



VERBAL AND NONVERBAL COMMUNICATION DURING HAMMER THROW TRAINING AND COMPETITIONS

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Abstract

This paper is an observational study conducted between February and March 2012, on 14 Romanian athletes (hammer throwers) and 12 Romanian coaches, regarding the importance and use of the verbal and nonverbal communication during training and competitions. The study tried to confirm two hypotheses. We used as a research method the inquiry, represented by a questionnaire with 6 questions, on which each coach had to choose one answer.

The analyzed answers have emphasized aspects that show the opinion of hammer throw athletes and coaches regarding the verbal and nonverbal communication. Their opinions reveal us that in training, there are small differences in the way in which the communication between the hammer throwers and their coaches is done. The athletes communicate 52.14% nonverbally, through gestures and facial expressions, and 47.86% verbally, while the coaches communicate 50.83% nonverbally, and 49.17% verbally. During *athletic competitions*, the throwers and the coaches communicate more nonverbally, 66.43% and 75.83%, respectively, than verbally, 33.57% and 24.17%, respectively. *Outside their athletic life*, the throwers communicate verbally with their coach more by phone (76.43%) than by written messages (on the Internet, or phone) (23.57%), while the coaches verbally communicate with the athletes orally in proportion of 85.83%, and use written verbal communication in proportion of 14.17%. Fatigue, noise, and weather represent over 50% of the total perturbing factors for the athletes, while the coaches perceive the athlete's tension, nervousness that leads to bad performances, and the athlete's fatigue, as representing over 50% of the total perturbing factors. The communication process is perturbed "most times" by distance and position in proportion of 57.14% for athletes, and in proportion of 58.33% for coaches. The first hypothesis, stating that the hammer throwers use the verbal communication and the nonverbal communication in different proportions during training than during competitions, was confirmed, just as the second hypothesis, stating that the nonverbal communication is used more than the verbal communication by the hammer throwers and their coaches, during training and competitions, was also confirmed.

Keywords: communication, verbal, nonverbal, ratio, training, competition.

Introduction

Athletic training is a process that requires a specific amount of time, and is conceived as a motor-functional system for achieving a certain high performance conduct during a competition (A. Dragnea, 2002). In presenting the concept of "athletic training as an adaptive process," R. Manno (1992, quoted by D.D. Mârza, 2006: 97) writes that: "in the athletic preparation process, the training aims to optimize the necessary adaptations the body needs in order to be able to perform an effort required by the practiced sport", an adaptation that can be known by coaches and athletes through communication. The success of an athletic and professional training is determined by the use of certain subject-centered programs "that support learning, encourage the mental, corporal, and emotional development,..., respect the diversity of people's intelligence, abilities, learning styles, stimulate a reflection on the essential things in life" (I. Neașu, 2010, page 287), programs that are based on different ways of transmitting the information.

The nonverbal communication, through body language, is specific to physical education and sports, during which every movement is filled with

information that can signify different things. That is why the verbal and nonverbal communication represent an important way of knowing and relating for the teacher-student, coach-athlete pair. The concept of communication is quite vast, due to the multiple opinions found in the specialized literature. I. Pânișoară (2003:14-16) presents several theories that are thought to be the most relevant in regards to communication, which is considered as: "a process in which people share information, ideas, and feelings" (*Hybels, Weaver*); "the process in which one party (called emitter) transmits information (a message) to another party (called receiver)" (*Baron*); "the action involving one or more people of sending and receiving messages that can be distorted by noises, takes place within a context, presupposes certain effects, and gives feedback opportunities" (*De Vito*); "a social interaction using a system of symbols and messages" (*George Gerbner*); "a focus of the people's interest on those behavioral situations in which a source sends a message to a receiver with the manifest intention to influence the receiver's subsequent behavior" (*Gerald Miller*); "a set of relations based on transmitting certain stimuli (signs) and evoking answers" (*Colin Cherry*);

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"an essential process of life through which animals and people generate systems, obtain transformations, and use the information to complete their activities, or carry on with their lives" (*Brent Ruben*).

Identifying the common elements of communication, no matter the field in which it is made (including high performance sports), shows that there is no actual existence without communication. Communication is "an essential process", a "process with an end" that is inevitable and continuous (J. Abric, 2002: 15-17), a *transactional process*, it is *information and/or inter and/or intrapersonal relation*, it is a process of *axiological modeling* (V.M. Cojocariu, 2004) that allows knowing the personalities involved in an activity. Human communication, understood as a "complex and dynamic phenomenon that can be defined as the relation through which the people can reciprocally understand and influence through a continuous exchange of diversely encoded information" (G. Rață, 2008, page 150), ensures the mental evolution of individuals. The cognition, the emotion, and the conation (the effector) are complex mental processes that overlap in different proportions. Most psychologists are tempted to emphasize the emotional aspects, but for the athletic performance, the cognitive-perceptive or motor-effector aspects are also important (M. Epuran, 2008, page 54). A. Demeter (1982, page 145) writes that during the initiation stage, there is an emphasis on harmonious physical development by using general training means, then towards the end of the training period, there is a gradual change towards a special physical and psychological training, according to each athlete's aptitudes and preferences. "The human bio-psycho-social unit indicates the uniqueness of each person", an unit that determines the training of high performance athletes' personality, and ensures them high level athletic results. Specific to our field (in which educating the motor skills is a priority) is the understanding of the functional relations between the systems and the organs of the body, on one hand, and the voluntary ability of practical or cognitive performance, on the other hand. V. Horghidan, (2000) thinks that intelligence is manifested in the "cognitive organization that expresses itself and functions through finalizations within the motor and communicative behavior plan. It regards equally the selection, caption and treatment of the information received from sources

inside and outside the body in order to create the adequate motor responses, but also in the motor expression itself."

Hypotheses

We started this study from the following hypotheses:

- the hammer throwers use the verbal communication and the nonverbal communication in different proportions during training than during competitions;
- the nonverbal communication is used more than the verbal communication by the hammer throwers and their coaches, during training and competitions.

Research methods and techniques

The subjects were 12 coaches and 14 hammer throwers from Romania, who had some experience in professional sports, and who accepted to fill out the questionnaire, anonymously. The questionnaire was handed out in Snagov, Bucharest, and Onesti (during athletic competitions), between February and March 2012. *The research methods* we used were: the study of the specialized literature, the inquiry method, the statistical-mathematical method, and the analytical method. As an instrument for assessing the coaches' and the athletes' way of relating to one another verbally and nonverbally, we applied a **6 item** questionnaire that was addressed both to the hammer throwers and to their coaches.

Results of the research – analysis and interpretation of the results

The questionnaire-based inquiry that we conducted on the hammer throwers and their coaches allowed us, after analyzing the data, to observe the following aspects.

At question no. 1, "Considering that both the explanations, and the demonstrations during training are methods of communication, by which way of transmitting the information do you relate to the coach/athlete during training?", the subjects had to give points to 3 answer choices we suggested (with a maximum of 10 total points). Because the study comprised 14 hammer throwers, they can have a general total of 140 points, while the coaches can have a total of 120 points.

Table 1 - Points given for the three ways of communicating during training

No.	Way of transmitting the information	Sum of the points		PERCENT	
		Athletes	Coaches	Athletes	Coaches
1.	Nonverbal - body = signs, gestures	44	41	31.43	34.17%
2.	Nonverbal - face = face expression, looks	29	20	20.71.	16.66
3.	Verbal = direct discussions, dialog	67	59	47.86	49.17%;
Total		140	120	100%	100%

After analyzing the data in Table 1, we can see that the hammer throwers communicate with their coaches: 47.86% verbally, 31.43% nonverbally - using their bodies, and 20.71% nonverbally - using their faces. If we add the values for the two types of nonverbal communication (body and face), we can see that during training the hammer throwers we questioned communicate with their coaches more nonverbally (52.14%) than verbally (47.86%). Regarding the coaches, they communicate with their athletes: 49.17% verbally, 34.17% nonverbally - using their bodies, and 16.66% nonverbally - using their faces. After adding the values for the two types of

nonverbal communication (body and face), we can see that during training, the hammer throw coaches use almost in equal proportion the *nonverbal* (50.83%) and the *verbal* (49.17%) communication. As it can be seen, there are no major differences between the athletes' and the coaches' scores, and, as a result, between their percentages, regarding any of the ways of transmitting information.

At question number 2, "Which ways of transmitting the information do you use to relate to your athlete/coach during competitions?" the subjects had to give points for 3 answer choices (with a total maximum of 10 points).

Table 2 - Points given for the three ways of communicating during competitions

No.	Way of transmitting the information	Sum of the points		Percent	
		Athletes	Coaches	Athletes	Coaches
1.	signs, gestures, = Nonverbal	75	73	53.57	60.83
2.	face expression, looks = Para-verbal	18	18	12.86	15.00
3.	direct discussions, dialog = Verbal	47	29	33.57	24.17
Total		140	120	100%	100%

After analyzing the data in Table 2, we can see that the hammer throwers communicate with their coaches: 33.57% verbally, 53.57% nonverbally - using their bodies, and 12.86% nonverbally - using their faces. After adding up the values for the two types of nonverbal communication (body and face), we can see that during *competitions*, the hammer throwers we questioned communicate with their coaches more nonverbally (66.43%) than verbally (33.57%). The coaches communicate with their athletes: 24.17% verbally, 60.83% nonverbally - using their bodies, and 15% nonverbally - using their faces. Unlike for training, adding up the values for the two types of nonverbal communication (body and face), shows us that during *competitions*, the coaches communicate with their athletes more nonverbally (75.83%) than verbally (24.17%). In the hammer throw competitions, the distance between the throwers and the coaches is large. According to the regulations, the coach must remain on the sidelines, which leads to a decrease in the verbal communication percentage. This explains why the nonverbal communication percentage is higher. When we compare the athletes' and the coaches' answers, we can observe a small difference in the nonverbal communication's larger percentage during competition (73.83% for the coaches, in comparison with 66.43% for the athletes). The 7.40% difference

between the coaches' and the athletes' nonverbal communication shows that during competition, the coaches transmit more information, comprising appreciations, corrections, and encouragements with regards to the athletes' performances.

At question number 3, "Which ways of transmitting the information do you use to relate to your athlete/coach outside the athletic life?" the subjects had to give points for 4 answer choices (with a total maximum of 10 points).

After analyzing the data in Table 3, we find that the hammer throwers communicate with their coaches outside their athletic life as follows: oral verbal communication (by telephone) - 50.71%; written verbal communication (telephone messages) - 15%; oral verbal communication (direct conversations) - 25.71%, and written verbal communication (Internet) - 8.57%. Assuming that outside the athletic life the nonverbal communication does not exist anymore, because the two factors involved (coaches and athletes) are not face to face, we have analyzed in comparison the cumulative values for the two forms of verbal communication: oral and written. We found that *outside the athletic life*, the hammer throwers we questioned communicate with the coaches more through oral verbal communication (76.43%) than written verbal communication (23.57%).

Table 3 - Points given for the three ways of communicating outside athletic life

No.	Way of transmitting the information	Sum of the points		Percent	
		Athletes	Coaches	Athletes	Coaches
1.	phone messages	21	67	15.00	10.00
2.	phone conversations	71	12	50.71	58.83
3.	direct discussions, dialog	36	36	25.71	30.00
4	Internet	12	5	8.57	4.17
Total		140	120	120 p	100%

The hammer throw coaches communicate with their athletes outside their athletic life as follows: oral verbal communication (by telephone) - 58.83%; written verbal communication (telephone messages) - 10%; oral verbal communication (direct conversations) - 30%, and written verbal communication (Internet) - 4.17%. We found that *outside the athletic life*, the coaches we questioned communicate with the athletes much more through oral verbal communication (85.83%) than written verbal communication (14.17%). We can also observe that the Internet is less used to interact with the athletes, a fact that can be explained, based on the observations and discussions we had during training, by a lack of interest (or lack of technical knowledge in working with it) of the coaches

for this particular type of written verbal communication. *Outside the athletic life*, the athletes we questioned communicate with the coaches through oral verbal communication in proportion of 76.43%, and the coaches, in proportion of 85.83%; the written verbal communication is used by the athletes in proportion of 23.57%, and by coaches, of 14.17%.

The item number 4, "Choose 5 of the factors below that have perturbed your communication with the throwers/coach during certain times in your training", has the athletes/coaches choose 5 of the factors we suggested that have perturbed their communication at certain points in their training sessions.

Table 4 - Options expressed by the hammer throwers and their coaches regarding the perturbing factors

Perturbing factors	No. opt.		Perturbing factors	No. opt.	
	A	C		A	C
weather (wind, rain)	7	5	fatigue	9	5
my attitude (tense, angry)	5	3	the noise in the gym	6	4
the coach's attitude (angry)	3	6	athlete's attitude (misunderstood gestures and demonstrations)	3	6
coach's voice (aggressive tone)	4	2	coach's voice (mild tone)	1	2
the training partners	1	1	my attitude (bad mood)	3	2
<i>Total</i>	21	17	<i>Total</i>	21	19
Total 42 options					

The answer choices are: weather (wind, rain), my attitude (tense, angry), my fatigue, the athlete's fatigue, the noise in the gym, the athlete's attitude (angry), the athlete's lack of focus, the thrower's training partners, other persons who are at that time present during training, my attitude (dominating, rigid), my attitude (sometimes indulgent). The subjects gave the same number of 10 points for the 5 answer choices. The analysis of the 14 hammer throwers' options show the hierarchy of the first 5 factors that have perturbed the communication with the coach during certain parts of the training: fatigue (9 choices); weather (7); noise in the gym (6); the athlete's attitude (tension, anger) (6); the coach's aggressive tone (4). As we can see in Table 4, there were cases in which the "bad mood" of the athletes was admitted by 3 of them, recognizing it as a factor that perturbs the communication with the coach. Also, after adding the first 3 positions in Table 4 (fatigue, noise, and weather), we can see that these represent over 50% of the total perturbing factors. Regarding the options expressed by the 12 coaches, we can see that the first 5 factors (figure 14) perturbing the communications at certain times during training were: the athlete's attitude, represented by tension, anger (6 options); the athlete's attitude, represented by bad performances (6); the athlete's fatigue (5); weather (5);

the noise in the gym (4). As we can see, there were cases in which the dominating attitude, or the indulgent one (6 options) admitted by some of the coaches, has represented a factor perturbing the communication with the athlete. Also, when adding the first points - the athlete's attitude, represented by tension, anger, the athlete's attitude, represented by bad performances, and the athlete's fatigue, they represent more than 50% of the total perturbing factors.

The data presented at **item no. 5**, "Did the position or the distance of the coach/athlete in relation to you created problems for you understanding their demonstrations, the distance existing because he/she wanted to give you indications or corrections regarding the throwing technique?" had the following values: for "YES, most times" - 4 options, for "YES, sometimes" - 8 options, and for "NO" - 2 options (Table 5). As we can see, most options are for "Yes, sometimes", which leads us to conclude that the positions, or the distances chosen by our subjects to make demonstrations, were not always the best ones. Out of the 14 athletes, 4 (28.58%) think that *position and distance in relation to the coach* has "always" perturbed their communication, 8 (57.14%) have said "most times", and 2 athletes (14.28%) said that their communication was "never" perturbed. The coaches

had different opinions regarding *the position and distance in relation to the athlete*, 3 (25%) think that it has "always" perturbed their communication, 7 (58.33%) have said "most times", and 2 athletes (16.64%) said that their communication was "never" perturbed. We can see from Table 5 the difference in

points of the coaches' and athletes' options regarding the position and distance between them. In both cases, the distance and position perturbs "most times" the communication process, with percentages of 57.14, for the athletes, and 58.33% for the coaches.

Table 5 - Options expressed by the hammer throwers and their coaches regarding the influence the distance has on communication

Subjects	Always		Most times		Never	
	Options	Percent	Options	Percent	Options	Percent
Athletes	4	28.57	8	57.14	2	14.28
Coaches	3	25.00	7	58.33	2	16.66

Question number 6, Choose 3 positive and negative characteristics that define the way through which the coach/athlete transmits you information the most during training and competitions (Table 6), asked the subjects to choose 3 positive and negative

characteristics that define the way through which the coach/athlete transmits you information the most during training and competitions.

Table 6 - The characteristics that define the way through which the coach/athlete transmits you information the most during training and competitions

Positive characteristics			Positive characteristics		
During training	A	C	During competitions	A	C
<ul style="list-style-type: none"> ▪ calm smile ▪ dominant posture ▪ relaxed, open posture ▪ interested face expression ▪ moderate visual contact ▪ permanent visual contact ▪ the arms support the words ▪ a sufficiently loud and varied tone of voice ▪ shaky voice ▪ evasive, uncaring look 	<p>3</p> <p>1</p> <p>5</p> <p>5</p> <p>1</p> <p>4</p> <p>8</p> <p>2</p> <p>-</p> <p>-</p>	<p>3</p> <p>1</p> <p>3</p> <p>1</p> <p>1</p> <p>3</p> <p>8</p> <p>3</p> <p>-</p> <p>-</p>	<ul style="list-style-type: none"> ▪ calm smile ▪ dominant posture ▪ relaxed, open posture ▪ interested face expression ▪ moderate visual contact ▪ permanent visual contact ▪ the arms support the words ▪ a sufficiently loud and varied tone of voice ▪ shaky voice ▪ evasive, uncaring look 	<p>4</p> <p>-</p> <p>2</p> <p>2</p> <p>1</p> <p>6</p> <p>6</p> <p>3</p> <p>-</p> <p>1</p>	<p>5</p> <p>-</p> <p>3</p> <p>2</p> <p>1</p> <p>4</p> <p>6</p> <p>4</p> <p>-</p> <p>2</p>
Total options	29	23		25	27

Regarding the training (Table 6), of the specific positive nonverbal language characteristics, the 14 athletes chose the following answers: 8 for "the arms support the words", 5 for "relaxed, open posture", 5 for "interested face expression", 4 for "visual contact", and 3 for "calm smile". As the 12 coaches are concerned, the options had the following values: 8 for "the arms support the words", 3 for "calm smile", 3 for "relaxed, open posture", 3 for "permanent visual contact", and 3 for "a sufficiently loud and varied tone of voice". For the 14 athletes, the results concerning the transmission of information during competitions were as follows: 6 points for "the arms support the words" and for "permanent visual contact", 4 options for "calm smile", 3 options for "a sufficiently loud and

varied tone of voice", and 2 for "relaxed, open posture".

For the 12 coaches, the options had values of: 6 points for "the arms support the words", 5 for "calm smile", 4 for "permanent visual contact" and "a sufficiently loud and varied tone of voice", and 3 for "relaxed, open posture".

As it can be seen in Table 6, there are no great divergences of opinions between coaches and athletes regarding the specific nonverbal language characteristics of the coaches and athletes during training and competitions.

Conclusions

The results we have recorded and analyzed have led us to the following conclusions:



1. during *training*, the questioned hammer throwers communicate with their coaches 52.14% nonverbally, through gestures and facial expressions, and 47.86% verbally, while the coaches communicate 50.83% nonverbally, and 49.17% verbally;

2. during *athletic competitions*, the questioned throwers and the coaches communicate more nonverbally, 66.43% and 75.83%, respectively, than verbally, 24.17% and 24.17%, respectively, because of the distance between them;

3. during training and competitions, the athletes communicate more than the coaches, while during competitions, the coaches transmit more information to the athletes, in various proportions, aspects that validate the two hypotheses.

4. *outside their athletic life*, the throwers communicate verbally with their coach more by phone (76.43%) than by written messages (on the Internet, or phone) (23.57%), while the coaches verbally communicate with the athletes orally in proportion of 85.83%, and use written verbal communication in proportion of 14.17%;

5. fatigue, noise, and weather represent over 50% of the total perturbing factors for the athletes, while the coaches perceive the athlete's tension, nervousness that leads to bad performances, and the athlete's fatigue, as representing over 50% of the total perturbing factors;

6. the communication process is perturbed "most times" by the distance and position of the coach and of the athlete, in proportion of 57.14% for athletes, and in proportion of 58.33% for coaches;

7. during training, the positive specific nonverbal language characteristics are, for the athletes: "the arms support the words", "relaxed, open posture", and "interested face expression", whereas for the coaches: "the arms support the words", "calm smile", and "relaxed, open posture";

8. during competitions, the positive specific nonverbal language characteristics are, for the 14 athletes: "the arms support the words" "permanent visual contact", and "calm smile", whereas for the 12 coaches: "the arms support the words", "calm smile", and "permanent visual contact";

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