## USING ADOLESCENT INTEREST IN SWIMMING TO ACCOMPLISH UTILITARIAN GOALS OF EDUCATION

Andrzej ROKITA<sup>1</sup>, Marcin SCISLAK<sup>1</sup>, Marek REJMAN<sup>2</sup> <sup>1</sup> Department of Team Sports, <sup>2</sup> Department of Swimming, University School of Physical Education, Wroclaw, Poland

## ABSTRACT

As drowning is a serious threat to life, aquatic education is a necessity. The aim of this study was to carry out a quantitative analysis of students' expressions of interest to participate in swimming activities compared to interests in other forms of physical activity. A total of 1328 girls and boys aged 16–18 years participated in the research. Subjects were at three different levels in nine high schools in a city in Poland. When completing a standardised questionnaire, respondents indicated and ranked five activities in which they were most interested. Relationships between interests, gender and age were analysed. Swimming evoked the most interest in adolescents, which was higher in girls than in boys and more permanent and stable throughout the monitored period. Despite the lack of swimming pools in the schools and the institutional mentoring, adolescents declared interest in swimming in almost each of the examined schools. Motives accompanying these interests are spontaneous in nature. Their skills and behaviours (safety) reveal negligence of the educational system. Adolescents' interest in aquatic education can be used to shape attitudes towards physical culture and implement the utilitarian goals of education.

*Keywords*: Educational objectives; Adolescent development; Health behaviour; Swimming.

### INTRODUCTION

For centuries, physical culture has been a part of human culture. Despite the differences associated with diverse communities, it has a universal, transnational dimension. This is confirmed by the widely recognised cultural model of ancient Greece – *kalos kal agthos* (Salemi, 2009) patterns (known as Feng-Shui) taken from the Shui civilisation in ancient China. In order to achieve harmony with the surrounding environment, Shui people practiced their traditional forms of physical activity as wushu, athletics and other original recreational activities (Ya-qiong *et al.*, 2007). The assimilation of propagated cultural models, values, attitudes and behaviours takes place in the context of physical education. Consequently, the most general definition of physical education was adopted in this study, namely a process through which favourable adaptation and learning result from and proceed through vigorous physical activity (Kent, 2006). Physical activity is "any form of body movement ... that involves a physical effort" (Kent, 2006:417). Physical activity was understood in our study as the main factor and the agent of the process of physical education that makes the process itself possible but, on the other hand, is subordinated to it.

In order to achieve the educational effect (enduring changes in health behaviour), multilevel interventions that focus on targeting individuals, social environments, physical environments, and policies have to be provided (Sallis *et al.*, 2008). Following Stokols (2000) and Sallis & Glanz (2006) it can be said that in the physical education domain, "behaviour changing is a complex and multifaceted phenomenon that has multiple levels of influences" (Buchan *et al.*, 2012:9), and there is no unified model of research and practice which integrates both ecological and complexity theories (Buchan *et al.*, 2012).

Most often, physical education takes place in the school. The practices of educating children and adolescents in the way of physical culture should focus on the following areas:

- Physical education introducing students to physical culture so that they adopt and cultivate the future-oriented models arising from the culture of the corporeality or physicalness (Ya-qiong et al., 2007; Salemi, 2009);
- (2) *Health education* accepting and cultivating the future-oriented models of physical culture arising from the role of physical activity in healthy living (Xu, 2010);
- (3) *Education for safety* adopting and cultivating the future-oriented models resulting from the responsibility for consequences of actions in the area of physical activity (Moran, 2006; Wiesner, 2008);
- (4) *Education for living in the community* relating to the permanent promotion of best practises in terms of health education, physical education and education for safety (Giles-Corti & Donovan, 2007).

It is the quality of the process of educating for physical education that shapes the transfer of models onto other individuals, groups and communities, and ultimately builds cultural capital. The role of promoting physical education falls on competent educators (teachers/mentors), for whom education is a tool to influence human personality in terms of its self-creation, including the inseparability of learning and teaching. The role of the educator is primarily to meet the needs of a student and to fulfil their expectations by arousing interests (Mosston & Ashworth, 2002). Awareness of knowledge and skills in pursuing these desired interests, passions and behaviours of young people can convince them of the importance of physical culture in a general sense, thus promoting physical, mental and overall public health (Anderson *et al.*, 2014).

Young people's interests in various forms of physical activity have been studied in several spheres. Among other things, the exploration included learning about the structure of these interests (Frömel *et al.*, 1995; Rokita, 2005; Mitić *et al.*, 2012; Ściślak *et al.*, 2013). Telama and Yang (2000) identified relationships between interests in physical activity and motivation for partaking in the activity. The issue of linking interests with the needs and expectations of young people was undertaken by several authors. Inter alia from perspective of Greenwood *et al.* (2001), the immediate quality of the movement experiences provided for the students should be a criterion for the selection of activities within the physical education curriculum. Consequently, it might be more fruitful to divide the students into groups according to, for instance, interest rather than by gender. Bernstein *et al.* (2011) researched the attitudes and perceptions of 24 middle school students toward competitive activities in physical education, and found that, having fun in competitive activities, not all students were attaining motor skills

necessary to participate in activities due to a lack of time to engage in appropriate practice, and the structure of competitive activities.

The social aspect of stimulating interest in physical activity and its cultivation has been studied also. Allen (2003) assessed how the social motivational orientations, achievement goal orientations, perceived belonging, perceived physical ability, and interest in sport contribute toward understanding the sport motivation of youth involving a hundred female adolescents. Suomi *et al.* (2003) investigated interest in physical education and the factors that affect social experiences of fourth grade students, with and without disabilities, in regular physical education classes. The results obtained by Dale *et al.* (2000) suggest that when third and fourth grade students (N=76) spent their recess time indoors at a computer terminal, and no physical education class was scheduled, they did not compensate it by increasing their activity out of school. On this ground the negative consequences of trivialising the need of awaking interests of young people arise. Among the studies reviewed, detailed analyses of adolescents' interest in swimming activities were not found.

Drowning is among the 10 leading causes of death of children and young people in every region of the world. The World Health Organisation Drowning Report (WHO, 2014) also reported that worldwide 372,000 people per annum lose their lives in water and that half of them were under the age of 25 years. This information is a reminder that continuous aquatic education that creates an understanding of the sense and values resulting from swimming skills, based on gaining knowledge and competencies, is a necessary element of a better life strategy (Anderson *et al.*, 2014) both in individual and societal dimensions.

The goals of aquatic education are accomplished on many levels (Wiesner, 2008), including: (1) teaching and learning, schooling, care, organisation of free time and the development of personality in terms of emotions, motivation and attitudes (Pedagogy); (2) organising the system of values that give a sense of meaning to human existence (hedonistic, vital, agonistic, aesthetic and ethical values) (Axiology); (3) promoting health education (medicine); (4) taking the responsibility for developing the competencies of good educators (teachers, trainers and animators in and around water) (Pedeutology); (5) viewing (humanistic) swimming education as a dimension of life-saving education; (6) associating economic consequences of individual and social costs of accidents in water and near water; (7) considering the legal concerns, as expressed in understanding and respecting existing regulation, resulting in compliance with safety standards in and around water; and (8) reflecting on ecology as a form of human coexistence with the aquatic environment.

## PURPOSE OF THE STUDY

Too often swimming education is seen only as a matter of performing swimming movements 'correctly' or swimming the fastest. The concept of acquiring aquatic competence or watermanship (Stallman *et al.*, 2008) is understood in the present study as all-around development of optimal swimming skills and knowledge needed for the prevention of drowning as the way to achieve the wide objectives of aquatic education. In this context, it is presumed that meeting the expectations of young people in swimming might reveal a unique need for aquatic education and controlled stimulation of this need to create positive attitudes. Therefore,

it seemed reasonable to hypothesise that the interest of young people in swimming could be used to implement universal, utilitarian purposes in education.

The aim of this study was to analyse quantitatively the will to participate in swimming activities expressed by students aged 16–18 in comparison to their interests in other forms of physical activity. The main research question was posed: How does interest in swimming compare to interest in other physical activities? In order to investigate the structure of these interests the following questions were asked: (1) Are there any measurable differences between boys and girls aged 16–18 in their declared interest in swimming? (2) Is age and the level of education a factor measurably differentiating the declared interests in swimming among the group of students? In order to monitor how the school meets students' expectation, the question concerning the links between the level of interest in swimming in the selected group and the school they attend, was posed.

#### METHODOLOGY

#### **Participants**

The 16–18-year-old students who participated in this study belong to the age group that is most likely to drown in most developed countries (Brenner, 2003; Saluja *et al.*, 2006). Participants were recruited from nine high schools (HS), which were chosen at random from among 20 schools located in a city with more than 800,000 inhabitants, in Poland. In the environment described, students were selected to maintain the group's homogeneity criteria, adopted in the methodology of Moran's (2006) research, who studied drowning risk from the perspective of ecological model of public health of Sleet and Gielen (2004), assuming that drowning risk conveys through the multiple levels of influence operating at an interpersonal, intrapersonal and community level. A random number generator (Excell, Microsoft, USA) was used to conduct the drawing of HS students from three levels (grades) of education.

		Girls		Boys			Total [girls & boys]			
School	Levels of high school education									
Code	Ι	II	III	Ι	II	III	Ι	II	III	Total
HS-1	54	27	32	20	25	25	74	52	57	183
HS-2	40	26	20	22	27	27	62	53	47	162
HS-3	16	24	30	26	26	27	42	50	57	149
HS-4	43	39	36	23	26	21	66	65	57	188
HS-5	33	26	22	25	32	31	58	58	53	169
HS-6	24	35	29	29	20	21	53	55	50	158
HS-7	44	32	45	21	17	12	65	49	57	171
HS-8	27	12	30	28	25	26	55	37	56	148
Sum	281	221	244	194	198	190	475	419	434	1328
Total		746			582			1328		

Table 1. NUMBER OF STUDENTS ACCORDING TO HIGH SCHOOLS

HS=High school (numbered)

A total of 1,328 girls and boys participated in the study (Table 1). The girls (n=746) accounted for 56.2% of the respondents and 43.8% were boys (n=582). Regarding the levels of education, there were 475 (35.7%) 16-year-olds in Level I, 419 (31.5%) 17-year-olds in Level II, and 434 (32.7%) 18-year-olds in Level III. The age of the participants in the study corresponds with their level of education and therefore accounts for age as a variable when considering their interest in swimming.

## Ethical approval

All students were healthy and had no contra-indications to participate in physical education classes. Prior to the study, they were informed about the research goals and all the research procedures. Consent was obtained from the adult students and from the parents of the younger ones for voluntary participation in the study. The procedures used during the study respected the Helsinki Convention on Human Rights and were granted a positive recommendation from the local Ethics Committee.

## Measurement instrument and procedure

Diagnostic survey was used as the basic research method. The respondents were asked to complete a standardised questionnaire "Interests in Physical Activity" (Frömel *et al.*, 1995). All subjects were familiarised with the technique of filling in the questionnaire, which was anonymous.

In the first part of the survey, respondents included information on gender, age and level of education. In the second part, they indicated four (of the proposed fifteen) forms of physical activity they were most interested in and ranked them in the order of preference. The questionnaire also included an open-ended question in which respondents could indicate "other" preferred forms of physical activity. Interest in physical activities were defined in general as meaning readiness to perform the "pure" form of each activity indicated in the questionnaire (swimming – locomotion in water; team sports – soccer, volleyball, etc.). The survey was organised during physical education classes and supervised by competent academic staff, who were not part of the research process of this study.

### Statistical analysis

In order to verify the statistical hypothesis about the relationship between declared interests in physical activity and the gender of students, the Chi-square test was used (significance was accepted at p<0.05). The hypothesis about the relationship between students' interests in physical activity and their age (level of education) was verified using the Kruskal-Wallis non-parametric test (significance at p<0.05). The same tool was used to study the interests depending on the school the respondents attended. Statistica 9 (StatSoft, USA) was applied for the statistical analyses.

## RESULTS

Adolescents' interest in swimming in comparison to other forms of physical activity showed statistically significant differences in the choices they made. Significant differences in interests declared by girls and boys occurred in relation to swimming, but also in relation to most other

forms of activity listed in the questionnaire (team sports, athletics, kayaking, strength training, running, aerobics, dancing, combat sports, ice and roller skating, sailing and windsurfing).

The age of the respondents (level of education) was a significant factor in making a choice in the case of swimming. The declared interest in swimming had no statistical relationship with the school as a place of education.

### Gender and interest in swimming compared to other forms of activity

The results (Figure 1) indicate that the highest interest declared by *girls* was dancing (13.5% to 18.8%; Mean=15.8) and swimming (14.4% to 16.9%; Mean=15.3). Next in the ranking were team sports (7.9% to 12.5%; Mean=10.1), alpine skiing (7.5% to 13%; Mean=9.6) and ice/roller skating (5.9% to 7.2%; Mean=6.4).

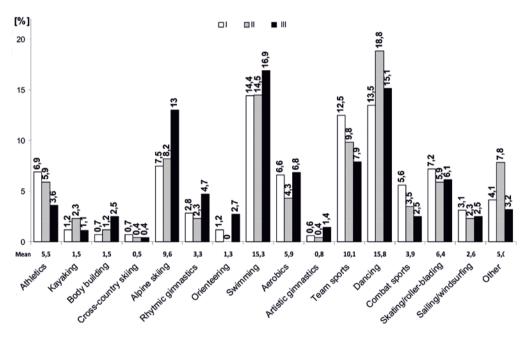


Figure 1. GIRLS' INTEREST IN PHYSICAL ACTIVITIES

The most preferred physical activity for the *boys* (Figure 2) was team sports (17.7% to 31.2%; Mean=24.4). They also showed interest in alpine skiing (9.9% to 12.2%; Mean=11.2), combat sports (8.9% to 10.4%; Mean=9.5), swimming (7.6% to 12.2%; Mean=9.3) and athletics (5.1% to 7.9%; Mean=16.5).

The results suggest that swimming belonged to the group of physical activities that generated the greatest interest in comparison with some other forms declared by adolescents. The interest in swimming among girls was relatively greater than in boys.

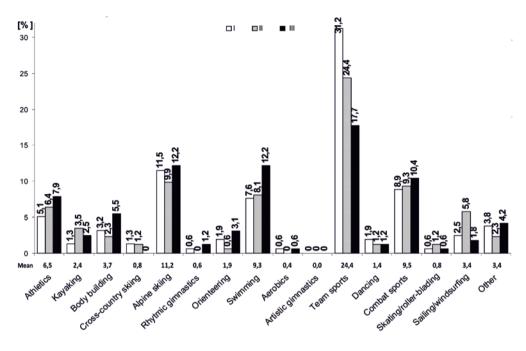
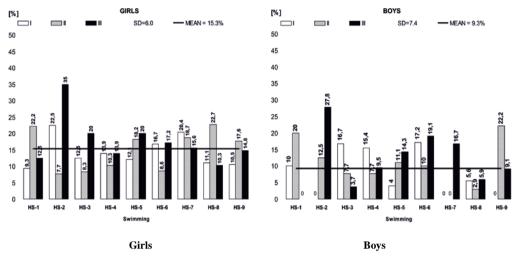


Figure 2. BOYS' INTEREST IN PHYSICAL ACTIVITY

#### Gender interest in swimming for educational level and school attended

In the case of *girls*, the declared interest in swimming increased with age (educational levels) in HS-5. The opposite trend was visible in HS-7 (Figure 3), while, in HS-4, it seemed to stay at the same level. The results for *boys* indicated that the declared interest in swimming increased with age (educational levels) in HS-5. A decline was visible in HS-3. It can be assumed that in HS-8, interest in swimming was almost constant during the period of HS education. Statistical analyses indicated that interest in swimming in the case of both genders increased with age (each consecutive level of education) (Figures 1 and 2). Additionally, when examining the standard deviation values estimated from the percentage of interest in swimming (Figure 3), it could be assumed that interest declared by girls was more stable than that of boys.

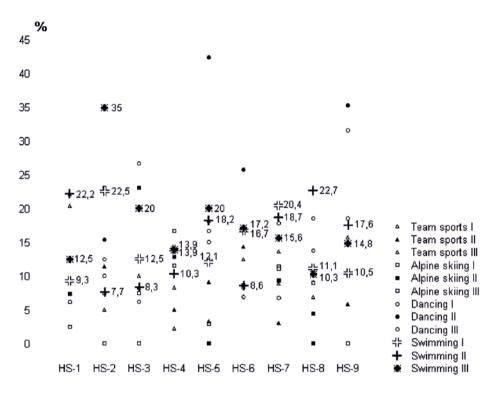


HS=High school; I, II, III=Levels of high school education; SD=Standard Deviation; [%]=Percentage of respondents

Figure 3. INTEREST IN SWIMMING FOR EDUCATIONAL LEVEL

Among the *girls*, it was observed (Figure 4) that in HS-7, they chose swimming as their favourite form of activity at both I and II level of education (20.4% and 18.7% respectively). The interest in swimming was also the highest in HS-2 at level III (35.0%) and in HS-8 at level II (22.7%). The girls from HS-1 (level II), were the most interested in swimming, the same as in team sports (22.2%).

In many schools, the interest in swimming was high in particular levels of education just after the interest in dancing, namely HS-4: Levels II and III (13.9%); HS-5: Level III (20.0%), HS-6: Level I and III (16.7% and 17.2% respectively), HS-9: Level II (20.4% and 17.6%). Only in HS-3, the interest in swimming declared by the girls in Level III gave way to dancing (Level III) and alpine skinning (Level II).

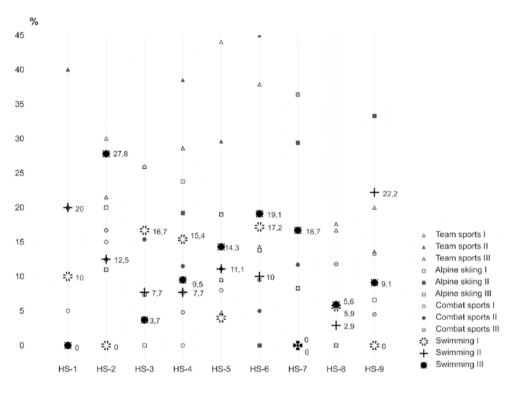


HS=High school; I, II, III=Levels of high school education; %=Percentage of respondents

## *Figure 4.* GIRLS' INTEREST IN PHYSICAL ACTIVITY WITHIN MONITORED SCHOOLS FOR EDUCATIONAL LEVELS

Shown in Figure 5, the *boys* from all the monitored HS did not declare that swimming belonged as their favourite activity. There is an evident lack of interest in swimming in HS-2, and HS-9 at Level I. At the same time their school mates selected swimming as the most preferred form of activity (27.8% and 22.2%) at Level II. Similarly, boys from HS-7 were not interested in swimming at Level I and Level II, while their school mates at Level III often indicated it (16.7%). Lack of interest at Level III was demonstrated by boys from HS-1, swimming was the favourite form of activity chosen by their school mates at Level I and Level II (10.0% and 20.0% respectively).

As mentioned, there is no statistically significant difference between declared interest in swimming and the school attended by students. However, the attention should be paid to: differences between girls and boys in the percentage indicating their declared interest in swimming in all the monitored school, and a comparison of the facts that the girls attending three different schools declared swimming as their favourite form of activity, with no interest in swimming in another three schools as demonstrated by boys.



HS=High school; I, II, III=Levels of high school education; %=Percentage of respondents

# *Figure 5.* BOYS' INTEREST IN PHYSICAL ACTIVITY WITHIN MONITORED SCHOOLS FOR EDUCATIONAL LEVELS

These findings made it possible to conclude that regardless of the age (level of education) of male and female participants, it was not the monitored schools that engendered the interest of the participants in swimming.

#### Sports facilities and activities to choose from in the schools

None of the monitored schools had a swimming pool. In none of these schools could provide the students the opportunity to benefit from organised swimming activities. As part of the schools' extracurricular physical activities, team sports, such as soccer, basketball or volleyball, dominated.

## DISCUSSION

The interpretation of the results was based on the premise that identifying the interests of 16–18-year-old students in swimming (compared to other forms of physical activity) could provide the basis for recognising their individual needs. It was assumed that the interest of young people in swimming could be used to implement universal, utilitarian purposes in education.

The results showed that swimming was one of the most popular forms of physical activity in the group of 16–18-year-old students. This main finding was much clearer in the group of girls than in the group of boys. The forms of activities chosen by adolescents in Poland was analogous with declarations made by their peers in the Czech Republic (Frömel *et al.*, 1995; Frömel & Bartoszewicz, 1998). Swimming was an interesting form of activity also to young people in the USA (Brenner, 2003; Saluja *et al.*, 2006), Australia and New Zealand (Moran, 2006). Referring to the aforementioned studies, it can seem that swimming essentially reflects the needs of adolescents, and a positive attitude toward swimming is a common, universal feature.

In our study, the interest in swimming declared by girls was greater and more stable than that of boys. These results corresponded with the results obtained by Ściślak *et al.* (2013). Then, Zatoń and Kwaśna (2011) revealed that the interest in swimming among adolescent girls appeared to be embedded in autotelic motives resulting from an intrinsic need to exercise and belief in the long-term benefits resulting from these activities.

None of the monitored schools had a swimming pool or offered students an organised swimming activity. Despite the lack of aquatic facilities and swimming mentoring, young people declared these interests in almost each of the examined schools. Then, the opposite thesis to Giles-Corti and Donovan (2007) can be advanced that the infrastructural platform was not a decisive factor in the process of boosting interest in swimming by the examined adolescents. The same conclusion was stated by Mosston and Ashworth (2002) and Moran (2006), although the environmental conditions in the US and New Zealand are more conducive to practising swimming than in Poland. In this light, the source of popularity of swimming must be sought amongst other elements of the adolescent's surrounding environment. Referring to a number of authors (cited bellow), this role could be attributed to parents. However, the parent's contribution in children's swimming education was also deemed an ineffective form of educational effort (Mosston & Ashworth, 2002; Moran, 2006). In this situation, the more likely impact on the interests of young people was individual experiences, knowledge acquired from peers, social networks and media (Moran, 2006; Michalsen, 2008).

Moran (2006) studied the opinions of more than two thousand adolescents in New Zealand. Most of the girls in this study showed a greater and more sustained interest in swimming than boys and indicated that adults (family and school) are the main source of education for safety (Moran, 2006). Boys obtained their knowledge on the subject mainly from peers, among whom anti-safe attitudes and tendencies to provoke and risky behaviours, have been observed (Moran, 2006). This factor is underlined by the WHO (2014) as the reason why males are twice as likely to drown as females. Unfortunately, this type of informal (uncontrolled) education often leads to the initiation of dangerous behaviours resulting from uncontrolled risk taking. An example of this can be found in Moran's study (2014) that analysed one of the websites for publicly

posted video clips from competition in high diving into the water in New Zealand (n=210) and Australia (n=179) against the background of eight fatal incidents caused by this activity reported in New Zealand and 12 fatal incidents in Australia, in 2011. This context reflects that interest in swimming in the examined group of youth (based on positive attitude and positive motivation) was not effectively developed in school education and at home. Therefore, the apprehension of the consequences of lack of control over a direction in evolution of these interests, arises.

#### Specificity of swimming as genesis of young people's interest

According to Wiesner (2008), it appears that the interest of youth in swimming, in spite of the spontaneous genesis (attractiveness of activities), results also from the awareness of multidirectional, utilitarian dimensions of swimming skills. From this perspective, the underlying interest of the youth in swimming may lie in the crisp and expressive axiom of swimming, which distinguishes it from other spheres of human physical activity, namely that the lack of this skill can lead to a loss of life (Brenner, 2003). At the same time, the awareness that participation in the many forms of activities associated with an aquatic environment (made possible by freeing ourselves from feelings of vulnerability due to a lack of swimming skills) can reveal very attractive possibilities in terms of broadly defined hedonistic joy from leisure and sport behaviours (sailing, rafting, surfing) (Wiesner & Rejman, 2014). The source of complacency resulting from performing these aquatic forms of activity may also be the accomplishment of aesthetic needs (Wiesner, 2008). The positive aesthetic feelings accompany, for example synchronised swimmers and also open other water forms of activity (scuba diving, sailing, kayaking, etc.). The perfect way to meet the agonistic needs of the youth is through fair play competition in and around water, in terms of not only sports, such as swimming, diving, water polo or underwater hockey, but also in the realms of recreation and leisure.

The social values (in the ecological framework) resulting from aquatic activities manifest themselves in a unique way when compared with other forms of activity work. Firstly, it is revealed as an attribute of humanity and then, in the broader context, as a need for regeneration following its performance (Zatoń & Kwaśna, 2011). This is confirmed by an example of the work of lifeguards resulting from the need to save human lives and the advantage of this work for society. The interest in swimming affirmed by the adoption of these values may result in a passion and a need to develop in the direction of professional fulfilment (Wiesner, 2008). Other obvious examples here are a coach or a swimming instructor. The utilitarian dimension of swimming is also manifested in the creation of a foundation that would qualify a person commence other professions (instructors of diving, sailing, windsurfing, kayaking), as well as occupations seemingly not related to the ability to swim (on ships or on oil rigs). Furthermore, the ability to swim creates social relationships. Building these kinds of relationships to promote a number of positive behaviours (interaction in groups and responsibility for one's own safety and that of others) (Salemi, 2009).

The aquatic environment, being a place of creative, preventive and regenerative activities undoubtedly boosts the interest in swimming among adolescents burdened with a deficient spirit. For example, in the case of obesity, greater buoyancy resulting from the somatotype features significantly accelerates the process of learning to swim. As a result, young people, who are excluded from activities requiring endurance or agility, are given the opportunity to succeed in an aquatic sphere of fitness, which often translates into acceptance within the peer group. Adding to this, water, by "masking" the imperfections of the body, sometimes eliminates or significantly reduces a sense of embarrassment (during aqua aerobics). Being active in water influences the emotional-motivational sphere, often allowing for participation in physical culture for all that it seems to exclude. According to Tinsley and Tinsley (1986), swimming is one of the few activities that provides such a broad spectrum of physical, social and mental benefits that can serve as a platform for promoting healthy life styles.

# Interest in swimming as a bridge introducing adolescents to a sense of accomplishing universal and utilitarian purposes of education

The WHO (2014) reports that every hour of every day approximately 42 people lose their lives from drowning and the economic cost of lives lost (estimates for Australia, Canada and the USA) ranges from US\$ 85 million to US\$ 4.1 billion per year. It becomes clear that the knowledge of safety in water enhances the quality of life in both the personal and the social dimension (Ito, 2014). Therefore, sharing the optimism of Wiesner (2008), it is possible to educate the youth with water safety in mind. Therefore, education on water safety becomes an integral part of a comprehensive education and adopts a role of the culture-forming factor in both the pedagogical (didactic and educational interactions) and the pedeutological dimension (the training of a person-educator responsible for the process of educating young people).

Educating for water safety should be understood as acquiring knowledge and skills or competencies and, above all else, fostering interest and shaping attitudes that express a responsibility for ourselves and others enjoying the aquatic environment (Moran, 2006). If not acquired, attitudes towards swimming and water safety become negative. As a consequence of uncontrolled sources of motivation, young people take on behaviour patterns, awareness and perception of risk from incompetent people (peers, networks and media) (Ito, 2014). This promotes the formation of pathological situations that go beyond norms of safety and legal or social norms (Franklin *et al.*, 2014). This study supports the assumption of priority importance given to pedagogical pre-orientation, based on the spontaneous interest in swimming, which promotes safe behaviour among students in and around water (Moran, 2006; Giles-Corti & Donovan, 2007). The interpretation of the obtained results within a worldwide perspective, showed similar findings (Frömel *et al.*, 1995; Frömel & Bartoszewicz, 1998; Brenner, 2003; Moran, 2006; Saluja *et al.*, 2006), which created, on the one hand, a notion of a universal dimension of the issue investigated, and on the other hand, it could be understood in terms of confirming the reliability of the current research.

## PRACTICAL IMPLICATIONS

The practical purpose of the study on the youth's interest in swimming was to highlight the urgent need to stimulate educators' actions (parents, teachers, coaches, etc.) in aquatic education. The fact is that drowning is one of the most frequent causes of death among young people, but it seems that educators and education policy makers are not fully aware of the consequences of aquatic education neglect (Moran, 2006). The study showed that the youth's interest in swimming is very high, though gender-linked and age-related. Against this background, the genesis of their interests has been presented here. A number of arguments have

been put forward to convince educators that their actions should purposely focus on helping young people discover and awaken an awareness of the multidirectional dimension of swimming and water safety competencies. This provides a solid base for employing spontaneous interest in swimming for affirmation of the universal, utilitarian purposes in education.

#### CONCLUSIONS

Swimming is one of the most popular forms of physical activity of 16–18-year-olds in Poland. Slightly greater and more permanent interest in swimming are manifested by girls, but boys also seem to express a positive attitude to this activity. Given that the educational environment does not contribute to creating an interest in swimming, nor is it a source of inspiration, we belief that the motives accompanying these acquired interests are of a spontaneous nature. Swimming satisfies the needs and expectations of adolescents. Their uncontrolled evolution, in terms of skills and safe behaviours, implies some neglect in the educational system.

In conclusion, deliberately discovering and awakening young people's awareness of the multidirectional, utilitarian dimension of swimming and water safety skills based on spontaneous interest in swimming, can lead to an affirmation of universal values. Based on the solid foundation of the need for activity evolving into a passion, swimming can be a platform for adopting and cultivating desirable models of physical education in a broad spectrum of education for life. Linking the education-forming role of creating and promoting interest in swimming, we postulate that aquatic education should focus not only on performing swimming movements correctly or swimming fastest, but also on the true ability (skills and mental competences) to swim safely, thus becoming an integral part of a comprehensive adolescent education curriculum.

#### REFERENCES

- ALLEN, J.B. (2003). Social motivation in youth sport. *Journal of Sport and Exercise Psychology*, 25(4): 551-567.
- ANDERSON, A.R.; RAMOS, W.D. & MIDDLESTADT, S.E. (2014). A narrative investigation into dimensions of experience at outdoor aquatic facility: A pool is more than a place to swim. *International Journal of Aquatic Research and Education*, 8(2): 143-156.
- BERNSTEIN, E.; PHILIPS, S.R. & SILVERMAN, S. (2011). Attitudes and perceptions of middle school students toward competitive activities in physical education. *Journal of Teaching Physical Education*, 30(1): 69-83.
- BRENNER, R.A. (2003). Violence and poison prevention: Prevention of drowning in infants, children and adolescents. *Pediatrics*, 112(2): 437-439.
- BUCHAN, D.S.; OLLIS, S.; THOMAS, N.E. & BAKER, J.S. (2012). Physical activity behaviour: An overview of current and emergent theoretical practices. *Journal of Obesity*, Article ID: 546459, 11pp. (online).
- DALE, D.; CORBIN, C.B. & DALE, K.S. (2000). Restricting opportunities to be active during school time: Do children compensate by increasing physical activity levels after school? *Research Quarterly for Exercise and Sport*, 71(3): 240-248.

- FRANKLIN, R.C.; KING, J.C.; WATT, K.; AITKEN, P.J. & LEGGAT, P.A. (2014). Media, risk and prevention lessons for aquatic safety from newsworthy deaths: Principle for prevention or just good tales. *International Journal of Aquatic Research and Education*, 8(May): 182-194.
- FRÖMEL, K. & BARTOSZEWICZ, R. (1998). Aspect of organization in the structure of sporting interests and motor activity in children in the regions of Olomouc and Wroclaw. In T. Pavlović (Ed.), Sport Mladih: III Mednarodni Simpozij Zbornik (trans.: Proceedings of the III International Symposium: Youth Sport) (pp. 94-99). Ljubljana, Slovenia: Univerzita Ljubljana.
- FRÖMEL, K.; LUDVA, P. & FORMANKOVA, S.; BARTOSZEWICZ R.; BEBCAKOVA V. & BURDOVA, I. (1995). Structure of sporting interests and motor activities of young people. *Telesna Kultura*, 26(1): 5-47.
- GILES-CORTI, B. & DONOVAN, R.J. (2007). The relative influence of individual, social and physical environment determinants of physical activity. *Social Science and Medicine*, 54(12): 1793-1812.
- GREENWOOD, M.; STILLWELL, J. & BYARS, A. (2001). Activity preferences of middle school physical education students. *Physical Educator*, 58(1): 26-29.
- ITO, G.H. (2014). Barriers to swimming and water safety education for African Americans International Journal of Aquatic Research and Education, 8(3): 240-257.
- KENT, M. (2006). Oxford dictionary of sport science and medicine. Oxford, UK: Oxford University Press.
- MICHALSEN, A. (2008). Risk assessment and perception. *International Journal of Injury Control and* Safety Promotion, 10(4): 201-204.
- MITIĆ, D.; STOJILJKOVIĆ, S.; PANTELIĆ, S. & ČOKORILO, N. (2012). The students' interest in introducing physical education classes at faculties. Series Physical Education and Sport Science, Movement and Health, 12(2): 215-220.
- MORAN, K. (2006). "Re-thinking drowning risk: The role of water safety knowledge, attitudes and behaviours in the aquatic recreation of New Zealand youth historical study of curriculum policy and practice". Unpublished doctoral dissertation. Palmerston North, New Zealand: Massey University. Hyperlink: [http://mro.massey.ac.nz/bitstream/handle/10179/642/02whole.pdf?sequence=1]. Retrieved on 21 March 2016.
- MORAN, K. (2014). Jumping to (fatal) conclusions? An analysis of video film on a social networking website of recreational jumping from height into water. *International Journal of Injury Control and Safety Promotion*, 21(1): 7-53.
- MOSSTON, M. & ASHWORTH, S. (2002). *Teaching physical education* (5<sup>th</sup> ed.). New York, NY: Benjamin Cummings.
- ROKITA, A. (2005). The interest in sport activity among first year secondary school students in the years 1995–2001. *Kinesiology*, 37(1): 99-105.
- SALEMI, J.S. (2009). "Kalos Kai Agathos". *The Pennsylvania Review*. Hyperlink: [http://pennre view.com/2009/05/kalos-kai-agathos/]. Retrieved on 21 March 2016.
- SALLIS J.F. & GLANZ, K. (2006). The role of built environments in physical activity, eating, and obesity in childhood. *The Future of Children*, 16(1): 89-108.
- SALLIS, J.F.; OWEN, N. & FISHER, E.B. (2008). Ecological models of health behavior. In K. Glanz, B.K. Rimer & K. Viswanath (Eds.), *Health behavior and health education: Theory, research and practice* (4<sup>th</sup> ed.) (pp. 465-485). San Francisco, CA: Jossey-Bass.
- SALUJA, G.; BRENNER, R.A.; TRUMBLE, A.C.; SMITHS, G.S.; SCHOEDER, T. & COX, C. (2006). Swimming pool drownings among US residents aged 5-24 years: Understanding racial/ethnic disparities. *American Journal of Public Health*, 96(4): 728-733.
- ŚCIŚLAK, M.; ROKITA, A. & POPOWCZAK, M. (2013). Secondary school students' interest in various forms physical activity. *Human Movement*, 14(1): 11-19.

- SLEET, D.A. & GIELEN, A.C. (2004). Behavioral approaches to injury prevention. In R. McClure, M. Stevenson & S. McEvoy (Eds.), *The scientific basis of injury prevention and control* (pp. 214-232). Melbourne, Australia: IP Communications.
- STALLMAN, R.K.; JUNGE, M. & BLIXT, T. (2008). The teaching of swimming based on a model derived from the causes of drowning. *International Journal of Aquatic Research and Education*, 2(4): 372-382.
- STOKOLS, D. (2000). Social ecology and behavioral medicine: Implications for training, practice, and policy. *Behavioral Medicine*, 26(3):129-138.
- SUOMI, J.; COLLIER, D. & BROWN, L. (2003). Factors affecting the social experiences of students in elementary physical education classes. *Journal of Teaching Physical Education*, 22(2): 186-202.
- TELAMA, R. & YANG, X. (2000). Decline of physical activity from youth to young adulthood in Finland. *Medicine and Science in Sports and Exercise*, 32(9): 1617-1622.
- TINSLEY, H.E.A. & TINSLEY, D.J. (1986). A theory of the attributes, benefits and causes of leisure experience. *Leisure Sciences*, 8(1): 1-45.
- WHO (World Health Organisation) (2014). "Global report on drowning: Preventing a leading killer". World Health Organisation, Geneva, Switzerland. Hyperlink: [http://www.who.int/vio lence\_injury\_prevention/global\_report\_drowning/Final\_report\_full\_web.pdf]. Retrieved on 15 June 2016.
- WIESNER, W. (2008). Swimming education: The area of interest and methodological basis. In K. Zatoń,
  & M. Jaszczak (Eds.), *Science in Swimming II* (pp. 41-48). Wrocław, Poland: Wydawnictwo Akademii Wychowania Fizycznego (*trans.*: Publisher of the Academy of Physical Education).
- WIESNER, W. & REJMAN, M. (2014). Risk management in swimming education. *International Journal* of Aquatic Research and Education, 8(2): 157-167.
- XU, F. (2010). Association between social and environmental factors and physical activity opportunities in middle schools. *European Physical Education Review*, 16(2): 183-194.
- YA-QIONG, W.; GUO-YI, S.; XIAO-YAN, G.; DONG-XIU, Z. & SHENG, H. (2007). Research on traditional physical culture of pro-ecology in fortified mountain villages of Shui Minority. *The Learned Journal of the Qiannan Normal University of Nationalities*, 27(3): 34-37.
- ZATOŃ, K. & KWAŚNA, A. (2011). Relation between values awareness and effectiveness of learning front crawl swimming technique. In K. Zatoń, M. Rejman & A. Kwaśna (Eds.), Science in Swimming III (pp. 41-48). Wrocław, Poland: Wydawnictwo Akademii Wychowania Fizycznego.

**Corresponding author:** Prof Marek Rejman; **Email:** marek.rejman@awf.wroc.pl (Subject editor: Prof Dorita du Toit)