


Original Article

The impact of an educational course for swimming on free style swimming performance and life skills for deaf students

MOHAMMAD HASSAN ABU ALTAIEB¹ , KHITAM MOUSA AY¹, MOHAMMAD FAYEZ AL DABABSEH¹, MO'ATH FAKHRI BATAINEH², ALI M. AL-NAWAISEH², AKEF TAIFOUR²

¹*Faculty of Physical Education, University of Jordan, Jordan*

²*Faculty of Physical Education and Sport Sciences, Hashemite University, Jordan*

ABSTRACT

This study investigates the impact of an educational course for swimming on free style swimming performance and life skills for deaf students. Subjects were (10) male deaf students who were attended to swimming courses level (1) in the Faculty of Physical Education at the University of Jordan, with mean age of (M age = 20.4 SD =1.35). After completing the Life skills through swimming context scale (Bayyat et al., 2016) and practical pre-test of free style swimming skills performance, subjects executed both physical practice of the free style swimming skills performance during a program consisted of eighteen sessions, 3 sessions a week, for 6-weeks, 60 minutes per session, and life skills development dialogues program which focused on certain life skills (Communications, team-work, self-confidence/self-Esteem, problem solving and decision-making/responsibility). After 6-weeks all subjects completed a post life skills questionnaire which measured the changes in their life skills level after learning the free style swimming skills performance, they also went through a post practical subjective performance evaluation post-test which measured their level of the free style swimming skills performance. Statistical analysis was processed by SPSS. The results showed significant differences between pre and post-test in life skills dimensions and significant differences between pre and post-test in free style swimming performance level for the subject of this study. In conclusions the educational course for swimming had a positive impact on free style swimming performance and on life skills

 **Corresponding author.** *Department of supervision and education, Faculty of Physical Education, University of Jordan, Jordan.*

<http://orcid.org/0000-0002-8999-1378>

E-mail: mabutaieb@yahoo.com

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for deaf students in the faculty of physical education at the University of Jordan. **Key words:** EDUCATIONAL COURSE, LIFE SKILLS, FREE STYLE, SWIMMING, DEAF STUDENTS.

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INTRODUCTION

Sport for persons with disabilities is not a new concept, but its full potential as a powerful, low-cost means to foster greater inclusion and well-being for persons with disabilities is only beginning to be realized, sport works to improve the inclusion and well-being of persons with disabilities in two ways: by changing what communities think and feel about persons with disabilities and by changing what persons with disabilities think and feel about themselves, the first is necessary to reduce the stigma and discrimination associated with disability, the second empowers persons with disabilities so that they may recognize their own potential and advocate for changes in society to enable them to fully realize it. (DePauw, 2005). The community impact and individual impact of sport help reduce the isolation of persons with disabilities and integrate them more fully into community life, sport changes community perceptions of persons with disabilities by focusing attention on their abilities and moving their disability into the background. (DePauw & Gavron, 1995).

Through sport, persons without disabilities encounter persons with disabilities in a positive context (sometimes for the first time) and see them accomplish things they had previously thought impossible. (Parnes & Hashemi, 2007). Sport changes the person with a disability in an equally profound way. For some, it marks their first experience of human agency, it enables them to make choices and take risks on their own, for others, the gradual acquisition of skills and accomplishments builds the self-confidence needed to take on other life challenges such as pursuing education or employment. Sport also provides opportunities for persons with disabilities to develop social skills, forge friendships outside their families, exercise responsibility, and take on leadership roles, through sport, persons with disabilities learn vital social interaction skills, develop independence, and become empowered to lead and make change happen. (Fukuchi, 2007).

Sport can be a powerful tool for transforming community attitudes and empowering individuals through the acquisition of new physical and social skills, self-confidence and positive relationships, the power of sport as means to improve the lives of persons with disabilities is reflected in a range of international agreements, strategies and instruments. As early as 1978, UNESCO identified the value of sport for persons with disabilities in its International Charter of Physical Education and Sport. The Charter called on countries to make special opportunities available to develop persons with disabilities personalities to the fullest through physical education and sport programs suited to their requirements (UNESCO, 1978). In 1982, the United Nations developed the World Program of Action, a global strategy to enhance disability prevention, rehabilitation and equalization of opportunities; this stated that member delegations should encourage all forms of sports activities of disabled persons among other things, through the provision of adequate facilities and the proper organization of these activities (United Nations, 1982). The Program set the stage for the United Nations International Decade of Disabled Persons 1983–1992, during which governments were encouraged to implement its provisions. In 1993, the United Nations adopted The Standard Rules for the Equalization of Opportunities for Persons with Disabilities, which also addressed the right to sport for persons with disabilities (United Nations, 1993).

In some places, persons with disabilities have succeeded in being seen for their abilities, rather than their disabilities, elsewhere, people suffer from social stigma associated with their disability; stigma consists of unfounded stereotypes, inaccurate assumptions, negative perceptions and prejudice. In many communities, stigma causes some children to refuse to play with children with disabilities, teachers to avoid asking what a student with a disability can do, and employers refusing to hire a person with a disability because they believe they are inferior to persons without disabilities. (Toronto: Inclusion International, 2006). The more that disability issues are addressed in mainstream society, the more persons with disabilities will be accepted,

sport can help combat stigma because it places persons with disabilities in a position where their skills are highlighted, the focus is not on their disability but their ability to score a goal or make the game-winning assist, using sport, persons with disabilities can work to remove the stigma confronting them in their own communities, this point is underscored by the Office of the High Commissioner for Human Rights (Walker, 2007).

Stigma is not only an external barrier, preventing persons with disabilities especially deaf persons from accessing social, economic and political rights, but it is often an internal barrier, causing deaf persons to question their own worth in society, sport is well suited to helping deaf persons acquire social skills, they may be lacking, it teaches individuals how to communicate effectively as well as the significance of teamwork and cooperation, goal-setting, self-discipline, respect for others, and the importance of rules, sport also enables deaf persons to take risks and learn how to manage failure and success in a safe and supportive environment, coaches and teammates provide important role models and can help deaf persons to develop skills they can apply in other aspects of their lives, such as employment (Conroy, 2007).

Deaf Persons generally excluded from social life from a young age, exclusion deprives them of opportunities to engage and develop relationships with others, while these opportunities are essential to their social development and important determinants of health and well-being. As a result, deaf persons may have had very little experience greeting people, carrying on conversations and interacting with others, sport contributes to normalization, enabling deaf persons to share their experiences and enjoy camaraderie with others who understand their challenges and capacities, through this peer interaction, deaf persons develop a positive sense of self and group identity because they no longer feel set apart they are like everyone else (Mastandrea,2007).

Sport also provides a forum to enable persons with disabilities to build the skills they need to advocate for and influence change (Mastandrea,2007). The awareness and confidence that persons with disabilities gain through sport are often the impetus for engaging in advocacy work, as the communication, leadership and teamwork skills they develop are easily transferred into this new arena. For example, Manuel Gaiato contracted polio as a young child in Angola. He became interested in playing sports after seeing photos of wheelchair basketball. Through involvement in a local sports project, Sports for Life, he was given an opportunity to play. Through practice and perseverance, he was elected captain of his basketball team and began speaking about his experiences at schools and sports events. At the age of thirty, Manuel Gaiato has become the key spokesperson for disability rights in eastern Angola and is well known throughout the country for his advocacy work. His recognition in the sports world has earned him regular meetings with government officials and policy-makers for the purpose of improving conditions for persons with disabilities. As a direct result of his lobbying, and that of other Sports for Life staff and participants, wheelchair basketball and amputee football have both been adopted at the national level by Angola's National Paralympic Committee (Parnes & Hashemi,2007).

The impact of sport and exercise on life quality and on different psychological variables beside athletic performance has been inquired and tested by many exercise psychologists (Sajadian & Mehr 2011). Students who have learned to effectively deal with the demands of university life through mastery of life, academic, and athletic skills have a better chance of succeeding at multiple tasks in their lives (Vernacchia, 2007). Programs that help physical education students to recognize how to transfer their mental skills which they have learned from sport to their lives outside of sport can lead to improve their quality of life as a whole (Danish et al., 1993). Physical activities have the potential to reduce health risk factors and positively affect other physiological subsystems in the body during certain critical developmental periods (Kozub, 2003). It

has been found that often times, the skills needed to enhance sport performance and to succeed in life are essentially the same (Danish et al., 2005). When all students deserve an equal opportunity to develop the skills that will help them to succeed socially and academically once they enter college (Rasnack, 2011) Some deaf students, because of their communication difficulties, may come across as quite shy or quiet, they may lack confidence or self-esteem and find it difficult to interact with others (Deaf Children's Society, 2012). Consequently, deaf and hard of hearing students not only may struggle academically, but they may experience challenges in their social relationships (Batten, Oakes & Alexander, 2014; Vaccari & Marschark, 1997). These factors may place mental health and emotional well-being at risk (Margaret Brown & Cornes, 2014), even for students with minimal hearing losses, that's why deaf students usually struggle with the development of social skills (Moeller, 2007).

Sport activities improve physical, psychological and social development of people with disabilities and affect their physical, cognitive, social and psychological developments positively and make their adaptation to social life much easier (Levent, 2012). Sport activities also facilitate their integration into the society, sport works to improve the inclusion and well-being of persons with disabilities by changing what communities think and feel about persons with disabilities and by changing what persons with disabilities think and feel about themselves, the first is necessary to reduce the stigma and discrimination associated with disability, the second empowers persons with disabilities so that they may recognize their own potential and provide them with many life skills, the community impact and individual impact of sport help reduce the isolation of persons with disabilities and integrate them more fully into community life, All education institutions in society including physical education departments should promote more efforts that encourage sports activities for children and youth students with disabilities, and the implementation of measures to ensure their access to rehabilitation, education, training and employment, as well as to cultural and sports activities and access to the physical environment (Eichsteadt & Lavay, 1992). With appropriate communication, knowledge and skill, sport can be a powerful tool for transforming community attitudes and empowering students with disabilities through the acquisition of new physical and social skills, self-confidence and positive relationships.

The purpose of this study is to examine the impact of an educational course for swimming on free style swimming performance skills and life skills for deaf students in faculty of physical education at the University of Jordan, the researchers in this study are the teachers of swimming courses in physical education faculty at the University of Jordan and they are interested in the practice of life skills, where there are many students with disabilities are studying in physical education faculty especially deaf ones, all students in physical education faculty have to learn many practical sport subjects in all kinds of sports, and they have to pass successfully a practical skills exam at the end of every course, swimming course is one of the major practice subjects which are part of the syllabus of physical education faculty at the University of Jordan. Swimming course is divided into two, namely: swimming (1) basic swimming that consists of teaching free style and backstroke swimming and swimming (2) consists of breaststroke swimming and life-saving skills. In swimming course (1) students are taught to learn free style swimming skills performance and have to pass successfully it's practical skills exam at the end of the course. In this study the researchers incorporated life skills activities into physical education courses to help deaf students establish a positive perception of themselves and develop higher personal life skills, researchers did that by placing deaf students in a position where their skills are highlighted, and the focus was not on their disability but on their ability to perform the free style swimming skills and to build more inclusive life skills through greater social cooperation between them and the other students with normal abilities. It's expected that deaf students may develop life skills and benefit from learning free style swimming skills, more competition in practice, and higher expectations than they are likely to receive in other settings, other benefits include socialization opportunities, greater independence in activities of daily living, and improved ability to cope with limitations imposed by disabilities.

(USA Swimming, 2014) Whereas, physical education is a process, in which there is a process of studying and learning, while learning is not simply gathering knowledge, the universal popularity of sport and physical education is its physical, social and economic development benefits, and its proven success as an education and social mobilization platform, make it an ideal tool for reducing the stigma associated with disability, these characteristics also make sport an ideal tool for fostering the socialization, independence, empowerment and full inclusion of persons with disabilities. In this sense, physical education and sport are not luxury, they are necessary and complementary approach that can expand the impact of traditional methods of stimulating individual and community development and empowerment, It is expected that participation in sport and physical education for persons with disabilities will help to build more inclusive communities and therefore greater social cooperation, it is also expected that sport is well suited to helping persons with disabilities acquire social and life skills they may be lacking, it teaches them how to communicate effectively, as well as the significance of teamwork and cooperation, goal-setting, self-discipline, respect for others, and the importance of rules. Sport also expected to enable persons with disabilities to take risks and learn how to manage failure and success in a safe and supportive environment (Conroy, 2007).

METHOD

Participants

This study investigates the impact of an educational course for swimming on free style swimming performance and life skills for deaf students, (life skills program as applied to swimming performance learning). Subjects were (10) male deaf students who were attended to swimming courses level (1) in the faculty of physical education at the University of Jordan, with mean age of (M age = 20.4 SD =1.35), they were learning free style swimming skills performance.

Procedures

In the pre-test all subjects went through practical test of the free style swimming skills performance and completed life skills questionnaire (Bayyat et al., 2016) which measures five life skills before learning the free style swimming skills performance. The purpose of carrying out the questionnaire as a pre-test was to check their level of the certain five life skills. Subjects executed both physical practice of the free style swimming skills performance (physical practice and repeated execution of the skills performance, during a program conceived of eighteen sessions, 3 sessions a week, for 6-weeks, 60 mints per session), and life skills development dialogues program which focused on the certain life skills (Communications, teamwork, self-confidence/self-Esteem, problem solving and decision-making/responsibility).After 6-weeks all subjects finished a post life skills questionnaire which measured the changes in their life skills level after learning the free style swimming skills performance, they also went through a post physical subjective performance evaluation (self-estimations) test which measured their level of the free style swimming skills performance. Conditions did not change between pre- and post-tests in the performance evaluation.

Life Skills Questionnaire

The life skills questionnaire (Bayyat et al., 2016) consisted of (42) items reflecting five life skills which experts agreed to be the most appropriate and feasible to fulfill the aim of this study (see Appendix A). Bayyat et al., (2016) identified these skills as follows: (1) Communication: one's ability to express oneself verbally and non-verbally, expressing feelings, giving and receiving feedback without blaming. (2) Teamwork: one's ability to work with and help others and contribute to the group, generally towards achieving a general goal. (3) Confidence/ self –Esteem: one's overall general belief in self and one's ability. (4) Problem solving: enables us to deal constructively with problems of our lives. (5) Decision-making/Responsibility: helps us to deal constructively with decisions of our lives. Students were asked to circle the level of life skills they think they

acquired through their swimming context. A five-level Likert for frequency was used to assess each item: always (5), often (4), sometimes (3), rarely (2) and never (1), the scale's reliability coefficient has been calculated through measuring the internal consistency for each factor using the Cronbach's Alpha. Table 2 shows good levels of reliability with a total number of 0.81.

Table.1. Reliability coefficient of "Life skills through swimming context scale"

No	Dimensions	Cronbach's Alpha
1	Communication	0.82*
2	Teamwork	0.79*
3	Self Confidence/self esteem	0.78*
4	Problem Solving	0.83*
5	Decision-making/responsibility	0.82*
6	Total scale	0.81*

Note: * indicates significance level at $p < 0.05$

The Program

In the first training unit, after warming up in the water, all subjects performed the free style swimming skills and the test of the performance was conducted. The instruction that was given to subjects before they started was: "do the best you can" subjects were informed about their scores in the test, and they filled out the life skills questionnaire, all program sessions were supported by a competent interpreter for deaf. The program consisted of eighteen sessions for 6-weeks, 3 sessions a week, 60 minutes a session.

The program sessions

- 1) 15 minutes: life skills development dialogues program.
- 2) 10 minutes: warm up in the pool.
- 3) 30 minutes: learning free style swimming performance.
- 4) 5 minutes: cool down.

Teaching Free Style Swimming Skills Performance Program

Free style swimming is one of the four competitive strokes. It is also a valuable survival stroke. The teaching steps for free style swimming skills performance were:

- 1) **Basic Breathing Drills:** in shallow water, crouch down so the head gets under water holding breath as long as possible, exhale under water through the nose, exhale under water through both the nose and the mouth, inhaling above water through the nose and exhaling under water through the mouth, bob up and down with the body in shallow water inhale while the head is above water and exhale while the head is under water (this drill gets the student familiar with rhythmic breathing in free style swimming).
- 2) **Teaching a Prone Position (Lying Flat on the Stomach):** being balanced and the body is horizontal in the water, learn how to keep the hips and legs close to the water surface with ease and without needing to kick hard.
- 3) **Teaching Legs Kick:** practice legs kick while in the water holding the side of the pool, kick for 12 meters holding a kickboard, kick for 12 meters without a kickboard.
- 4) **Teaching Arms Stroke:** free style arm stroke on dry land, free style arm stroke in the pool while the partner holding the learner's legs, body moving 12 meters forward in the pool with using arms stroke only.

- 5) **Coordination:** practice coordination between legs kicking and arms stroke while holding breath for 12 meters.
- 6) **Teaching Breath Timing Rhythm:** The researchers in this study are expert swimming instructors, they as a team evaluated the subject’s skills performance in free style swimming skills performance in both pre and post-tests.

Statistical Analysis

In order to obtain a complete image of the study results, data statistical analysis included: descriptive statistics (means, standard deviations, percentages, paired t.Test) to find out the significance of differences between pre-test and post-test for the study variables, as well as the Internal consistency of the scales using Cronbach's coefficient alpha. Data was processed by SPSS.

RESULTS

For Statistical treatment the researchers used (means, standard deviations, & paired t.Test) Based on the data collected in this study, with due to the consideration to the limitation of the investigations, the results of this study were the following:

Table.2. Descriptive Statistics and t-test Results for life skills dimensions n=10.

Dimensions	Pre-test		Post-test		T	P
	M	SD	M	SD		
Communication	2.46	0.9	3.9	0.7	3.9	0.0*
Teamwork	2.94	1.11	4.1	0.84	2.61	0.0*
Self Confidence/self esteem	3.09	0.89	3.92	0.9	2.17	0.04*
Problem Solving	2.84	0.79	3.91	1.2	2.35	0.03*
Decision-making/responsibility	2.74	0.74	4.12	0.9	3.74	0.0*
Total scale	2.82	0.8	3.98	0.86	3.12	0.0*

*Note: * indicates significance level at p<0.05*

Table 2 shows that there were significant differences between pre and post-test in life skills dimensions for the subject of this study.

The results show the role that sport can play in helping persons with disabilities to acquire the knowledge, skills, and confidence to become effective advocates for themselves and others. Sport has the power to reduce dependence and develop greater independence by helping individuals with disabilities to become physically and mentally stronger. Research has documented many physical benefits from sport and physical activity. For a group of young people with Down’s syndrome, horseback riding increased coordination, posture, muscle tone, sitting balance, strength, and rhythmic movement of the upper body.⁷⁸ Similarly, children with cerebral palsy who participated in a strength training program enjoyed significant improvements in strength and the ability to walk, run, jump, and climb stairs (Burgess, 2007). Sport also promotes social-emotional development and facilitates self-help. The same study of the benefits of horseback riding for people with Down’s syndrome found improvements in participants’ emotional control, social awareness, self-confidence, self-esteem, and self-concept, as well as increased motivation and independence (DePauw, 1986).

Many individuals with disabilities accept the exclusion and discrimination they encounter because they feel powerless to change their situation. Additionally, many persons with disabilities have never been taught that they deserve more equitable treatment and that they have rights which should be respected. Without role models and information about living with their disabilities, persons with disabilities lack the knowledge and tools to make improvements in their lives and in their community.

If they have not seen examples of better conditions, they may have difficulty imagining a different situation. Those individuals who might have been interested in working for change may never have the opportunity to learn the leadership and advocacy skills necessary to create change Sport is an effective means of building knowledge and awareness among persons with disabilities because it allows large groups to come together in an enjoyable way (Mastandrea,2007).

This is especially true in areas where sport is one of the few means of entertainment. Sport also provides a forum to enable persons with disabilities to build the skills they need to advocate for and influence change (Mastandrea, 2007). The awareness and confidence that persons with disabilities gain through sport are often the impetus for engaging in advocacy work, as the communication, leadership and teamwork skills they develop are easily transferred into this new arena.

Sport’s unique capacity to cut across linguistic and cultural barriers gives it a singular capacity when it comes to inclusion, when an individual with a hearing impairment is placed on a football field, he sees that communication with his peers does not require him to hear their words, he understands that his teammate’s pointing hand means he wants to receive the ball downfield, he understands that clapping by his coaches and teammates means he did well. As one participant with a hearing impairment explained: *“When I was on the athletic fields, I felt normal for the first time in my life. I could do what everyone else could do. I didn’t have to worry about struggling to communicate. I just played. My teammates respected me for my playing skills and began to make efforts to include me.”*

This experience also helped those who played with him to put aside their fears about trying to communicate with individuals who have hearing impairments.

Table.3. Descriptive Statistics and t-test Results for life swimming performance n=10.

Swimming performance	Pre-test		Post-test		T	P
	M	SD	M	SD		
	3.12	1.2	7.8	2.8	4.85	0.0*

Table 3 shows that there were significant differences between pre and post-test in free style swimming performance level for the subjects of this study.

CONCLUSION

The educational course for swimming had a positive impact on free style swimming performance and life skills for deaf students in the faculty of physical education at the University of Jordan. Sport programs have the power to reduce dependence and develop greater independence by helping individuals with disabilities especially deaf people to become physically and mentally stronger. Sport programs also promote social-emotional development and facilitate self-help, reduced stigma and increased self-esteem, self-confidence and social and life skills. The universal popularity of sport, its physical, social and economic development benefits, and its proven success as an education and social mobilization platform, make it an ideal tool for

reducing the stigma associated with disability. These characteristics also make sport an ideal tool for fostering the socialization, independence, empowerment and full inclusion of persons with disabilities. In this sense, sport is not a luxury. It is a necessary and complementary approach that can expand the impact of traditional methods of stimulating individual and community development and empowerment.

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APPENDIX A

Life skills through swimming context scale.

Please circle the appropriate response which is most descriptive of you.

Item #	Life skills	Always	Often	Sometimes	Rarely	Never
1	I listen carefully to the technical explanation of the skills.					
2	I focus during listening to the teacher's instructions.					
3	I interpret the non- verbal signals of the teacher during practice.					
4	I show suitable reactions during swimming practice.					
5	I am good at following instructions.					
6	I avoid pre-judging performance.					
7	I use verbal and non- verbal communication to interact with others.					
8	I communicate with others with confidence.					
9	I openly accept others' opinions.					
10	I negotiate with others to convince them with my point of view about the right performance of skills.					
11	I respect and accept others' ideas.					
12	I am a team player.					
13	I make sure to follow the teachers' instructions.					
14	Group interest is always the priority.					
15	I willingly help others.					
16	I make sure to enforce trust bonds between team members					
17	I endure training pressure along with my team.					
18	I can listen to others.					
19	I discover faults in the swimming performance which my colleagues fail to do.					

20	I present constructive criticism toward technical skill.					
21	I detect my strengths and weaknesses during my practice and find suitable solutions.					
22	I try to be creative during swimming.					
23	I can think out of the box.					
24	I give helpful and critical advices to others.					
25	I praise others and accept being praised easily.					
26	I positively criticize others and accept criticism.					
27	I swim with confidence.					
28	I feel enthusiastic when I learn new swimming skills.					
29	I have no problem of doing new skills.					
30	I am satisfied with the way I deal with others.					
31	I practice my swimming drills without supervision.					
32	I practice my swimming drills with all my effort.					
33	I am eager to learn.					
34	I organize my duties.					
35	I invest my time.					
36	I cooperate with my peers.					
37	I try to interact with those who are less active.					
38	I suggest different solutions to problems.					
39	I study my alternatives.					
40	I help others taking decisions.					
41	I choose the best alternative.					
42	I try to understand others					