

PART II. PHYSICAL ACTIVITY OF SOCIAL AND PROFESSIONAL GROUPS

FROM INSPIRATION TO ACTION: ACTIVE PEOPLE MOTIVATE OTHERS TO BE PHYSICALLY ACTIVE

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- A. Study design/planning
- B. Data collection/entry
- C. Data analysis/statistics
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Summary

Background. The aim of the study was to find out what inspires people who practice Nordic walking and running to be physically active. It was decided to examine who mainly motivated the respondents to take up physical activity. Another important issue was to investigate how physically active people who participate in sports events influence the interest in physical activity of other family members, friends, acquaintances and colleagues.

Material and methods. The study involved 209 people, including 108 men and 101 women. The study was conducted using an online questionnaire. The purposeful sampling method was used. The questionnaire consisted of closed and open questions, covering, among others, inspirations, behaviors, motivations regarding physical activity of the surveyed people.

Results. Most respondents claim that they need one source of inspiration to undertake physical activity, colleagues and acquaintances, and to a lesser extent support from family members. The analysis of the relationship between the sources of inspiration for physical activity among respondents showed a dependence on education and age. People participating in running and Nordic walking events inspire others to physical activity. Most often, it is family, colleagues and acquaintances.

Conclusions. The results of the presented study indicate a positive influence of inspirators on increasing the physical activity of people of different ages. This fact should be taken into account when creating a strategy for the development of physical activity.

Keywords: Nordic walking, physical activity, motivation, inspiration, running

Introduction

Living in the modern world, despite many conveniences, requires special care to maintain health. In recent years, there has been a significant increase in interest in the so-called healthy lifestyle in the context of physical activity,

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especially that which is widely available to everyone, does not require special equipment or major financial outlays. Such activities include running and the currently popular Nordic walking [1,2]. Often, however, awareness of the benefits of physical exercise is not enough to make a decision to systematically engage in physical activity and additional inspiration is needed, i.e. influence on someone, encouragement, suggestion, persuasion, model or inspiration.

Running and Nordic walking practiced in the form of systematic training and, consequently, participation in competitions take on additional significance. Both running and Nordic walking competitions are a kind of a spectacle, which has its audience, which inspires and motivates to physical activity [3]. Running and Nordic walking are aerobic activities, characterized by simplicity, economy and safety of their practice, and also directly translate into increased physical capacity [4,5].

Physical activity provides basic health benefits at various stages of life [6]. Low effectiveness of interventions, especially among young people, results from the lack of knowledge about the mechanisms responsible for changing behavior [7]. Identifying the “mediators” of behavior (activators of behavior change) is essential for the progress of research on physical activity – it allows researchers to determine which elements of the intervention are responsible for mediating behavior change.

Ways to be active are sought. Physical activity in the fresh air gives us great opportunities [8], as well as stress-reducing relaxation exercises [9]. Physical activity habits, which we have thanks to our family and various institutions, such as school, are also important. If these habits are permanent, they allow us to be active.

There is evidence that anyone who increases their level of physical activity, even after long periods of inactivity, can achieve health benefits regardless of age. Physical activity is crucial in positively shaping the health, development and physical fitness of children and adolescents and in preventing many chronic diseases among the adult population. On the other hand, it is known that insufficient levels of it are a risk factor for many heart and vascular diseases, obesity, type II diabetes, osteoporosis and some cancers [10]. In addition to personal factors, the environment also influences the level of physical activity. The influence can have physical, social and economic dimensions. To ensure the integration of policies that translate into increased daily physical activity, close and coherent cooperation is necessary between both public and private entities in the coordination of policies on sports, health, education, transport, urban planning, the work environment, recreation, etc. If the policies are effectively integrated, choosing a healthy lifestyle will not be a problem for society [11]. According to Gajda [12], many people, due to their insufficient level of physical activity and age (often retirement), believe that it is too late to start physical activity. It is expressed by a lack of faith in a positive effect. In addition, a significant percentage of the population is unable to perform various types of exercises because being physically active has never been an attractive way for them to spend their time. Therefore, the society should be made aware that it is never too late to do something important for your health.

Aim of the work

The aim of the study was to answer the question whether people who systematically engage in physical activity (for example running and Nordic walking) and regularly participate in sports events inspire their loved ones (family, friends) to be active through being followed? It was also decided to investigate who mainly motivated the respondents to engage in physical activity.

Material and methods

The study involved 209 people competing in running and Nordic walking competitions at various distances. Among them, there were 108 men (51.67%) and 101 women (48.33%). Most had higher education – 154 people (73.68%). There were 46 people with secondary education (22.01%), and the smallest group were people with education lower than secondary – 9 people (4.31%). In the age structure of the sample, the most numerous group was the group of people under 40 years old, it constituted 40.19% of all respondents (n=84). The second largest age group was the group aged 50-59, it constituted 34.93% of all respondents (n=73). The least numerous group was people aged 60 and over (n=52 people; 24.88%). Attempts were made to reach respondents who have children or grandchildren.

The survey was conducted using an online questionnaire, it was developed specifically for the purpose of collecting data on the physical activity of participants in running and Nordic walking competitions. A purposive sampling method was used. Recruitment for the study was conducted during the competition among its participants. The questionnaire was sent electronically directly to those who agreed to complete it. During recruitment and in the introduction to the survey questionnaire, people were informed that the answers were collected anonymously and that they could refuse to participate in the study at any time. The questionnaire consisted of questions covering, among others, inspirations, behaviors, motivations regarding physical activity of people participating in running events and opinions of the environment in which they live. The survey questionnaire was designed in such a way that it was possible to analyze the relationships and assess the scale of the phenomena studied. The definitions of variables and the coding method are presented in Table 1.

Table 1. Variables and their values

Variable name	Definition	Value range/coding
Gender	gender of respondents	male – 1, female – 2
Age	age group of respondents	<40 years old – 1, ≥40<50 – 2, ≥50 – 3
Education	the highest level of education of the respondents	higher – 1, secondary and lower – 2
Training period	the period of running practiced by the examined person	<6 years – 1, ≥6 years – 2
Source of inspiration	a person or entity that inspires the person being examined to engage in physical activity	colleagues or acquaintances: yes – 1, no – 2 mass media: yes – 1, no – 2 oneself: yes – 1, no – 2 spouse/partner: yes – 1, no – 2 physical education teacher: yes – 1, no – 2 parents: yes – 1, no – 2 children/grandchildren: yes – 1, no – 2 doctor: yes – 1, no – 2
Acceptance of physical activity	attitude of family members towards the interest in sports of the surveyed persons	positive – 1, neutral – 2, negative – 3
Encouraging to run	respondents encouraging other people to run	yes – 1, no – 2

Variable name	Definition	Value range/coding
Family members encouraged to be physically active	degree of relationship of family members encouraged to engage in physical activity by respondents	spouse/partner: yes - 1, no - 2 children/grandchildren: yes - 1, no - 2 siblings: yes - 1, no - 2 other family members: yes - 1, no - 2
Non-family members encouraged to be physically active	non-family members encouraged to be physically active by respondents	friends: yes - 1, no - 2 colleagues: yes - 1, no - 2 neighbors: yes - 1, no - 2 other colleagues: yes - 1, no - 2

The results of the study were statistically analyzed using the Statistica program version 13. The applied measures of occurrence (so-called “frequencies”) – the distribution of answers to the questions given by the respondents, are the percentage and *n* – the number of respondents, corresponding to the percentage. In order to check whether there is a statistically significant relationship between qualitative variables, the chi-square test of independence was used. Statistical analysis was performed assuming statistically significant values of $p \leq 0.05$ [13].

Results

The study participants were asked to indicate at least one source that inspired them to take up physical activity. The results showed that for 74.16% of the respondents, only one source of inspiration was enough to take up physical activity. In turn, 18.66% of the respondents needed motivation from two sources, while 7.18% from three or more to make the decision to engage in physical activity. Analysis of the types of inspirers showed that friends and colleagues (55.5%) are the group that most often played a key role in introducing physical activity. Almost every fifth respondent (18.66%) was influenced by the encouragement from the mass media. A significant number of respondents (16.75%) indicated themselves as the inspirer, i.e. internal inspiration resulting from previous experiences, the need for movement, awareness of the importance of physical activity in life, or deriving pleasure from it. Parents shaping attitudes, norms and values, providing emotional, organizational and financial support, mainly during childhood and youth, were the inspirers of physical activity for 12.44% of the respondents. Physical education teachers, whose task is to shape young people’s attitudes by fulfilling a role aimed at raising the level of fitness and movement skills and promoting physical activity, were slightly less likely than parents to inspire them to take up activity (9.09%). Also, children and grandchildren proved to be a motivating force for 9.09% of respondents to spend their time actively. The least likely people to inspire physical activity were a spouse or partner and a doctor (the sources were indicated by 3.35% of respondents each), as well as other people (6.22% of respondents) (siblings, extended family).

For the purposes of the study, the relationship between various sources of inspiration for the respondents to engage in physical activity and their gender, level of education and age was analyzed. The results showed that there were no statistically significant differences between women and men. Both women and men indicated individual sources of inspiration with similar frequency. The analysis of the relationship between the level of education of the respondents and the sources of inspiration showed a significant relationship only with independent motivation and undertaking activity without external inspiration ($\chi^2=9.20(1)$, $p=0.002$). It suggests that people with higher education are more likely to undertake physical activity on their own initiative – internal motivation plays a greater role for them, as compared to people with secondary and lower

education. Analysis of the dependence of the source of inspiration on age showed that there are statistically significant differences between the age groups of the respondents and the sources of their inspiration for physical activity such as: friends, mass media and parents (Table 2). The media and parents are more likely to inspire respondents under 40 than older people. Friends or colleagues are more likely to inspire people aged 40 or more (Table 3).

Table 2. Diversification of sources of inspiration for physical activity by age groups

Inspirer*	Age in years**						Chi-square (df)	p
	<40 years		≥40<50		≥50			
	n	%	n	%	n	%		
Colleagues or friends	37	44.05	47	64.38	32	61.54	7.56(2)	0.02***
Mass media	29	34.52	5	6.85	5	9.62	23.44(2)	0.000***
Oneself	14	16.67	14	19.18	7	13.46	0.71(2)	0.7
Spouse/partner	4	4.76	3	4.11	0	0	2.45(2)	0.29
Physical Education teacher	8	9.52	6	8.22	5	9.62	0.104(2)	0.95
Parents	16	19.05	9	12.33	1	1.92	8.65(2)	0.01***
Children/grandchildren	5	5.95	8	10.96	6	11.54	1.686(2)	0.43
Doctor	3	3.57	2	2.74	2	3.85	0.136(2)	0.93
Others	6	7.14	3	4.11	4	7.69	0.873(2)	0.64

Notes: * – out of the number of respondents in a given age group, ** – possibility to indicate more than one type of inspirer, *** – significant difference at the level of $p \leq 0.05$.

Table 3. Diversification of sources of inspiration for physical activity between different age groups

Inspirer*	Age in years**						Chi-square (df=1)	p
	<40 years		≥40<50		≥50			
	n	%	n	%	n	%		
Colleagues or friends	37	44.05	47	64.38	32	61.54	6.49	0.01***
	37	44.05	47	64.38	32	61.54	3.93	0.05***
	37	44.05	47	64.38	32	61.54	0.11	0.75
Mass media	29	34.52	5	6.85	5	9.62	17.63	0.000***
	29	34.52	5	6.85	5	9.62	10.63	0.001***
	29	34.52	5	6.85	5	9.62	0.32	0.57
Parents	16	19.05	9	12.33	1	1.92	1.32	0.25
	16	19.05	9	12.33	1	1.92	8.61	0.003***
	16	19.05	9	12.33	1	1.92	4.47	0.04***
Children/grandchildren	14	25.00	34	64.15	25	62.50	16.94	0.000***
	14	25.00	34	64.15	25	62.50	13.60	0.000***
	14	25.00	34	64.15	25	62.50	0.03	0.87
Siblings	23	41.07	8	15.09	5	12.50	9.03	0.003***
	23	41.07	8	15.09	5	12.50	9.22	0.002***
	23	41.07	8	15.09	5	12.50	0.13	0.72

Inspirer*	Age in years**						Chi-square (df=1)	p
	<40 years		≥40<50		≥50			
	n	%	n	%	n	%		
Other family members	11	7.38	2	3.77			6.53	0.01***
	11	7.38			0	0	8.87	0.003***
			2	3.77	0	0	1.54	0.21

Notes: * – out of the number of respondents in a given age group; ** – possibility to indicate more than one type of inspirer; *** – significant difference at the level of $p \leq 0.05$.

The vast majority of respondents (80.38%) believe that family members have a positive attitude towards their interest in sports, 18.66% are indifferent and 1.85% have a negative attitude. Statistical analysis showed that the family’s attitude towards the respondents’ interest in sports is not dependent on their education and age, but is related to gender ($\chi^2=6.49(2)$, $p=0.039$). It turned out that family members more often present a positive attitude when women are involved in sports.

The test result $\chi^2=4.03(1)$ indicates a statistically significant relationship ($p=0.045$) between the period of active running (<6 years and ≥6 years) and encouraging others to participate in running events (Yes, No). Based on the analysis of percentage values, it can be concluded that people who have been training for at least 6 years are more likely to motivate others to participate in running events (90.18%) than people who have been training for a shorter period (80.41%).

The study collected data on the extent to which respondents influenced the involvement of family members and people outside the family in physical activity. The study revealed that 70.33% of respondents encouraged at least one family member to be physically active. The most frequently indicated were spouses (57.82%) and children/grandchildren (49.66%), and to a much lesser extent siblings (24.49%) and other family members (8.84%). The respondents, regardless of gender and level of education, did not differ statistically significantly in encouraging family members based on their degree of kinship to be physically active. Significant differences occurred in the analysis taking into account the age of the respondents. It turned out that older respondents aged 40 or more were more likely to encourage their children/grandchildren to be physically active than those under 40, while people from the youngest group were more effective in motivating siblings and other family members (Tables 3-4).

Table 4. Relationship between the age of the respondents and the degree of kinship of family members encouraged to engage in physical activity

Degree of relationship*	Age in years**						Chi-square (df)	p
	<40 years		≥40<50		≥50			
	n	%	n	%	n	%		
Spouse/partner	29	51.79	33	62.26	23	57.50	1.22(2)	0.54
Children/grandchildren	14	25.00	34	64.15	25	62.50	20.69(2)	0.000***
Siblings	23	41.07	8	15.09	5	12.50	14.09(2)	0.001***
Other family members	11	7.38	2	3.77	0	0	13.84(2)	0.001***

Notes: * – out of the number of respondents in a given age group; ** – possibility to indicate more than one type of person; *** – significant difference at the level of $p \leq 0.05$.

The respondents not only encouraged family members, but also people from outside. The collected data shows that every ninth in ten respondents (90.91%) managed to encourage at least one person from outside the family to take up physical activity. Most often, they were friends (69.47%) or colleagues from work (68.42%), slightly less often neighbors (26.32%) and other colleagues (28.95%). Respondents aged 40 or more were significantly more likely to encourage their friends to be physically active ($\chi^2=15.29(2)$, $p<0.001$). On the other hand, people with higher education were more likely to encourage their colleagues to be physically active than those with secondary or lower education ($\chi^2=5.21(1)$, $p=0.02$).

Discussion

Preparation for lifelong physical activity is an extremely important factor. In education for an active lifestyle, the most important role is played by the closest environment of a child's development, where the child acquires habits, learns pro-health behaviors, and spends free time [14]. At school, the main role in popularizing sports is played by physical education teachers, who, with their attitude and actions, build a sports atmosphere and encourage students to act and compete in sports [15]. The simultaneous influence of the family home, kindergarten and school, as well as institutions promoting physical culture, promotes comprehensive education in physical activity, builds healthy lifestyle habits, and teaches health care. The research by Freedons and Evenson [16] shows that active parents have a greater chance of raising active children. Inactive parents mean inactive children. The research by Bronikowski et al. [17] shows that the effects of the classes conducted in which parents and children participated in relation to significant changes in selected physical and psychosocial parameters turned out to be insignificant. However, it can be stated that one important goal was achieved, there were more frequent family social behaviors (walks, meals, relative visits). In turn, Tabak's research [18] found that children of physically active parents are physically more active than their peers whose parents do not practice sports. Attention was also paid to the joint activity of young people with their parents and siblings. The decrease in its frequency was considered alarming. It is postulated to increase the physical activity of parents. Pańczyk [19] believes that it will be difficult for a modern school to limit the extent of hypokinesia among students, and consequently also in adult populations. In his opinion, however, it is a necessary for better development and health. The results of the study by Pluta et al. [20] indicate that school-based interventions aimed at adolescents should in particular take into account family, teachers and peers as important sources of social support in promoting overall physical activity, the aim of which is to increase its level.

The authors of the study focused on adults practicing running and Nordic walking. The particular interest in the form of exercise among both study participants and researchers should be sought in the broad health benefits of these activities (physical and mental) [21-23]. It should be emphasized that scientific research on the issue has already been conducted [24,25].

Our respondents are physically active people, participating in sports and recreational events. Analysis of the type of inspirers showed that colleagues/friends and acquaintances are the group that most often played a key role in introducing physical activity. An analysis of the relationship between the sources of inspiration for physical activity showed a dependence on education and age. In people with a higher level of education, internal motivation plays a greater role, as compared to people with secondary and lower education. It is undoubtedly related to the level of knowledge and awareness on the subject [21]. According to Lubans et al. [7], self-efficacy may be a mediator of behaviors related to physical activity. The results of our study show that people with higher education are more likely to undertake physical activity on their own initiative. The theory of self-efficacy assumes that people who believe in their ability to be physically active will perceive

fewer barriers or will be less influenced by them. They will tend to pursue the perceived benefits of being physically active and derive pleasure from exercise [26].

As emphasized by Szaniawska et al. [27], along with technological progress, trends/fashion, increased awareness and easy access to information, there is a significant interest in the topic of a healthy lifestyle, including the issue of physical activity. It is particularly visible in social media. The dependence of the source of inspiration on age showed that significantly more often the mass media is the inspiration for people under 40 years of age, which concerned one fifth of the studied population. According to the research conducted by Smith and Bonfiglioli [28] in Australia, physical activity was considered a matter of personal will and, in the case of children, the responsibility of parents. Respondents believed that the media paid too little attention to physical activity, focused too much on the risks and did not provide practical advice. It should be noted that the users of social media are mainly young people [27], hence it is extremely important to promote actions, activities, social campaigns and, above all, education to raise awareness of not only the need, but even the necessity, of being physically active. The Internet is a huge source of information – it can be a place to acquire scientific knowledge, it can also be used for communication, but due to easy access and lack of control and supervision it can also become a dangerous place in terms of available content. It is worth emphasizing that broadly understood social media can also have a positive impact on society, which is manifested by the body positive movement, or body positivity. The approach promotes self-acceptance of one's own body and motivation to notice its beauty [29].

The results of our research indicate that friends and colleagues are the most important source of inspiration for older people. In the case of the age group, there is a specific justification for the most effective socialization of seniors in a peer group, as evidenced by, among others, research on this subject conducted by Samiec et al. [30].

Physical education teachers, whose task is to shape young people's attitudes by fulfilling a role aimed at raising the level of fitness and movement skills and promoting physical activity, were slightly less likely than parents to inspire them to take up activity. As the research showed, parents and physical education teachers are less important in the current lifestyle of respondents than a group of friends. The results correspond to our previous studies, as were also conducted on physically active people and concerned physical activity undertaken during COVID-19 [31].

Another important issue that was highlighted was the role of physical activity animators played by our respondents. As shown by the results of the research by Szark-Eckardt et al. [32], animation is an essential element influencing the increase in participation in physical activity. Animation activities consist in stimulating others to act, gathering groups of people with similar passions and interests, activating the community to undertake activities that make free time more dynamic and intensified [33]. The subjects were people participating in various types of competitions that required systematic training. The research showed that there is a desire to spark the interest in sports not only among family members, but also among friends and work colleagues. It should be emphasized that inspiring others to be active was more effective among active older people with more sports experience. Spouses, acquaintances and friends were mainly encouraged. Children and grandchildren were also encouraged. It corresponds with the research by Pawlak [34], he draws attention to the great role of grandparents in sparking the interest in physical activity among their grandchildren. Our earlier studies, which were conducted on participants of long-distance running events, also show the trend. If one family member participated in running competitions, it motivated other family members to be physically active. It was expressed, among other things, in participation in trips to events to support and in active participation in races at various distances. The promotion of physical activity

by the respondents was also expressed through conversations about participation in competitions with family and friends [35].

Limitations

It should be noted that the study participants were mainly people with higher education and in a certain age group. The uneven distribution of data in some categories may limit the generality of the results.

Conclusions

It can be assumed that the surveyed people – active physically, are a useful diagnosis illustrating the scale of involvement in the promotion of physical and health activity using existing conditions for running and Nordic walking. They also indicate areas that require intensification of activities to build health awareness of the community. They define and highlight the role of sports animators who directly influence the immediate community in terms of promoting physical activity and health-promoting habits and behaviors.

The results of the presented studies indicate a positive impact of inspirers on increasing physical activity of people of different ages. However, we see a niche in the area of assessing the level and intensity of inspiration to undertake physical activity – in order for the results to be comparable, a uniform research methodology should be developed. There is a need for further exploration in the area in order to verify the long-term effects resulting from specific sources of inspiration. The results of our research can be used to develop strategies to increase physical activity in modern society, which has a significant impact on population health.

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