

SECTION – EXERCISE SCIENCES

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COMMUNICATION BETWEEN THE COACH AND CHILDREN LEARNING TO SWIM

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Authors' contribution:

- A. Study design/planning
- B. Data collection/entry
- C. Data analysis/statistics
- D. Data interpretation
- E. Preparation of manuscript
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Abstract:

Aim. The purpose of this study is: (a) to examine how swimming coaches perceive their communication skills and preferences; (b) to better understand the behaviour of coach-athlete communication during practice sessions; (c) to explore similarities and differences between coaches' declared and actual communication behaviour.

Basic procedures. To accomplish this purpose, 10 swimming coaches (6 males, 4 females; $m_{age}=31$ years) were invited to take part in the two-part study. First, the participants were asked to answer 6 questions about their communicational behaviours towards children during typical swimming practices. Then, during a real swimming session, both verbal and non-verbal communication was recorded (content of the message, recipient of the message, body posture, gestures, proxemics, vocal aspects).

Results. The obtained results show that the coaches used six of communication behaviours. The results revealed a discrepancy between the coaches' declared and observed communication preferences. The data analysis shows that the coaches provided both feedback (40.7%) and feedforward (59.3%) information. In the research, it is shown that swimming teachers used non-verbal messages more often (63%) than verbal ones.

Conclusions. In the teaching process, it is important that the trainer/coach provides not only information regarding the tasks to be performed but also information improving the atmosphere and also the quality of the exercises performed.

Introduction

Current research indicates the importance of proper communication with significant people (e.g. trainers, parents, peers) and its large impact on the quality of children's sports experiences, their involvement in sports activity and development [1]. In a sports environment, the coach is a group leader as well as an authority for his/her mentees, which helps build a good relationship with them and the right form of communication [2, 3, 4]. The role of the trainer is to cooperate properly with the group, make decisions regarding how sessions are conducted, motivating them to undertake classes, pro-

viding feedback and feedforward information as well as establishing correct interpersonal relationships [5, 6]. In addition, the coach's role is to choose proper communication with the mentee, which depends on changes in the child's mind (peace of mind, confidence, breakdown, harmony, regulation) [7]. Having the right competences in the field of social communication is crucial to its effectiveness and instructional skills. In addition, appropriate communicative behaviour of the teacher/instructor can also serve motivational purposes, which in turn, facilitates the achievement of many important teaching results [8]. It should also be emphasized that swimming is a very complex motor skill, and its acquisition or pur-

suit of improvement in technical performance requires a special procedure of two-sided information flow between the swimmer and the coach [9].

The purpose of this study is: (a) to examine how swimming coaches perceive their communication skills and preferences; (b) to better understand the behaviour of coach-athlete communication during practice sessions; (c) to explore similarities and differences between coaches' declared and actual communication behaviour.

The study with trainers consisted of two parts. The first part of the study involved the coach completing a questionnaire regarding forms of communication with the mentees. The second part consisted of the researcher observing a 45-minute swimming lesson and recording verbal and nonverbal messages used by the coach (message content, recipient of the message, proxemics, vocal aspects, body posture, gestures, facial expressions) at 4-minute intervals. This procedure was repeated for each tested coach (Tab. 1).

Table 1. Variables and indices

VARIABLES	TYPE	HOW MEASURED	HOW EXPRESSED	INDICES
Coach-athlete communication	Explanation	Survey	6-point scale	*level of satisfaction with the conducted classes *subjective assessment of the frequency of using specific messages *subjective assessment of the significance of specific messages
		Lesson observation sheet	Lesson record	*verbal and non-verbal information

Research questions:

- 1. How do coaches perceive their communication skills with training session participants?
- 2. What communication behaviours do the coaches demonstrate?
- 3. What forms of communication supporting the teaching process dominate during classes?
- 4. What are the differences and similarities between the declared and real nature of coach-athlete communication?

Materials and methods

The study was conducted among a group of 10 swimming coaches (6 men, 4 women, $m_{age}=31$; $m_{exp}=8.2$ years) conducting group swimming lessons with children ($x_{age}=10$ years; $x_{gr. size}=9$ individuals, recreational sport, swimming lessons) at one of the Kraków swimming pools (Tab. 2). The trial lasted 6 weeks. The criterion for inclusion in the group was conducting group swimming classes for children aged 9-11 and signing a statement which constituted consent of the researcher to participate in one of the lessons led by the coach.

In the research, the following were used:

- 1. Lesson observation sheet (see: appendix 1), based on which observation of the 45-minute lesson conducted by the coach was performed. The observed aspects were: the content of the message; the person to whom the message was addressed; body posture; facial expressions; gestures; distance, vocal aspects. Each of these elements were noted 12 times at 4 minute intervals.
- 2. Questionnaire for coaches – consisting of demographic information (gender, age, education, professional experience) and 6 questions regarding the level of the coach's satisfaction with the conducted classes, changes in the conduct of future classes and the frequency of using specific messages by coaches and meaning within the context of learning outcomes. All questions included in the survey were answered on a 6-point scale, 1 being the lowest and 6 the highest.

Analysis of the observation sheets enabled the creation of specific categories of the used verbal and non-verbal messages. The basic descriptive statistics were used in the analysis of test results: number of observations, mean values and percentages.

Table 2. Size of groups on the day of the survey

Group number	1	2	3	4	5	6	7	8	9	10
Number of participants	10	12	9	7	8	9	13	11	5	9

Results

Coach-athlete communication: coaches' preferences regarding the manner of communication, similarities and differences in the declared and actual communication behaviours and the declared willingness to change the way of conducting classes

The results show that the majority of coaches (80%) would like to change some element related to the way they conduct their classes. Half of them declare that this is a way of communicating with children, and the others state that they would like to be more effective in the process of teaching swimming (teaching strategies).

In Table 3, it is shown that there is great coherence between the frequency of using certain messages declared by coaches and belief in their importance for the teaching process. Only in the case of messages regarding the quality of performance can it be seen that despite the fact that they are considered very important, not everyone uses them regularly.

The messages used by coaches are more diverse than those declared in the questionnaire. In addition to the 4 categories that were included in the survey, 2 new categories were created: 1) improving the classroom atmosphere and, 2) tasks to be performed. The most frequently

appearing messages are related to tasks to be performed, improvement of task performance, the behaviour and safety of children. During the classes, coaches used individual messages ($x=12.6$) more often than group messages ($x=10.6$), which translates into a large percentage of messages regarding tasks to be performed (Tab. 4).

In the research, it is demonstrated that coaches use non-verbal messages ($x=66$) more frequently, which indicates their importance in the teaching process (Tab. 5). The dominant forms of positive reinforcement that were used in verbal form are: cheering, encouragement, praise, joking, for example *"You managed to catch the disc very nicely"*; *"That was good, you work well with your hands – keep it up"*, while in non-verbal form we may distinguish: smiling, maintaining a calm and cheerful voice, expressing satisfaction by showing a thumbs-up, assistance in performing an exercise.

Analysis of observation sheets showed that in the field of non-verbal communication (posture, facial expressions, gestures), the following categories may be distinguished:

- gestures – pointing at someone or something, e.g. a rope, showing arm and leg work, giving a thumbs-up;
- facial expressions – smile, pursed lips, increased eye contact with the child, raised eyebrows;

Table 3. Comparison of coaches' opinions regarding the frequency of using specific information and their level of importance in the teaching process

Type of communication	How often do you use particular types of information?			How important is type of information regarding teaching effectiveness?		
	never or almost never	sometimes, not regularly	very often, regularly	not, low importance	moderate	high importance
children's behaviour and commitment during swimming sessions	0	3	7	0	3	7
quality of performance	0	2	8	0	0	10
outcomes	0	3	7	0	4	6
swimming skills improvement plan for next sessions or how to improve skills during following sessions	0	3	7	1	3	6

Table 4. The patterns of coach-athlete communication during practice sessions

Categories of communications	%
organisation and safety issues, children's behaviour	21.4 %
the quality of the task	11.3 %
improvement of the task	25.0 %
obtained results	1.6 %
tasks to be carried out*	39.5 %
positive atmosphere of the lesson*	1.2 %

categories from 1-4 overlap with the categories given in the survey; categories 5-6 were created after analysis of the observation sheet

Table 5. Positive reinforcement used by trainers

Type of positive reinforcement	Coaches										Σ
	1	2	3	4	5	6	7	8	9	10	
verbal	4	4	1	3	1	9	2	6	5	4	39
non-verbal	6	8	7	6	2	10	4	10	4	9	66
Σ	10	12	8	9	3	19	6	16	9	13	105

Table 6. Feedback vs. feedforward messages used during swimming classes

Communication	Coaches										Σ	%
	1	2	3	4	5	6	7	8	9	10		
feedback	12	14	7	11	4	16	10	10	6	11	101	40.7%
feedforward	12	15	16	16	14	15	10	15	16	18	147	59.3%
	24	29	23	27	18	31	20	25	22	29	248	100%

Table 7. “We” vs. “you” rhetorics

rhetoric	“we”	“you”
number of messages	83	48

- posture – facing the group/child in posture and kneeling or sitting.

Analysis of the results indicates that coaches use feedforward messages more often, understood as information leading to the desired outcome regarding the intended performance and expected effects, e.g. *“Let’s start with 2 streamline lengths - long exhalations and try to maintain the streamline position for as long as possible”*; *“Good, now take your boards and swim with the board between your legs, 1 length arms in crawl stroke, 2 arms breaststroke, 3 backstroke arm position. Firmly hold the board with your legs”*. Most of the feedforward messages used were used for the near future (currently on-going classes). In contrast, feedback messages, which are understood as information on a previously completed task, were used less frequently (40.7%) (Tab. 6).

The obtained results also indicate that the coaches used the “We” rhetoric rather than the “You” type when referring to the mentees (Tab. 7).

Discussion

Due to the nature of the classes (i.e. swimming lessons), it is common for coaches to use messages regarding specific tasks. However, in addition to verbal communication, they can use non-verbal communication (gestures, body posture, facial expressions), which is particularly important due to the specificity of the place where the classes take place (noise, body immersion including ears). Non-

verbal messages are an element that differentiate the way coaches conduct classes. The non-verbal communication they use comes in a form that supports verbal communication, e.g. regarding a task to be performed, and also plays an important role in creating a positive atmosphere during classes, e.g. smiling, encouraging gestures. The trainers, using positive reinforcement, to a large extent, did this by means of non-verbal messages, which were, among others, in the form of a smile, help in carrying out an exercise, giving a thumbs-up gesture. The use of both forms of messages is an element supporting the achievement of desired results and contributes to the development of competences and increasing the autonomy of students [10, 11]. The analysis of the results allows to state that the verbal and non-verbal messages used by the coaches are consistent with each other, and the “we” rhetoric used in the statements in most cases indicates the trainer’s involvement, e.g. *“take the boards and swim 2 backstroke lengths”*; *“We collect boards and at the end, we apply the crawl stroke in the following way – the legs work and breathe in every 3 strokes”* (rhetoric “you” 48 messages; rhetoric “we” 83 messages). In addition, the obtained results indicate that the tested coaches create a motivational climate focusing on a specific goal during the classes. Thanks to this, the student is placed in the centre of attention, and his/her willingness to learn and the level of aspiration can increase. On the other hand, messages that focus on the “I” (4) and are associated with criticism, showing dissatisfaction and punishment for errors are rare (12). In their communica-

tion with the athletes, the coaches used feedforward more often than feedback messages, thanks to which the swimmers also received information on how something could be changed in the future regarding the manner of performing specific tasks [5].

Referring to the results of the questionnaire on the messages used, it was noted that the coaches (10/10) consider providing mentees with information on the quality of tasks performed to be the most important, however, not everyone declares its regular use during their classes (8/10). This is also confirmed by the results obtained during the analysis of the lesson observation sheets, which indicate that only 11.3% of the messages concerned the quality of the exercise performed by the student. Messages regarding discipline during the lesson, achieved results and suggestions for the future were indicated by the coaches as being used in similar proportions (3 coaches – sometimes; 7 coaches – regularly). Nevertheless, the analysis of the messages observed during the lesson in-

dicates that messages leading pupils to the expected effect were more often used (25%), which can undoubtedly have a positive effect in the form of developing their skills and sense of competence [13, 14]. In conclusion, due to the small group of respondents, caution should be exercised when generalising the results onto the population.

Conclusions

1. The use of non-verbal messages is an important element supporting conducting classes at the swimming pool.
2. It is important for the swimming teaching process to have appropriate communication skills.
3. In the process of teaching swimming, it is important that the coaches, in addition to information about the tasks to be performed, provide information improving the atmosphere and the quality of exercises performed by students.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Ethics Committee

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appendix 1

DURATION	CONTENT OF MESSAGE (specific message stated by the instructor)	DIRECTED TOWARDS (group, part of the group, individually)	BODY POSTURE (frontward, backward, sideward, etc.)	FACIAL EXPRESSION (smile, frowning brow, etc.)	GESTURES (arms, hands, fingers, legs, feet, head, whole body)	PROXEMICS (intimate sphere, personal, social, public)	VOCAL ASPECTS OF VOICE (pace, tone, strength, timbre, interruptions in speech, clear formulation of words)
1'							
5'							
9'							
13'							
17'							
21'							
25'							
29'							
33'							
37'							
41'							
45'							

ADDITIONAL COMMENTS: