

## **Social Status and Self-Assessment of Health Condition as Factors Determining Access to Physical Recreation among Former Female Athletes as Compared to Women without Competitive Sports Experience**

by

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*The purpose of the study was to determine whether an experience of long-term competitive sports activity may reduce the negative influence of unfavourable social status and low health self-assessment on women's participation in physical recreation. A survey study involved women aged 18-51 years: former female athletes (n=137) and women who neither were in the past nor are at present involved in competitive sports activities (n=220). Variables defining participation in physical recreation (PR), socio-economic status and health self-assessment were taken into consideration. It was shown that women's participation in PR is significantly determined by previous competitive sports activity, a positive health condition self-assessment and a relatively high social status. However, the experience of competitive sports activity does not compensate for an unfavourable effect of women's low social status on their participation in physical recreation activities. All efforts oriented at increasing women's access to physical recreation should combine two directions: popularisation of competitive sports among young girls and creating conditions for improvement of women's social status (employment, income, education), which will enable them to make health-promoting decisions.*

**Key words:** *physical recreation, former athletes, socio-economic status, health self-assessment*

## ***Introduction***

An international research project, called "Bridging East West Health Gap", involving 6 Eastern and Western European countries (including Poland), showed a very low physical activity of the Polish population, as compared to the other countries participating in the project. The highest percentages of people declaring high physical activity were observed in Finland (30.2%) and in Spain (23.7%) whereas the lowest ones were noted in Hungary (12.3%) and in Poland (6.4%) (Laaksonen et al., 2001). These results confirm a long distance between Poland and other countries of the European Union with respect to popularisation of sport and education. In all age and social groups the percentage of women practicing in regular physical exercise are lower than those of men from the respective groups (Charzewski 1997), which is indicative of sex-related inequalities in access to physical recreation. Bearing in mind extensively documented favourable effect of physical exercise on physical and mental health (Pate 1995, Obmiński 2000, North et al., 1990), any barriers in women's access to recreation should be treated as reducing their chances for health improvement through physical exercise.

One of the reasons of low physical activity of women in Poland seems to be the fact that they usually do not see any relationship between recreational physical activity and health condition. This assumption is confirmed by the results of a survey of 1033 randomly selected women. These results showed that almost 90% of the respondents indicated noise, environmental pollution and chemical food processing as our daily life risk factors for health and well-being. Less than 40% included smoking and alcohol drinking and 6% - sedentary lifestyle and excessive TV-watching among these risk factors (Czerepaniak-Walczak 1993). These results reflect a very low level of knowledge of the surveyed women on significance of physical exercise for health promotion and disease prevention.

Participation in recreational physical exercise depends on a combination of different factors. Drabik (1997) distinguishes three groups of such factors: personal, social and related to physical activity characteristics. Among the personal factors, he underlines a favourable effect of the following: young age, higher education, higher economic status, good health condition, as well as developed exercise habits and active lifestyle in the past.

Taking into consideration their previous competitive sports experience, ex-sportswomen constitute a particular group. Is their participation in physical recreation (PR) also determined by the above socio-economic factors and health condition ?

The following detailed research questions were formulated:

- is the PR activity of former female athletes determined by their social status ? and does it depend on the same socio-economic factors that determine participation of women without sports experience in these activities ?
- is there a relationship between former female athletes health condition self-assessment and their participation in PR ?
- does long-term sports training minimise possible effect of the current women's socio-economic and health status on their participation in PR ?
- which of the variables characterising PR practice among women (time, frequency or forms) are most susceptible to socio-economic factors and health condition self-assessment ?

The following research hypotheses were formulated:

- participation of former female athletes and women without competitive sports experience in PR is positively conditioned by their high social position and positive health self-assessment;
- influence of socio-economic and health factors on women's participation in PR may be minimised by long-term sports training;
- particular variables characterising women's participation in PR (time, frequency and forms) are conditioned by specific determinants of their social status.

## ***Material and methods***

Between May and September in the years 1997-2002 the following groups of women aged 18 – 51 years took part in the study:

- Former female athletes (FA) (n=137),
- Women without any (past or present) competitive sports experience (NA) (n=220).

Sample selection was deliberate according to the "easy access" criterion (Wagner 2002). The method of diagnostic poll was applied using an anonymous individual questionnaire with closed questions.

The following variables were considered:

- participation in PR, with three defining categories:
  - frequency of PR undertaken in a week preceding the survey,
  - time spent on PR in a week preceding the survey,
  - PR forms practiced on a day preceding the survey;
- socio-economic status with the following categories: age, marital status, residence, educational level, type of work (Miśkiewicz 1995);
- health condition self-assessment result:

- a positive one (very good and good) and a negative one (mediocre, poor and very poor) (Karski et al., 1999),
- as compared to other women of the same age (better, similar, worse) (Tobiasz-Adamczyk and Brzyski, 2001).
- The following variables were subject to analysis in both groups of women:
  - frequency of and time spent on participation in PR in the week preceding the survey and PR forms practiced on the day preceding the survey;
  - relationships between time, frequency and forms of PR practice and variables determining socio-economic status and health self-assessment of the subjects.

The chi square test ( $\chi^2$ ) (with Yates correction) was used to verify the research hypotheses, where the significance level for the relationship between two variables was defined as  $p \leq 0.05$ ,  $p \leq 0.01$  or  $p \leq 0.001$ . To assess power of the relationship (correlation) between particular variables, the Cramer's coefficient (V) was calculated. This coefficient ranges from 0 (no relationship between variables) to 1 (Stanisz 2006). Statistical analysis of results was performed with the use of Statistica 6.0 PL software.

## **Results**

Table 1 shows the results obtained for participation in PR in two groups of women: former female athletes (FA) and women without competitive sports experience (NA). As evidenced in the table, the former athletes, as compared to the control group, significantly more frequently participated in PR ( $p \leq 0.05$ ), spent more time on these activities ( $p \leq 0.05$ ), and also more frequently practiced recreational sports than walking ( $p \leq 0.001$ ).

The relationships between particular variables describing participation of the respondents in PR and socio-economic determinants and health condition self-assessment are presented in Tables 2, 3 and 4.

The frequency of participation in PR in the former athletes group was shown to rise along with the increased education level ( $p \leq 0.05$ ) and higher health-condition self-assessment ( $p \leq 0.01$ ). The other factors did not affect significantly the frequency of exercise practice in this group of respondents (Table 2). In the group of women without competitive sports experience, lower income per family member was associated with higher frequency of women's participation in PR activities ( $p \leq 0.05$ ). Additionally, the frequency of participation in PR in the control group was positively influenced by high health condition self-assessment ( $p \leq 0.01$ ) (Table 2).

**Table 1***The respondents' participation in physical recreation activities (in %)*

No.	Participation in physical recreation activities	FA (n=137)	NA (n=220)
	Frequency of participation (times per week):		
	0	8.09	17.67
	1–2	31.62	25.12
1.	3–4	41.91	34.42
	5–6	13.97	14.42
	7≤	4.41	8.37
	Chi square (Cramer's V test):	9.93* (0.17)	
	Time (hours) spent by the subjects on physical recreation during a week:		
	0	8.15	17.15
	1–2	29.63	30.41
2.	3–4	35.56	29.49
	5–6	18.52	10.14
	<6	8.15	12.44
	Chi square (Cramer's V test):	11.63* (0.18)	
	Forms of physical recreation:		
	No leisure time	36.03	31.78
	I do not practice physical recreation	5.15	11.21
3.	Walking	24.26	40.65
	Recreational sports	33.09	12.05
	Other responses	1.47	4.21
	Chi square (Cramer's V test):	29.03*** (0.29)	

\* statistical significance at  $p \leq 0.05$ ; \*\*\* statistical significance at  $p \leq 0.001$

Time spent by former athletes on recreational exercise increased significantly along with their level of education ( $p \leq 0.05$ ) and higher health condition self-assessment ( $p \leq 0.01$ ). However, the relationship between the level of income per family member and the time spent on PR was an inversely proportional one ( $p \leq 0.05$ ). In the control group, time spent on PR was favourably affected by the following factors: single marital status ( $p \leq 0.05$ ), higher income ( $p \leq 0.05$ ), and, additionally, high health condition self-assessment ( $p \leq 0.001$ ), also when compared to other women in the same age group ( $p \leq 0.05$ ) (Table 3).

**Table 2***Social and health determinants of frequency of participation in physical recreation*

Determinants	FA	(n=137)	NA	(n=220)
	$\chi^2, p$	V test	$\chi^2, p$	V test
Age	7.84 n.s.	0.24	4.66 n.s.	0.15
Place of residence	12.85 n.s.	0.22	4.52 n.s.	0.10
Education	19.04 *	0.19	12.85 n.s.	0.12
Type of work	18.36 n.s.	0.19	18.44 n.s.	0.15
Marital status	3.46 n.s.	0.16	2.05 n.s.	0.10
Income	8.12 n.s.	0.14	11.71 *	0.14
Health condition self-assessment	13.25 **	0.18	23.44 ***	0.19
Health condition self-assessment as compared to individuals of the same age	11.54 n.s.	0.21	7.76 n.s.	0.13

n.s. – no statistical significance; \* statistical significance at  $p \leq 0.05$ ;

\*\* statistical significance at  $p \leq 0.01$ ; \*\*\* statistical significance at  $p \leq 0.001$

**Table 3***Social and health determinants of time of participation in physical recreation*

Determinants	FA	(n=137)	NA	(n=220)
	$\chi^2, p$	V test	$\chi^2, p$	V test
Age	9.05 n.s.	0.26	2.37 n.s.	0.10
Place of residence	5.28 n.s.	0.14	2.63 n.s.	0.08
Education	19.49 *	0.19	12.30 n.s.	0.12
Type of work	13.28 n.s.	0.16	19.39 n.s.	0.15
Marital status	3.14 n.s.	0.15	10.79 *	0.22
Income	11.87 *	0.17	12.29 *	0.14
Health condition self-assessment	15.58 **	0.20	23.44 ***	0.19
Health condition self-assessment as compared to individuals of the same age	6.67 n.s.	0.16	11.81 n.s.	0.17

n.s. – no statistical significance; \* statistical significance at  $p \leq 0.05$ ; \*\*

statistical significance at  $p \leq 0.01$ ; \*\*\* statistical significance at  $p \leq 0.001$

**Table 4***Social and health determinants of forms of participation in physical recreation*

Determinants	FA	(n=137)	NA	(n=220)
	$\chi^2, p$	V test	$\chi^2, p$	V test
Age	7.94 n.s.	0.24	6.60 n.s.	0.18
Place of residence	9.17 n.s.	0.18	8.47 n.s.	0.14
Education	16.06 *	0.17	8.43 n.s.	0.13
Type of work	21.16 *	0.20	23.97 *	0.17
Marital status	3.19 n.s.	0.15	0.47 n.s.	0.05
Income	18.35 **	0.21	13.96 **	0.15
Health condition self-assessment	14.91 **	0.19	7.91 n.s.	0.11
Health condition self-assessment as compared to individuals of the same age	12.40 *	0.21	17.99 **	0.21

n.s. – no statistical significance; \* statistical significance at  $p \leq 0.05$ ;

\*\* statistical significance at  $p \leq 0.01$

The forms of PR practiced among the former athletes were determined by the following variables: education level and type of work ( $p \leq 0.05$ ), income level ( $p \leq 0.01$ ), and, additionally, health condition self-assessment ( $p \leq 0.01$ ), also when compared to other women in the same age group ( $p \leq 0.05$ ). A relatively higher education level was related to more intensive forms of recreation (recreational sports), whereas analysis of the influence of type of employment on forms of recreation confirmed that unemployed FA practiced walking more frequently than those employed or studying. The lowest percentage of respondents declaring lack of free time was among the unemployed. At the same time the percentage of women practicing recreational sports was in this group slightly lower than among working or studying women. Additionally, it was demonstrated that a relatively higher income favoured walking and recreational sports activities. The forms of PR practiced by former athletes showed a significant association with health condition self-assessment, i.e.: subjects with positive health condition self-assessment significantly more frequently practiced “recreational sports” than these with negative health self-assessment (Table 4).

PR forms in the control group were determined by type of work of the respondents: women not pursuing professional work less frequently than these working/learning declared a lack of free time. These women most frequently practiced walking and less frequently than the other females practiced recreational sports ( $p \leq 0.05$ ). Additionally, also in this group a relatively higher in-

come was shown to favour participation in walking and sports ( $p \leq 0.01$ ). It was established that women NA, ranking their health condition as better than that of other women at the same age, also more frequently participated in recreational sports ( $p \leq 0.01$ ) (Table 4).

## **Discussion**

The studied group of former athletes showed a higher frequency, longer time spent on and more intensive forms of PR activities than the control group. Significant exercise activity is also confirmed by the results of other authors. A study of recreational exercise activity of former athletes from different sports clubs from eastern Polish provinces, who had their sports career terminated for at least 5 years showed that as much as 86% of the surveyed former athletes use their abilities acquired during competitive training for recreational and health as well as fitness-building purposes. However, only 57% of the surveyed perform physical exercise regularly, about 40% - sporadically (at times), and 56% of the entire population – on a seasonal basis. Based on these findings the author concludes that sports clubs in a more or less unintentional way prepare their members for participation in different PR forms in their later decades of life, after they terminate their sports careers (Litwiniuk 1994).

Lipowski (2005) found that former athletes – as compared to women without competitive sports experience – devote more time to PR, practice it more frequently and undertake more varied forms of PR. According to this author „...a sportive past is a good basis for participation in recreational exercise forms” (Lipowski 2005). Also other researchers (Litwiniuk 1994, Dishman and Sallis 1994, Żukowska 1991) underline that sports training in young age is a factor promoting later participation in different forms of PR after the sports career is terminated. According to Żukowska (1991), the experience of competitive sports activity generally determines actual participation in PR, needs for and motives for this participation and related knowledge and abilities, transferred into family life, and social and work environment. All this defines the lifestyle of former athletes irrespective of the social group surveyed. Participation of the subjects (aged 18-30 years) in PR activities is, additionally, determined by education but the effect of social origin and profession is almost negligible.

Participation of women from the control group in PR was characterised by lower frequency, shorter time and less intense forms than it was the case for the group of former athletes. Low physical activity of women, in particular of the elderly ones, is also documented in a nation-wide study of selected health determinants carried out by Kuciarska-Ciesielska (1998) on 20 thousand households. The most common form of PR among women of all age categories is



walking (Charzewski 1997). Zawadzka and Ferenc (1998), examining social aspects of recreation among young women, residents of Wrocław (Poland), showed that a walk is a popular form of recreation among 62% of physical workers, 88% of mental workers and walking is performed also by 63% of unemployed women. However, they treat walking as a family and social event. Avoidance of intense physical exercise by women (mothers of young children) was also confirmed by results obtained by Drabik (1995a) who found that 22% of surveyed women spent no time at all during a week for such activity and more than half of them, only 10–30 minutes per week.

An analysis of participation of women aged 25, 35 and 50 years in organised sports or recreational activity by age, urban situation and educational level showed that their sports abilities and physical activity are rather low. In the group of women aged 25 years 2-4% of physical workers and about 11% of mental workers practice some sport disciplines and in the group of the 50-year-olds these numbers are 4% and 6%, respectively. Women's non-professional physical activity is limited by work-related (in particular in case of professional physical work) and household activity-related fatigue and by "matrimonial involvement". Additionally, participation of women in organised PR forms (especially in sports activities) in all age categories decreases along with low educational level and residence in small cities and villages (Charzewski 1997).

More than half of the women participating in recreation and sports activities have intermediate education and less than 20% - higher education. "Choosing sports and recreational services, as a form of spending leisure time, by individuals with higher and secondary education is probably a result of more controlled selection of leisure time activities with respect to potential benefits for mental and physical health" (Marciszewska 1999). Also other authors stress that participation in exercise activities increases along with the educational level (Szeklicki 1997, Łosień and Zając 1998, Stephens and Caspersen 1994). Lipowski (2005), based on analysis of 1300 women aged over 18 years, showed that over half of the women participating in PR activities have secondary education and 35% - higher one. However, our own analysis of the women from the control group, as well as a study of a representative group of 671 women aged 20–74 years, residents of Warsaw (Waśkiewicz and Sygnowska, 2006), did not show the positive effect of relatively higher educational level on women's participation in PR activities.

A study of women aged 22-60 years, performing mental work, confirmed that sport activities is treated by these women as „...a reflection of some psychic, social and financial comfort. Therefore, according to their opinion, the families that do not experience everyday life obstacles and financial shortages may par-

ticipate in sport activities". The author found that PR is only rarely perceived by these women as a factor that may alleviate life's difficulties and represent a source of individual's vital forces and a means to maintain health and working ability in a long-term perspective (Nowocień 1995).

Zawadzka and Ferenc (1998), surveying young women (aged 21-35 years), showed that for 32% of respondents recreational sports, considered a form of active recreation, already has become an element of their lifestyle. However, the authors found clear differences in forms of exercise recreation among particular groups of women studied: the percentage of women participating in recreational sports activities constituted 18% among physical workers, 36% among clerks and 32% among teachers. According to the authors, the reason for these differences is not hard physical work of the physical workers but rather unwillingness and a lack of "a good example" in the closest environment.

According to Drabik (1995b) the factor determining appropriate recreational behaviour is comprehensive knowledge on positive effect of physical exercise on the human body. However, current knowledge of Polish women on PR issues appears to be superficial and incomplete, which is the cause of their ambivalent attitude to exercise. On one hand, they appreciate the health-promoting need for recreation, but on the other one, they rank exercise deficit (as a health risk factor) far behind other risks, such as alcohol and nicotine use (Parnicka 2000).

Own study of women aged 18-51 years without competitive sports experience demonstrates that decreased participation in PR activities is significantly related to low income level, failure to undertake an employment and married status. However, educational level, age and area of residence showed in this group of women no relationship with any of the analysed variables defining participation in PR activities. In the group of former female athletes, the most important socio-economic determinants of low participation in PR activities were as follows: low educational level and low income and – to a lesser extent – failure to undertake employment. Subjects' age, residence area and marital status did not affect any of the analysed aspects of participation of former athletes in PR activities.

A comparison of socio-economic determinants of participation of former athletes and of control female subjects in PR activities leads to a conclusion that there was no significant relationship between performing recreational exercise and age and residence area in any of this group. However, among analysed characteristics of social status in both groups of women there was a marked favourable effect of the following variables on women's participation in PR activities: a higher income, undertaking of employment or educational activi-

ties, and additionally, in the group of former athletes – a higher than average educational level and in the control group – single marital status.

Analysis of demographic determinants of undertaking physical exercise by American women, where only one variable relating to PR was taken into consideration (frequency) showed unfavourable effect of a low educational level and low income (US Department 1996, CDC 1991). A negative relationship between frequency of undertaking PR activities and low educational level (among former athletes) and low income (in the control group) was found also in own study. In the above-mentioned group of American women, it was also found that the elderly individuals practice physical exercise less frequently than the younger ones (US Department 1996, CDC 1991), which was not confirmed in own study of former athletes and of women without competitive sports experience.

Results of other authors and of own surveys confirms, in spite of methodological differences and consideration of different characteristics of participation in PR, that PR among women is strongly rooted in the culture and social background, which should be taken into account while developing programs aiming at increased women's participation in different forms of PR.

In this study, the most prominent (i.e. with respect to all variables characterising participation in PR) was the relationship between PR and health condition self-assessment of the subjects in both study groups. Also Drabik (1997) points out to the role of health condition in undertaking physical exercise. He underlines that susceptibility to disease, a disease or injury paradoxically decrease motivation to undertake physical exercise; it is more frequently the case for adult women than for adult men. A positive relationship between high health condition self-assessment and different forms of health-promoting activities is also pointed out by Ostrowska (1999) who concluded that this relationship is undoubtedly reciprocally enhancing in nature: well-being mobilises health-promoting activities and these activities in turn enhance well-being. An important role of general feeling in explanation of differences in recreational activity is maintained irrespective of determinants of the social status.

The statistical analysis of the data collected enables to define groups of women with difficult access to PR; these include women with low income level, unemployed, married, with negative health condition self-assessment. These groups should be given multidirectional support of both state and local offices aiming at improvement of their access to PR activities and, thus improvement of their health condition. These actions, however indispensable, may appear insufficient as a high social status increases women's chances for participation in PR but does not guarantee undertaking of physical exercise. An improve-

ment of physical activity among women may also be reached by popularisation of sports activity among girls because – as demonstrated in this paper – a sportive past has a significant positive effect on later participation in recreational activities and it additionally favours high self-assessment of health condition (Woitas-Ślubowska 1998), which is a factor determining frequency, time spent on and forms of recreation (Tables 2-4).

## ***Conclusions***

1. Women's participation in PR is significantly determined by previous competitive sports training, positive health condition self-assessment and a relatively high social position.
2. Competitive sports experience in the past does not compensate for the unfavourable effect of a low current social status of a woman on her participation in PR activities.
3. Among the examined characteristics of women's participation in PR, exercise forms and time spent on recreation appeared to be the most susceptible to the influence of unfavourable socio-economic factors and PR frequency – the least susceptible one. It implicates a necessity to include in studies on participation in PR a number of carefully selected variables.
4. The actions increasing women's access to PR should take two directions: they should aim at popularisation of competitive sports among girls and create conditions for a rise of women's social status (employment, increased income, education), which will enable them to make health-promoting decisions.

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