

سامية محمد مصطفى



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سامية محمد مصطفى



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بالرسالة صفحات لم ترد بالأصل



**POSTURAL CONTROL TRAINING : EFFECT
ON BALANCE AND LOCOMOTION IN
HEMIPARETIC CHILDREN**

A Thesis

**Submitted to Physical Therapy Department for Growth and
Developmental Disorders in Children and its Surgery
in the Partial Fulfillment of the Requirements for
the Doctoral Degree in Physical Therapy**

By

Heba Mohamed Youssr Mohamed El Basatiny

M.Sc. Physical Therapy

Faculty of Physical Therapy

Cairo University

2004

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1000-0

Supervisors

A. ElTohamy

Prof. Amira Mohamed El-Tohamy

Professor of Growth and Developmental

Disorders in Children and its Surgery

Faculty of Physical Therapy

Cairo University

Prof. Elham EL-Sayed Salem

Professor of Growth and Developmental

Disorders in Children and its Surgery

Faculty of Physical Therapy

Cairo University



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Heba M. Youssr El Basatiny

2004

Dedication

To

*My Husband, Parents and Children
for their Continuous Support and
Encouragement*

Abstract

Postural control training : Effect on balance & locomotion in hemiparetic children. By : *Heba Mohamed Youssr Mohamed El Basatiny*; Supervisors: *Prof. Dr. Amira Mohamed El-Tohamy, Prof. Dr. Elham El-Sayed Salem*. Doctoral thesis P.T., Physical Therapy Department for Growth and Developmental Disorders in Children and its Surgery, Faculty of Physical Therapy, Cairo University, 2004.

Abstract

The purpose of this work was to study the effect of postural control training on balance & locomotion in spastic hemiparetic children. The study was conducted on forty-two children, ranging in age from 7 to 12 years from both sexes, they include: fifteen normal children served as a control group (A) & twenty-seven ambulant spastic hemiparetic children as study group (B). They received a balance training program on Biodex system in addition to a physical therapy program 3 times/week for 3 months. The post treatment stability indices & gait parameters results showed significant improvement in balance & locomotion of study group (B) after treatment which confirm the importance of postural control training (by using Biodex system) in the rehabilitation program of spastic hemiparetic children.

Key Words : Postural Control, balance, locomotion, hemiplegia.

List of Abbreviations

AP	: Anteroposterior.
BOS	: Base of support.
cm	: Centimeters.
CNS	: Central nervous system.
COG	: Center of gravity.
COM	: Center of mass.
CP	: Cerebral palsy.
IQ	: Intellectual quotient.
kg	: Kilograms.
m	: Meter.
m/s	: Meter/second.
Max	: Maximum.
Min	: Minimum.
ML	: Mediolateral.
NDT	: Neurodevelopmental treatment.
No.	: Number.
P	: Probability value.
S.D	: Standard deviation.
sec	: Second.
SEM	: Standard error of mean.
SI	: Stability index.
t	: Paired samples t-test.
VOR	: Vestibuloocular reflex.
VSR	: Vestibulospinal reflex.
\bar{X}	: Mean.
%	: Percentage.
(*)	: Significant.

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