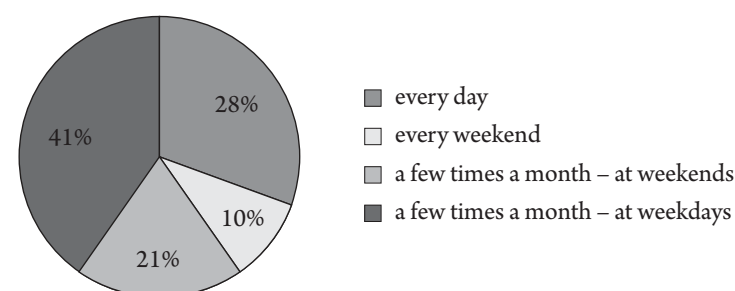
The level of participation in physical recreation in the studied group is low – 30.5% (Chart 1). As it has already been mentioned, the inhabitants of Poznań municipality constitute 48% of all the people physically active in their free time. As far as the remaining 52% are concerned it is the inhabitants of Luboń and Kórnik municipalities who are most active (19.5% and 16% respectively).

Chart 1. Level of participation in physical recreation of people with disabilities in Poznań metropolis



Source: own work (N = 200).

Chart 2. Frequency of participation in physical recreation of people with disabilities in Poznań metropolis



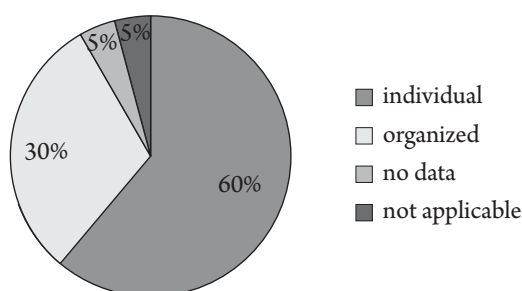
Source: own work (N = 200).

28% of the respondents do physical exercises on a daily basis, while almost 41% are active a few times a month, apart from weekends. People who are active several times a month but during weekends constitute 21.3% of the group. Fewer than 10% of the respondents declare participation in indifferent forms of recreational activity every weekend (Chart 2). Almost half of the respondents (46%) stated that the present level of participation in physical recreation is not satisfactory.

6.3. Forms of physical recreation

It can be inferred from the responses that most of the respondents participate in individual forms of physical recreation, while only 30% prefer mass forms of recreation (Chart 3).

Chart 3. Preferred forms of physical recreation



Source: own work ($N = 200$).

In their place of living the respondents most often go walking (77%), swimming (26.2%) or cycling (16.4%). With regard to the activities performed away from the place of residence the mentioned above activities are also very popular, however, the particular percentages are lower: walking – 18%, cycling – below 10% and swimming – 4.9%. The range of activities performed in the place of residence is much wider when compared with the number of activities performed away from the place of residence (18 recreational disciplines and 9 respectively) (Table 3).

The gathered data indicate that very few of the respondents take part in physical activities of mass character which are organized in Poznań. Only 1.6% participate in orienteering, 3.3% in trekking and canoeing, and nearly 5% in fêtes. The remaining respondents did not give their answer to this question. 16% of the respondents participate in such mass events as half marathons and marathons only in the role of spectators, while only 1.6% are competitors. It should be a signal for organizers of this kind of sport and recreational mass events – its need to be

Table 3. Preferred forms of physical recreation in and away from the place of residence (in %)

Form of physical recreation	In the place of residence	Away from the place of residence
Walking	77.0	18.0
Cycling	16.4	9.8
Badminton	1.6	1.6
Swimming	26.2	4.9
Aerobics	1.6	0
Fitness	4.9	0
Yoga	3.3	0
Gymnastics	9.8	3.3
Dancing	1.6	0
Running/jogging	6.5	0
Nordic walking	3.3	1.6
Fishing	9.8	0
Team sports:		
Basketball	1.6	0
Rugby	1.6	0
Soccer	0	1.6
Winter sports	1.6	0
Other activities:		
Weight lifting	1.6	0
Gym workout	4.9	0
Aqua zumba	0	1.6
Gardening	0	1.6

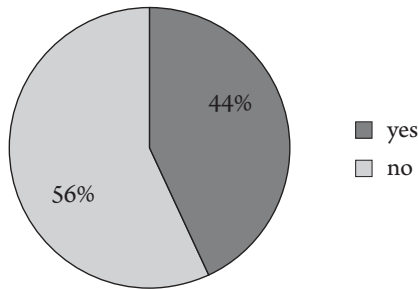
Source: own work (N = 200).

well-suited for the potential spectators and contestants with disabilities, because, unfortunately, it still does not often fit to the requirements and capabilities of people with disabilities. It is assumed, that the organizers do not take into account many urban and architectonic barriers or they do not expect contestants and participants with disabilities.

6.4. Sports and recreational facilities

The majority of respondents (55%) do not use recreational and sports facilities (Chart 4). The obtained results indicate also that the respondents are more likely to use smaller facilities (32.8%), instead of the big chain facilities. The latter are mostly used in the place of residence (Chart 5).

Chart 4. Use of recreational and sports facilities

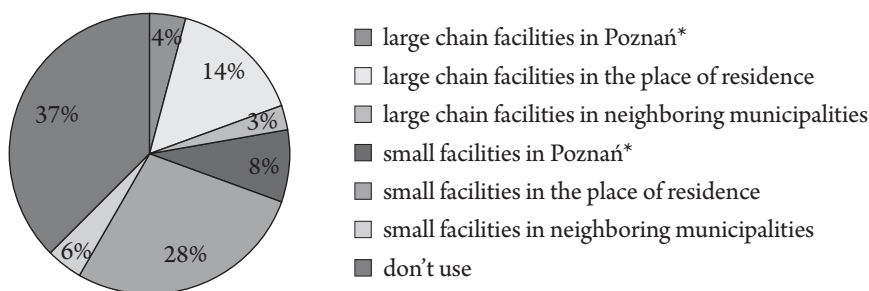


Source: own work ($N = 200$).

When it comes to selecting a sport facility the deciding factors are the following: the closeness of the place of residence (over 73% responses), price (over 53% responses) and the quality of the rendered services (over 35% responses). Getting to a particular facility usually takes the respondents about 15 minutes – during their daily recreation (80% responses) and during their weekend recreation (72% responses). For 1.6% of the respondents it takes over an hour to get to the selected sports facility. The optimal time to get to those facilities is 10 minutes, both during their daily recreation (28.8% responses), and during weekend recreation (24.6% responses). The average time of getting to the sports facility that would be considered satisfactory for the respondents is 12.6 minutes during the week and 14.5 minutes at weekends.

As far as different types of sports facilities are concerned, it is the indoor swimming pools that are visited most often (over 26% responses), health clubs and gyms (over 13% responses) and outdoor gyms (almost 10% responses). The

Chart 5. Use of sports facilities in and away from the place of residence



*only respondents living outside Poznań

Source: own work ($N = 200$).

average number of using a particular facility is quite diverse (Table 4). On average the respondents visit a swimming pool in their place of residence 4.6 times a month, health club and a gym – 8 times a month and an outdoor gym – almost 7 times a month. When it comes to sports facilities away from the place of residence, the respondents visit indoor swimming pools most often (3.8 times a month) and small playing fields (4 times a month).

Table 4. Use of sports facilities in and away from place of residence

Type of sports infrastructure	Average number of using the facility per month	
	in the place of residence	away from place of residence
Grass soccer pitches	1.33	1.0
Multifunction playing fields	2.50	0
Small playing fields	2.50	4.0
Multiarenas	4.50	2.0
Gymnasiums	3.80	4.0
Bowling alleys	1.00	1.0
Indoor swimming pools	4.60	3.8
Outdoor swimming pools	4.00	0
Health clubs and gyms	8.75	2.5
Climbing walls	3.00	0
Outdoor gyms	5.67	0
Children's playgrounds	9.20	0
Shooting ranges	2.00	2.0
Bathing lakes	3.00	2.0
Boathouses	13.75	1.0

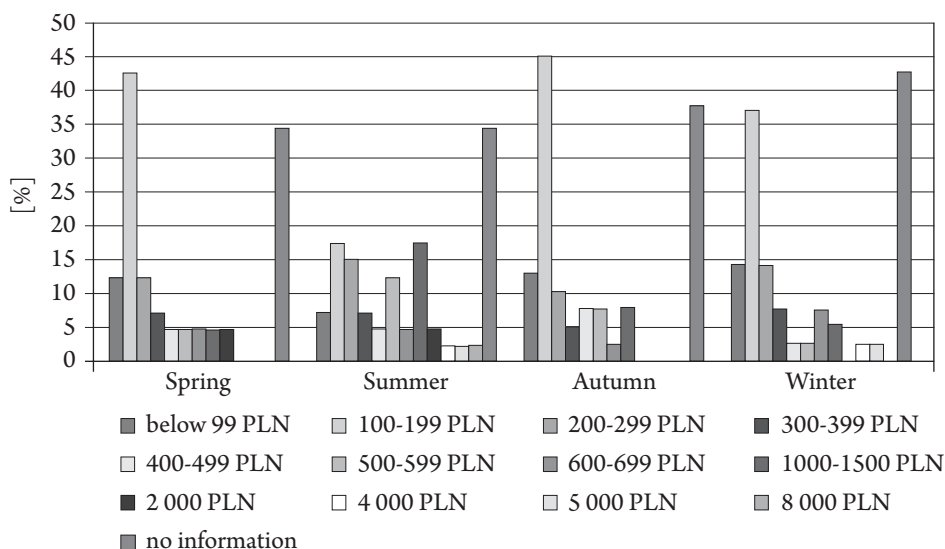
Source: own work ($N = 200$).

Most of all, the results above were expected. For example, daily hasten causes searching for sport facilities the closeness to the place of residence, taking into consideration the price – it is often related to low rewards. However, small interest in outdoor gym activity is surprising. They are available on many housing estates and in recreation open air, besides this kind of activity is free and depends on weather available by the majority of the year.

6.5. Monthly expenditure on physical recreation

Respondents were also asked to establish the sum of money they spend monthly on average on physical recreation. This amount was presented with reference to

Chart 6. Monthly expenditure on physical recreation in different seasons



Source: own work ($N = 200$).

the particular season (Chart 6). Depending on the season over 34% respondents (in spring and summer) up to 42% (in winter) do not declare any expenditure related to their physical activity in their leisure time. 100-199 PLN is the most often selected expenditure range (over 40% responses in spring and autumn). In summer, however, respondents are more willing to spend higher amounts of money.

The lowest amount spent on physical recreation monthly is 20 PLN, while the highest – 8000 PLN. On average respondents spend 73 PLN on various forms of recreational activity.

Most of all the results above are surprising. Especially the fact that the respondents are more willing to spend higher amounts of money in summer. The weather in summer time promotes more outdoor recreation activities, such as running, cycling or walking etc. Besides, this kind of activities is free and very popular at this time of year. The height of declared expense is also surprising. Indeed, not numerous respondents have indicated expenses as high as in 2000-8000 PLN, but unfortunately it is not known on what they are ready to issue such amounts.

7. Conclusion

Reinforcing the functions that facilitate and condition social and economic development is essential for the development of metropolitan areas. These areas sho-

uld be associated with higher quality of living, which is also connected with generating better access to different forms of physical recreation for the inhabitants.

The conducted study indicates clearly that the level of participation in physical recreation, as far as the people with disabilities are concerned, is constantly very low. Small range of activities, preference towards using infrastructure located close to the place of residence, selecting small facilities over the big ones prove that overcoming urban, architecture and social barriers is still a problem. Very small interest into participating in mass sports events in Poznań metropolis also indicates that the types of these activities or events should also be adapted to the special needs of both spectators and contestants with various disabilities. For example – the route of run without urban and architectonic barriers is the greatest chance to apply the participation of sportsman with disabilities, mass sport events promotions should be also dedicated and directed to people with disabilities. Besides, the improvements for spectators with disabilities are needed – depending on various of disabilities improvements of approaches such as special area for supporting participators, current devolution of information for not hearing or unseeing person, during enduring recreation mass events .

People with disabilities are a social group with very specific needs in terms of participating in physical recreation due to their individual impairments and different abilities. Creating proper and favorable conditions for spending free time actively should be one of the basic challenges for the state's (including government and non-government organizations) policy. All this refers also to Poznań metropolis, including Poznań municipality.

The results of the following study allow the authors to draw the following conclusions concerning people with disabilities living within the boundaries of Poznań metropolis:

1. The level of physical activity of inhabitants of Poznań municipality is higher when compared to inhabitants of other municipalities within Poznań metropolis, which is in line with the research hypothesis. Simultaneously, Poznań municipality is not perceived by inhabitants of other municipalities as more attractive in terms of participation in physical recreation – they most often use the infrastructure and facilities near their place of residence.

2. Activities promoting active lifestyle need to be intensified, especially as the level of participation in those activities is not perceived as satisfactory by the respondents.

3. It is advisable to improve access to more diverse forms of physical recreation by creating an offer directed to special needs and abilities of people with disabilities.

4. Sports and recreational mass events in Poznań metropolis need to be well-suited for potential spectators and contestants with disabilities.

5. Further research into the subject of various aspects of recreational activity of people with disabilities is required in order to monitor the situation. This could be the basis for practical activities for interested individuals and for liaising with the organizations working for the benefit of people with disabilities in various spheres of life, including recreation.

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Rekreacja fizyczna osób z niepełnosprawnością – mieszkańców metropolii poznańskiej. Wybrane aspekty badań

Streszczenie. Celem artykułu jest charakterystyka wybranych aspektów rekreacji fizycznej osób z niepełnosprawnością, mieszkających na terenie metropolii poznańskiej. Przedstawione wyniki stanowią fragment szerszych badań na temat regionu metropolitalnego jako przestrzeni penetracji rekreacyjnej na przykładzie aglomeracji poznańskiej. Wyniki badań wskazują na niski poziom uczestnictwa osób z niepełnosprawnością w rekreacji fizycznej zarówno w miejscu zamieszkania, jak i poza nim, przy czym – zgodnie z założeniami – mieszkańcy gminy Poznań są bardziej aktywni niż badani z pozostałych gmin. Ankietowani preferują aktywność weekendową, w miejscu swojego zamieszkania, a formy rekreacji nie są zróżnicowane. Najczęściej wybierają małe obiekty rekreacyjno-sportowe lub korzystają z infrastruktury plenerowej. Wskazana jest większa aktywizacja osób z niepełnosprawnością w zakresie uczestnictwa w rekreacji fizycznej oraz przygotowanie oferty spersonalizowanej – dostosowanej do rodzaju posiadanej dysfunkcji. Należy również stworzyć bardziej korzystne warunki do uczestnictwa w aktywności rekreacyjnej o charakterze masowym, organizowanej na terenie poznańskiej metropolii.

Słowa kluczowe: metropolia, obszar metropolitalny, rekreacja fizyczna, niepełnosprawność