



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكروفيلم

# بسم الله الرحمن الرحيم



**MONA MAGHRABY**



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التوثيق الإلكتروني والميكروفيلم



# شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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# جامعة عين شمس

## التوثيق الإلكتروني والميكروفيلم

### قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



### يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



**MONA MAGHRABY**

# **NUTRITIONAL REFLECTION ON GROWTH AND DEVELOPMENT AMONG CHILDREN WITH INTELLECTUAL DISABILITY**

**Submitted By**

**Marwa Nasr Al Sayed Soliman**

B. Sc. of Pharmaceutical Sciences, Faculty of Pharmacy, Cairo University, 1996  
Master in, Environmental Sciences, Institute of Environmental Studies & Research,  
Ain Shams University, 2016

A Thesis Submitted in Partial Fulfillment  
Of  
The Requirement for the Doctor of Philosophy Degree  
In  
Environmental Sciences

Department of Environmental Medical Sciences  
Institute of Environmental Studies and Research  
Ain Shams University

**2021**

APPROVAL SHEET  
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## *Acknowledgment*

First and foremost, I feel always indebted to Allah, the most kind and most Merciful.

I would like to express my respectful thanks and profound gratitude to **Dr. Howida Hosny El Gebaly** Professor of Pediatrics and Dean of Faculty of Post Graduate Childhood Studies, Ain Shams University for her keen guidance, kind supervision, valuable advice and continuous encouragement, which made possible the completion of this study.

I am also delighted to express my deepest gratitude and thanks to **Dr. Mohamed Salah Mostafa**, Professor of Preventive Medicine and Epidemiology, Faculty of Post Graduate Childhood Studies, Ain Shams University, for his kind care, continuous supervision, valuable instructions, constant help, and great assistance throughout this study.

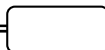
My deepest gratitude and thanks to **Dr. Rania Samy Mohamed** Fellow of Pediatrics - faculty of Post Graduate Childhood Studies, Ain Shams University, for her continuous supervision and assistance till the completion of this work.

My thanks and appreciation to **Dr. Mageda Ramzy Kastandy** Fellow of Nutrition - The National Institute of Nutrition for her valuable instructions, help and assistance.

I would like to express my deep appreciation and thanks for all the staff of the general pediatric clinic referred to Center of children with special needs, Faculty Of Post Graduate Childhood Studies, Ain Shams University for their help.

Last but not least my sincere thanks and appreciation to all parents of patients participated in this study.

*Marwa Nasr Al-Sayed*



## *Abstract*

**Background** there is a strong relationship between malnutrition. Socioeconomic, demographic factors and children growth and development. this clinic based study aimed to detect nutritional problems and its reflection on growth and mental development among disabled children.

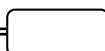
**Methods** All subjects were submitted to cross sectional study, subjects exposed to history taking include: age, sex, onset and duration of disorder and family history. Full clinical examination was carried out, IQ test: using Stanford - benet 5<sup>th</sup> edition were carried out. Assessment of nutritional status using developmental nutritional questionnaire, 24-hr. dietary recalls were collected for each participant.

**Results of this study showed:** significant difference in the residential places between the two groups of lower and higher IQ ( $p=.042$ ). The gross motor development is delayed in the lower IQ group of children (27.9%), According to food analysis there is significant difference in the elements they get between the two groups of children (of lower and higher IQ). multiple analysis showed significant relationship between orientation (49%) and zinc intake (33%) with IQ of children.

**Conclusion:** The diet has major role in motor and IQ development among intellectual disabled children.

**Recommendations:** This study suggests for the decision makers to implement nutrition program for all children especially intellectual disabled children.

**Keywords:** Intellectual disability, nutritional factors, IQ level, socioeconomic impacts.





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*List of Abbreviation*

<b>ACTH:</b>	Adrenocorticotrophic Hormone
<b>ADD:</b>	Attention Deficit Disorder
<b>ADHD:</b>	Attention Deficit/ Hyperactivity Disorder
<b>ASD:</b>	Autism Spectrum Disorders
<b>BDNF:</b>	Brain-Derived Neurotropic Factor
<b>BMD:</b>	Bone Mineral Density
<b>BMI:</b>	Body Mass Index
<b>CBCL:</b>	Child Behavior Checklist
<b>CNS:</b>	Central Nervous System
<b>CP:</b>	Cerebral Palsy
<b>CS:</b>	Caesarean Section
<b>CVS:</b>	Cardiovascular System
<b>DNA:</b>	Deoxyribonucleic Acid
<b>DHA:</b>	Dexahexanoic acid
<b>DLD:</b>	Delayed Language Development
<b>DM:</b>	Diabetes mellitus
<b>DS:</b>	Down Syndrome
<b>EEG:</b>	Electrocardiogram
<b>FA:</b>	Fatty acid
<b>FT:</b>	Full Term
<b>GABA:</b>	Gamma-aminobutyric acid
<b>GDM:</b>	Gestational diabetes mellitus
<b>Hb:</b>	Hemoglobin
<b>ID:</b>	Intellectual Disabilities
<b>IGF:</b>	Insulin Like Growth Factor
<b>IQ:</b>	Intelligence Quotient
<b>ISAA:</b>	Indian Scale for Assessment of Autism
<b>IVH:</b>	Intraventricular Hemorrhage
<b>LCPs:</b>	Long Chain Unsaturated Fatty Acid