

7th ANNUAL CONGRESS OF THE EUROPEAN COLLEGE OF SPORT SCIENCE
Athens, Greece, 24-28 July, 2002

VOLUME I

Congress President

Vassilis Klissouras

ECSS Executive Board
Paolo Parisi, President
Joachim Mester, Past President
Michael Kjaer, President Elect
Eric Muller, General Secretary
Susan Ward, Treasurer

ECSS Scientific Committee

Albert Gollhofer, Chairperson
Stuart Biddle
Caroline Nicol
Fabio Pigozzi
Roland Renson
Anton Wagenmakers

Organizing Committee

Konstandinos Mandroukas
Yiannis Mouratidis
Yiannis Theodorakis
Kyriakos Taxildaris

Consultant

Paolo Parisi

Local Scientific Committee

Nickos Geladas, Chairperson
Spyros Athanasopoulos
Panayiotis Baltopoulos
Vassilis Baltzopoulos
Konstandinos Boudolos
Christos Kabitsis
Yiannis Kologeropoulos
Konstandinos Karteroliotis
Spyros Kellis
Yiannis Koutedakis
Maria Maridaki
Yiannis Mouratidis
Labros Sidossis
Yiannis Theodorakis
Savas Tokmakidis
Yiannis Zervas

UNDER THE AEGIS AND SPONSORSHIP OF

The European Parliament
The European Commission
The International Olympic Committee
The European Olympic Committees

Ministry of Education
Ministry of Health
Ministry of Culture

General Secretariat of Sport
Greek National Tourism Organization
The Mayor of Athens
The Governor of Elia
The Governor of Drama
National Bank of Greece
Agricultural Bank of Greece
Pachalidis Medical Publishers
Hellenic Festival SA

Edited by M. Koskolou, N. Geladas, V. Klissouras

Published by Pashalidis Medical Publisher, 14 Tetrapoleos, Athens 115 27, Tel. 010.7789.125, 010.7793.012, 010.7483.148, 010.7489.411, FAX: 010.7759.421

Copyright © 2002, ECSS2002 and University of Athens

Cover page designed by: D. Manolakakis

COORDINATION INTEGRATION DEVELOPMENT IN GIRLS AGED 7 – 9 YEARS

R. Katić, D. Bonacin, and R. Pažanin

Department of physical education, Faculty of Natural Science Mathematics and Education. University of Split, Croatia

Upon entering school the seven-year olds (± 2 months) underwent a systematic, experimental, specially programmed, eighteen-month-long transformational procedure. In that sense, the objective of the procedure was to develop the abilities and to observe the growth of the children's coordination.

The sample of examinees was comprised of 238 girls, primary school first formers from Split Croatia who were 7 years ± 2 months old at the beginning of the experimental procedure. The sample of variables necessary for the assessment was selected in such a way as to cover all, the morphological, aerobic and the motor status, and one especially complex variable (Mpol). Control points in which the measurements were done were defined in the periods each lasting nine months. Data processing methods implied standard multivariate regression with Mpol criterion in each control point.

In all the cases the regression analyses are significant at the level of 0.01. According to the data obtained in this paper, a systematic kinesiological treatment may without any doubt contribute to the whole process. As it is evident, both the classical contents of the physical education classes (curriculum) and the specially programmed treatment brought about positive effects in this respect. Therefore, even at the age of seven years the development of coordination can still be affected, but a year or more of systematic treatment is the time necessary to achieve any effect.

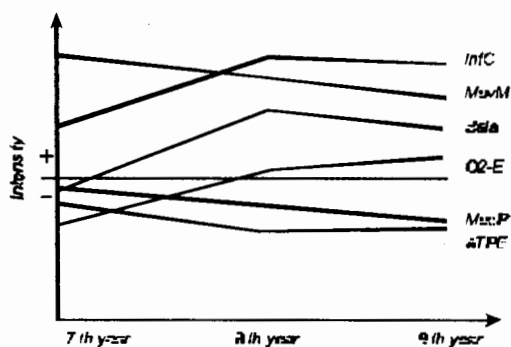


Figure 1. Model of coordination prediction development

	M1	p	M2	p	M3	p
InfC	-.15	*	-.33	**	-.30	**
MovM	-.37	**	-.28	**	-.19	**
Bala	.05		-.13	*	-.08	
O2-E	.11		.01		-.06	
MecP	.06		.11		.12	
ATPE	.05		.12		.12	
Delta	.24		.42		.30	
Ro	.49		.65		.55	
P	.00		.00		.00	

InfC = Information channels, MovM = Movement maintenance,

O2-E = O2- energy, Bala = Balance, MecP = Mechanic.

persistency, ATPE = ATP energy. Delta = determination,

Ro = multiple correlation, P = probability (*=.05, **=.01)

M1,2,3 = beta coef. In measurement 1,2,3, p = probability

Movement (walking, running) control is, however, a complex process which involves not only the motor functions of locomotion, but also the very mechanism that is permanently active and that is needed to keep the balance. Transmission to the system of effectors undoubtedly requires, above all, apart from forming the quality engrams, an exceptional speed of signal transmission (Nakahara et al., 2001). On the whole, it may be said that it is of an outstanding importance to perceive the possibility of the development of co-ordination abilities precisely in consistence with the time spent under treatment, since this happens to be one of the basic kinesiological characteristics of physical exercising.

REFERENCES

- Nakahara et al (2001) J Cogn Neurosci 13: 626-647
Stern (2001) Science 291: 1861