Palestrica of the third millennium – Civilization and Sport
Vol. 14, no. 3, July-September 2013, 212–218

Neurolinguistic programming techniques in sports training for enhancing performance capacity

Tehnicile de programare neuro-lingvistică în antrenamentul sportiv pentru creşterea capacităţii de performanţă

Vlad Teodor Grosu[1], Alina Cristina Rusu[2], Emilia Florina Grosu[1]
[1]*Faculty of Physical Education and Sport, "Babeş-Bolyai" University Cluj-Napoca*
[2]*Technical University Cluj-Napoca*

Abstract

Background. In this study, we wish to emphasize the importance of communication between coaches and athletes in order to increase athletic performance. If we compare communication to the analog/digital transmission mode, in the past communication was analogical, while at present it is digital – through submodalities of the communication channel. The language of training is more dynamic and is accompanied by a number of mentions based on senses and on the description of the motor act.

Aims. To find the favorite communication channel of each athlete. Verbs of action, motion, processes, etc. establish reality more clearly. Neurolinguistic programming has a real arsenal of effective techniques capable of generating rapid changes in the athlete's performance, in increasing performance capacity. Neurolinguistic programming uses ideomotor representations, accompanied by visual, auditory, kinesthetic, tactile, olfactory sensations felt by the athlete to describe certain movements.

Methods. Applying a questionnaire by the authors Bandler & Thomson, Garner & Jacobson to the Olympic judo team of Romania. The questionnaire items were classified into three categories: visual, auditory and kinesthetic. The written answers of the athletes allowed to analyze the submodal distinctions of communication and to determine the main communication channel of each athlete.

Results. Neurolinguistic programming techniques applied in practice reveal significant differences for auditory sensations in influencing athletic performance $p=0.652$. There is a significant positive correlation between visual sensations and kinesthetic sensations ($r=0.59$, $df = 23$, $p<0.01$). There is no significant correlation between kinesthetic sensations and olfactory and gustatory sensations. Subjects undergoing a stimulation of visual and auditory channels will have positive effects in the kinesthetic area.

Conclusions. It is very important for the technical staff to understand the best way to communicate with each athlete by applying neurolinguistic programming techniques, so that athletes can reach optimal results in major national and international competitions.

Key words: ideomotor representation, sports training, NLP, sensations: auditory, visual, kinesthetic.

Rezumat

Premize. În acest studiu dorim să subliniem importanţa comunicării dintre antrenori şi sportivi în vederea creşterii performanţelor sportive. Dacă comparăm comunicarea cu modul de trasmisie analogic/digital, în trecut comunicarea se realiza în mod analogic, iar în prezent se realizează în mod digital – prin submodalităţi ale canalului de comunicare. Limbajul este mai dinamic şi este însoţit de o serie de specificări bazate pe simţuri şi pe descrierea actului motric.

Obiective. Găsirea canalului de comunicare favorit al fiecărui sportiv. Verbele de acţiune, mişcare, procese, etc. stabilesc realitatea într-un mod mai clar. Programarea neuro-lingvistică are un adevărat arsenal de tehnici eficiente, capabile să genereze schimbări rapide în performanţa sportivului, în creşterea capacităţii de performanţă. Programarea neuro-lingvistică foloseşte reprezentări ideomotorii, însoţite de senzaţii vizuale, auditive, kinestezice, tactile, olfactive, simţite de sportive pentru a descrie anumite mişcări.

Metode. Aplicarea unui chestionar al autorilor Bandler & Thomson, Garner & Jacobson, la Lotul Olimpic de judo al României. Itemii din chestionare au fost clasificaţi în 3 categorii: vizual, auditiv şi kinestezic. Prin răspunsurile date în scris de sportive se realizează analiza dinstincţiilor submodale de comunicare şi se poate determina care este canalul principal de comunicare al fiecărei sportive.

Rezultate. Tehnicile programării neuro-lingvistice, aplicate în antrenament, prezintă diferenţe semnificative în cazul sezaţiilor auditive în influenţarea performanţelor sportive $p=0,652$; există o corelaţie pozitiv semnificativă între senzaţiile vizuale şi senzaţiile kinestezice ($r=0,59$, $df=23$, $p<0,01$); nu prezintă corelaţie semnificativă între senzaţiile kinestezice şi senzaţiile olfactive şi gustative. Subiecţii cărora li se stimulează canalele vizuale şi auditive vor avea efecte pozitive şi în sfera kinestezică.

Received: 2013, March 8; *Accepted for publication:* 2013, April 20;
Address for correspondence: Faculty of Physical Education and Sport, Babeş-Bolyai University, Cluj-Napoca. Pandurilor Str. No. 7
E-mail: e_f_grosu@yahoo.it

Concluzii. Pentru staff-ul tehnic este foarte important să înţeleagă care este modalitatea optimă de comunicare cu fiecare sportivă, prin aplicarea tehnicilor programării neuro-lingvistice, în aşa fel încât sportivele să ajungă la rezultate optime la marile concursuri naţionale şi internaţionale.

Cuvinte cheie: reprezentare ideomotorie, antrenament sportiv, programare neuro-lingvistică, senzaţii: auditive, vizuale, kinestezice.

Introduction

Neurolinguistic programming (NLP) abounds in behavior changing techniques, which are rapidly adapted to the specific case of sports activity. NLP is aimed at optimizing cognitive-behavioral modalities that are frequently a short-term objective. Neurolinguistic programming (NLP) has a real arsenal of effective techniques, capable of generating rapid changes in athletic performance and of creating a favorable behavior (Grosu, 2012). ”Neuro relates to what is happening in your mind. Linguistic refers not only to the words you use in your communication, but also your body language and how you use it. Programming tackles to persistent patterns of behavior that you learn and than you repeat”. (Ready Romilla & Burton Kate, 2010)

Subconscious, conscious, wish, imagination, body structure, relationship dynamics... all are a sort of interface between the way in which we relate to the others, how we would like to be ourselves, and the way in which we will eventually achieve self-fulfillment (Hall, M., 1996).

These sensations are certainly influenced by the senses. Language reflects these relationships naturally, when people express it (Jacobson, 2009).

The general picture of neurolinguistic programming (NLP) consists of using the nervous system in order to create a model that creates in its turn the sense of reality. Our nervous system – the brain – receives information from the environment by means of the senses. We use these understanding modalities to create sensor information (”thoughts”) and to store it (”memory”). NLP defines these methods of working with the subjects, *ideomotor representations*, systems of actions, based on sensations such as: visual, auditory, kinesthetic, tactile, olfactory. Each system has its own list of sensory submodalities (Bodenhamer BG, Hall M, 2012). Modeled training is based on the principle of training for a specific sport (Epuran, 2008).

Hypotheses

Using neurolinguistic programming techniques, the research is aimed at increasing the performance capacity of the female athletes of the Olympic judo team. These techniques have been very little applied to the sports science area. Educating at school or in sport is a profession full of interaction with not only instructing, but also influencing and sometimes guiding (Isidori, Emanuele, 2009).

Finding the favorite communication channel of each athlete. Verbs of action, motion, processes, etc. establish reality more clearly. In the initial phase of starting to exercise, cognitive processes in the form of attributions and self-efficacy may be special important influences on psychological well-being (Biddle Stuart J.H.; Fox, Kenneth R.; Boutcher, Stephen H, 2000).

Neurolinguistic programming (NLP) has a real arsenal of effective techniques, capable of generating rapid changes in athletic performance, in increasing performance capacity. Neurolinguistic programming (NLP) uses ideomotor representations accompanied by visual, auditory, kinesthetic, tactile, olfactory sensations felt by athletes in order to describe certain movements.

Material and methods

Research protocol

a) *Period of the research*

This paper is part of a larger study aimed at optimizing judo training. The experiment was conducted in the period October-December 2012 in Cluj-Napoca.

b) *Subjects and groups*

The subjects of the experiment were female athletes of the Olympic judo team of Romania, divided into 4 groups: children (12-13 years), cadets (14-16 years), juniors (17-19 years), seniors (older than 20 years). The questionnaire was applied to 25 athletes.

The athletes were asked to think and imagine that they executed the back techniques: uchi-mata, harai-goshi and koshi-guruma. The athletes had to think of the execution technique and focus on the general phases of the technique: kuzushi (unbalancing), uchi-komi (technique entrance), nage-komi (throwing). It is important that the ideomotor representations of the above mentioned motor acts should be paralleled by the sensations accompanying the execution of those motor acts.

c) T*ests applied*

The research methods used were: statistical analysis and investigation performed by applying the questionnaire ”The Secret of Being Happy”, in English, or ”NLP per il benessere”, the Italian edition (Bandler & Thomson, 2011; Garner & Jacobson, 2009).

The items were classified into 3 categories: visual, auditory and kinesthetic (VAK), according to Dilts et al., 2011. The written answers of the athletes allowed to analyze the submodal distinctions of communication and to determine the main communication channel between the coach and the athletes (for each individually). At this point, it can be said that the alteration of a communication submodality may have a strong effect on another submodality, in the sense of its increase or decrease. For example, if the brightness of an image increases, the intensity of the sensations determined by it in our mind might also increase. Qualitative or quantitative changes may take place.

d) *Statistical processing*

Statistical processing was performed using the SPSS 15.0 software. For the comparison of the means between the subject groups, the ANOVA test was used and for multiple comparison, the post-hoc Bonferroni test. The correlation between the variables was established with the Pearson correlation coefficient (r). The diagrams were drawn using the box plot method and they indicated: the

minimum and maximum value, the median, percentiles 75 and 25; extreme scores.

We mention that the approval of the Ethics Board of the Olympic Judo Team as well as the informed consent of the participants in the research and their parents were obtained.

Results

The content of submodal distinctions refers to several components. Here is a list of the main visual submodalities, followed by a brief description of each and some instructions on what can be changed: brightness, acuity, distance, static image, size, moving image, shape, associated, position, dissociated, direction, three-dimensional depth, contrast, flat image, clarity, framed/unframed, color, other quality. In most of the cases, the difficulty encountered in understanding these types of differences is related to the limits within which we use our language (not to the limits of our sensory experience) (Jacobson, 2009). Color indicates the number of colors that are seen, the image is black and white or colored, or a combination of the two. There are colors that are conspicuous, as if they were central or more important. The following indications were given to the athletes: an image may be focused but not clear, or it can be very accurately exposed or it may have certain diffuse parts. The shape defines the configuration of an image, but also the potential shapes that are seen inside the image. The same may be true for size, distance and position, it is a sort of game of the mind (Bandler & Fitzpatrick, 2011).

The athletes were told the following: ”When you are associated to the image, you see exactly with your eyes as if you were there (usually a panoramic image). In other words, you do not see yourselves inside the image. When you are dissociated from the image, the opposite happens, you see yourselves in the image as if someone else’s eyes saw the image, as if you watched a movie. The analysis of submodal distinctions through the visual, auditory and kinesthetic channels in the athletes of the judo groups (Bandler & Thomson, 2011) can be seen in Table I and Fig. 1.

Discussion

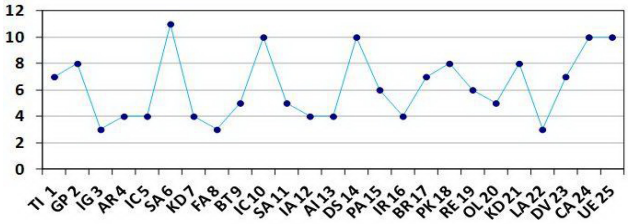

Fig. 1 – Analysis of visual submodalities.

On the abscissa, the 25 subjects are represented, and on the ordinate, the values of the visual components.

The values of the visual submodality distinctions can be seen in Fig. 2. In the children category, there is an athlete who has visual preferences with the value 8. In the cadet group, there are 3 athletes with values of the visual components higher than 10, which represent the largest group. In the junior group, the maximum value is 8, with only one athlete who prefers visual communication during training. In the senior group, 3 of 5 athletes prefer visual submodalities, with values higher than 8.

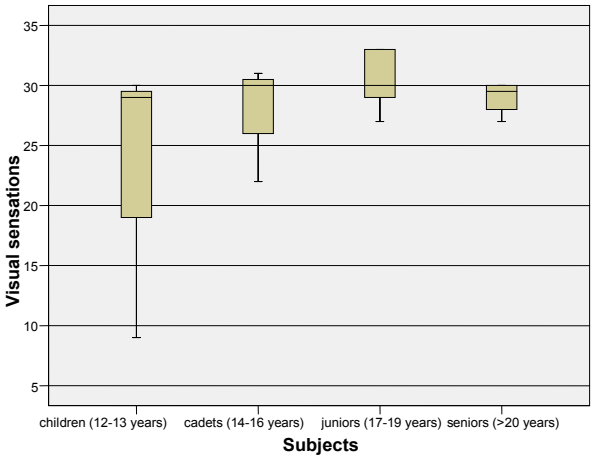

Fig. 2 – Box plot diagrams – visual sensations.

Table I

Analysis of visual submodality distinctions in the Olympic judo team.

Indicator	Age																							
Group	12-13 years Children			14-16 years Cadets											17-19 years Juniors					Over 20 years Seniors				
Subjects	TI	GP	IG	AR	IC	SA	KD	FA	BT	IC	SA	IA	AI	DS	PA	IR	BR	PK	RE	OL	KD	LA	DV	CA	UE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Visual channel	7	8	3	4	4	11	4	3	5	11	5	4	4	10	6	4	7	8	6	5	8	3	7	10	10

Table II

Analysis of auditory submodalities in the Olympic judo team.

Indicator	Age																							
Group	12-13 years Children			14-16 years Cadets											17-19 years Juniors					Over 20 years Seniors				
Subjects	TI	GP	IG	AR	IC	SA	KD	FA	BT	IC	SA	IA	AI	DS	PA	IR	BR	PK	RE	OL	KD	LA	DV	CA	UE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Acoustic channel	3	2	3	3	2	3	2	2	3	7	2	4	3	3	4	4	3	4	3	2	2	1	2	5	6

The auditory submodality distinctions of sounds are more important than volume, particularly regarding voices. The voice characteristic of a person, which is technically termed vocal timbre, might have an impact on us more than anything (Jacobson, 2009). The auditory submodalities were described (Bandler & Thomson, 2011): sounds, vocal timbre, words, internal, position, external, frequency, direction, tone, tempo, voice, volume, distance, duration, rhythm (Table II).

The athletes were given indications: whether the sounds come from inside or outside the body might be more important to note, identifying an exact position. The direction from which they come will be relevant. Volume might be influenced by distance and direction, usually sounds seem fainter when they are far away and volume is louder when they are closer (Jacobson, 2009). There are other qualities of the sound that are important. In order to distinguish them clearly, it is useful to think in musical terms. A characteristic is frequency, the higher or lower notes played by a piano, or rhythm and tempo. Even duration can be important, in certain cases. Tone and timbre refer to the frequency range and the distribution of the sound.

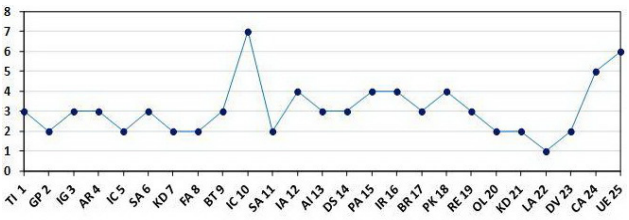

Fig. 3 – Analysis of auditory submodalities.

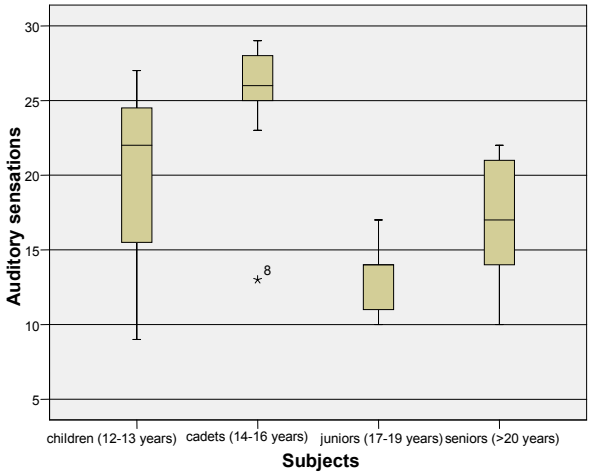

Fig. 4 – Box plot diagrams – auditory sensations.

On the abscissa, the 25 subjects are represented, and on the ordinate, the values of the auditory components (Fig. 3). Regarding data interpretation, it can be said that athletes at this stage of the experiment do not use auditory submodal distinctions in the training process. There is only one athlete in the cadet category (14-16 years) who uses auditory submodalities with the value 7. In the future, this aspect should be worked on, in order to develop the ideomotor representations of motor acts, of technical elements during training (Fig. 4).

The analysis of data by kinesthetic submodalities shows that 2 athletes, one in the cadet group and the other in the children group, use in the case of ideomotor representations certain kinesthetic sensations, with the values 9 and 10 (Table III, Fig. 5).

Kinesthetic submodal distinctions: internal, proprioceptive sensation**,** external, shape, position, temperature**,** weight, movement, duration, intensity, size, humidity, pressure, consistence, frequency, rhythm, tactile sensation, balance.

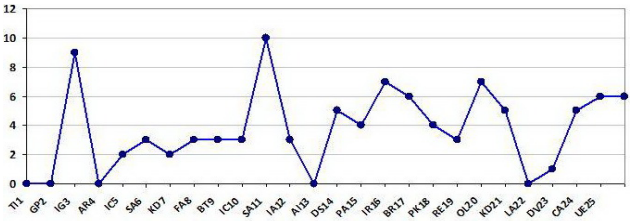

Fig. 5 – Analysis of kinesthetic submodalities.

On the abscissa, the 25 subjects are represented, and on the ordinate, the values of kinesthetic components.

In the future, it remains to work on these submodal distinctions during training, so that athletes can better feel any movement (motor act), see Figs. 5 and 6.

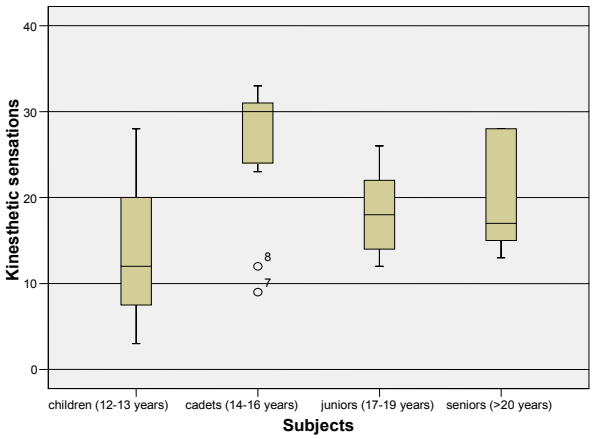

Fig. 6 – Box plot diagrams – kinesthetic sensations.

Table III

Analysis of kinesthetic submodalities in the Olympic judo team.

Indicator	Age																							
Group	12-13 years Children			14-16 years Cadets											17-19 years Juniors					Over 20 years Seniors				
Subjects	TI	GP	IG	AR	IC	SA	KD	FA	BT	IC	SA	IA	AI	DS	PA	IR	BR	PK	RE	OL	KD	LA	DV	CA	UE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Kinesthetic channel	0	9	0	2	3	2	3	3	3	10	3	0	5	4	7	6	4	3	7	5	0	1	5	6	6

The table below contains: the partial means for each perception submodality as part of neurolinguistic programming: visual, auditory, kinesthetic, olfactory, gustatory by different age categories, Table IV. Much educational research is concerned with establishing interrelationships among variables (Cohen Luis; Manion Lawrence; Morrison Keithe, Research Methods in Education, 2007).

Table IV
Analysis of NLP submodalities (means by age categories) in the Olympic judo team.

Indicator	Category			
Submodalities	12-13 years Children	14-16 years Cadets	17-19 years Juniors	Over 20 years Seniors
Subjects	3	11	5	6
Visual	22.6	28	30.4	29
Auditory	19.3	25.3	13.2	16.8
Kinesthetic	14.3	25.5	18.4	19.6
Olfactory-gustatory	5	1.54	9.6	4.8

In the case of kinesthetic submodalities, the following sensations listed below can be identified or not by the athletes. The athletes were suggested to think of the tactile, proprioceptive and vestibular sensations that they felt during the ideomotor representations of the various technical elements as follows: tactile sensation means the sensation of contact at the surface of the skin (temperature, consistence, humidity, physical contact); proprioceptive sensation – a sensation from inside the body, internal pressure, tension, weight, position of the body and limbs; vestibular sensation – the sense of balance (position in space, gravity-dependent relationships); a strong emotion includes elements of all these types and something more. We might have similar physical sensations in very different situations and give them different names. If we wish to feel a sensation, it means that we like it, and in the opposite case, we feel it as unpleasant. The same physiological sensation is interpreted differently.

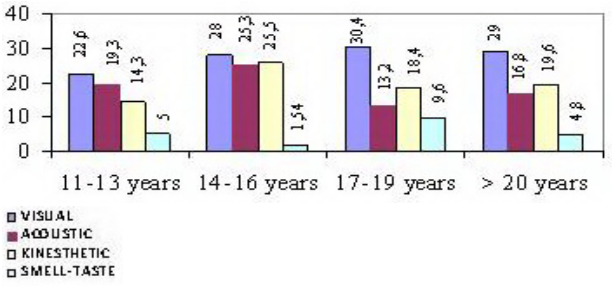

Fig. 7 – Analysis of perception submodalities.

The components of visual, auditory, kinesthetic, olfactory and gustatory submodalities were selected according to an operational scheme proposed by Jacobson (2009). Until recently, only the presence or the absence of different sensations felt during the execution of motor acts, the analogic type, were taken into consideration, as shown in the first part of the study. The values recorded in Fig. 7 refer to each category of sensations by age groups. It can be seen that in all age groups, kinesthetic sensations need to be worked on in order to reach the values of visual sensations.

Today, in the analysis of sensations felt during ideo-motor representations, the different submodalities of each sensation, the digital type, are considered. For example, brightness and its value, which can be different for each athlete, are important. Size, shape, distance and all the other visual submodal distinctions can also be felt and interpreted differently by each of our athletes. The same is true for all the other components of auditory, kinesthetic, olfactory-gustatory submodalities (Fig. 8).

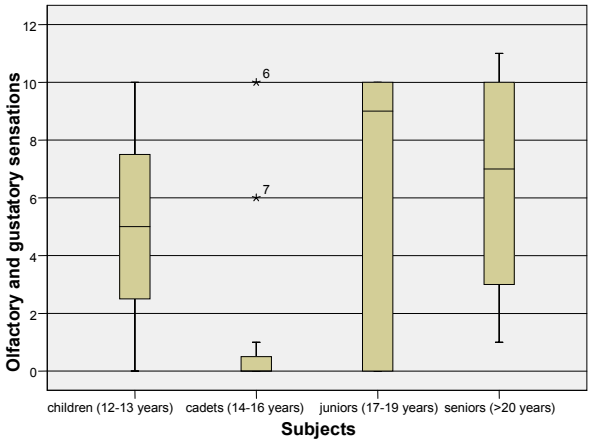

Fig. 8 – Box plot diagrams – olfactory, gustatory sensations.

Statistical processing

Statistical processing was performed using the SPSS 15.0 software. For the comparison of the means between the groups of subjects, we applied the ANOVA test and for multiple comparison, the post hoc Bonferroni test, the significance threshold being $p \leq 0.05$. The correlation between the variables was established through the Pearson correlation coefficient (r), the significance threshold being $p \leq 0.01$. The diagrams drawn with the box plot method indicate: the minimum and maximum value; the median, percentiles 75 and 25; extreme scores.

ANOVA statistical results obtained (Table V).

Table V
Analysis of the results of the ANOVA test

Indicator	Mean square	F	p
Visual sensations	39.991	1.918	.158
Auditory sensations	202.838	8.306	.001
Kinesthetic sensations	133.944	2.106	.130
Olfactory and gustatory sensations	40.991	2.466	.090

* The main difference is significant at a value of .05

The training method (NLP) has significant differences only in the case of auditory sensations ($F=8.30$, $p=0.001$). After the Bonferroni adjustment of the number of comparisons, significant differences were found between the means of cadets and juniors ($MD=12.164$, $p=0.001$), and between those of cadets and seniors ($MD=8.53$, $p=0.016$). The mean of the auditory sensations of cadets ($M=25.36$, $SD=4.5$) was significantly higher than the mean of juniors ($M=13.3$, $SD=2.77$) and seniors ($M=16.83$, $SD=4.62$). In the other cases of the comparison of the means, there was no significant difference (Table VI).

Table VI

Analysis of the results of post hoc tests - multiple comparisons - Bonferroni.

Dependent variable	(I) Subjects	(J) Subjects	Mean difference (I-J)	Std. error	Sig.
Auditory sensations	Children (12-13 years)	Cadets (14-16 years)	-6.030	3.219	.450
		Juniors (17-19 years)	6.133	3.609	.624
		Seniors (>20 years)	2.500	3.494	1.000
	Cadets (14-16 years)	Children (12-13 years)	6.030	3.219	.450
		Juniors (17-19 years)	12.164 (*)	2.665	.001
		Seniors (>20 years)	8.530 (*)	2.508	.016
	Juniors (17-19 years)	Children (12-13 years)	-6.133	3.609	.624
		Cadets (14-16 years)	-12.164 (*)	2.665	.001
		Seniors (>20 years)	-3.633	2.992	1.000
	Seniors (>20 years)	Children (12-13 years)	-2.500	3.494	1.000
		Cadets (14-16 years)	-8.530(*)	2.508	.016
		Juniors (17-19 years)	3.633	2.992	1.000

*The most important difference is significant at a value of .05

Table VII

Analysis of results – Correlations

Indicator	Significance	Visual sensations	Auditory sensations	Kinesthetic sensations	Olfactory and gustatory sensations
Visual sensations	r	1	.270	.593(*)	-.037
	p		.192	.002	.861
Auditory sensations	r	.270	1	.652(*)	-.293
	p	.192		.000	.156
Kinesthetic sensations	r	.593(*)	.652(*)	1	-.300
	p	.002	.000		.145
Olfactory and gustatory sensations	r	-.037	-.293	-.300	1
	p	.861	.156	.145	

*The correlation is significant at a value of 0.01

Correlations

There is a significant positive correlation between visual sensations and kinesthetic sensations ($r=0.59$, $df=23$, $p<0.01$) and between auditory sensations and kinesthetic sensations ($r=0.65$, $df=23$, $p<0.01$) (Table VII). There is no significant correlation betweeen kinesthetic sensations and olfactory and gustatory sensations. The subjects whose visual and auditory channels are stimulated will also have positive effects in the kinesthetic area. Sport is a complex social phenomenon, and the concepts within it are rarely unidimensional, that is they cannot be measured using a single question (Ian, Iones & Chris Gratton, 2004).

Conclusions

1. Values of *visual submodality* distinctions. In the children category, there is one athlete who has visual preferences with the value 8. In the cadet group, there are 3 athletes with values of the visual components higher than 10, which represent the largest group. In the junior group, the maximum value is 8.

2. Auditory submodality distinctions in the process of training. There is one athlete in the cadet category (14-16 years) that uses auditory submodalities with the value 7. In the future, this aspect should be worked on in order to develop the ideomotor representations of motor acts, of the technical elements of training.

3. The analysis of data for *kinesthetic submodalities* shows that there are 2 athletes, one in the cadet group and the other in the children group, who use in the case of ideomotor representations certain kinesthetic sensations, with the values 9 and 10.

4. In the analysis of sensations felt during ideomotor representations, the different submodalities of each sensation, the digital type, are considered. The need for the clarity of thougths associated with action and with all submodal distinctions of NLP. In addition, the athletes have to focus on the present moment (Vittoz & Godefroy, 2001). It is very important for the technical staff to understand the optimal communication modality with each individual athlete, so that the athletes can reach optimal results in major national and international competitions.

5. The training method (NLP) has significant differences only in the case of auditory sensations.

6. The mean of the auditory sensations of cadets is significantly higher than the mean of juniors and seniors.

7. There is a significant positive correlation between visual sensations and kinesthetic sensations and between auditory sensations and kinesthetic sensations. There is no significant correlation between kinesthetic sensations and olfactory and gustatory sensations.

Conflicts of interests

Nothing to declare.

Acknowledgments

The article is based on a study for the ongoing doctoral thesis of the first author.

Authors' contributions

The first two authors were responsible for the theoretical fundamentation of the article and data recording. The last author was responsible for data processing.

References

Biddle Stuart JH, Fox KR, Boutcher SH. Psysical Activity and Psychological Well – Being, Routledge, Taylor and Francis Group, London and New York, 2000; 164.

Bodenhamer BG, Hall M. The time-line della NLP/Come transformare la percepzione degli eventi passati e futuri con la Programazzione Neuro-Linguistica, Publishing Alessio Roberti, Urgnano (BG), Italy, 2012; 29, 31, 46-47, 50.

Bandler R, Thomson G. NLP per il Benessere, Ed. Alessio Roberti, Roma, Italy, 2012; 419-420, 128-129.

Bandler R, Fitzpatrick O. NLP and Freedom, Ed. Alessio Roberti, Roma, Italy, 2011; 89.

Cohen L, Manion L, Morrison K. Research Methods in Education, Sixt Edition,Companion Website, Routledge, Taylor and Francis Group, USA and Canada, 2007; 528.

Dilts RD, Epstein T, Dilts RW. NLP and the creativity. Ed. Alessio Roberti, Roma, Italy, 2011; 105.

Epuran M, Holdevici I, Toniţa F. Psihologia sportului de performanţă, Teorie şi practică. Ed. FEST, Bucureşti, 2008; 356

Grosu EF. Applications of mental training in sport, Vol III, GMI Publishing House, Cluj-Napoca, 2012; 32, 33.

Hall LM. The Spirit of NLP: The process, meaning and criteria for mastering NLP, Anglo American Books, Carmarthen, Wales, U.K., 1996; 14.

Iones I, Gratton C. Research methods for sport studies, Routledge, Taylor and Francis Group, London and New York, 2004, 124.

Isidori E. Outline of Sport Pedagogy, Introduction and research Essays, Aracne, Roma, 2009; 28.

Jacobson S. NLP per il problem solving, Ed. Alessio Roberti, Roma, Italia, 2009; 46-48, 191.

Ready R, Burton K. Neuro-Linguistic Programming for Dummies, 2nd Edition, Published by John Wiley&Sons, Ltd. West Sussex, England, 1.

Vittoz R, Godefroy CH. How to control your brain at will, Published by Christian H Godefroy USA, 2001; 50.

Websites

(1) www.pnl. info, Italy NLP Coaching School visited on 25.11.2012