Ain-Shams University
Faculty of Specific Education
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Effects of Dietary Intervention on Epilepsy Seizures and Hyperactive Children

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ABSTRACT

Effects of Dietary Intervention on Epilepsy Seizures and Hyperactivity Children

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The study aimed to effect of dietary intervention on epilepsy seizures and hyperactive children. Subjected sample were 56 children classified into three groups: 16 female + 9 male with epilepsy only, 20 female + 5 male with ADHD only and 3female + 3male with epilepsy and ADHD combined. They selected from two places (Care Center For Special Need Children ,Ain Shams University and "Sondos" Center, Abbass Elakkad St., Nasr City Cairo governorate, their age ranged between 6:12 yrs. The study investigated their socio-economic factors, nutritional status; dietary intakes, using 24 hours recall, diet history, food habits, anthropometric measurements and clinical signs. Also Attention Deficit Hyperactive Disorder Test was applied on groups 2 & 3 and the number with time length of seizures was recorded. After statistical analysis, Correlation Matrix, for compiled data dietary intervention was applied for 80 days followed by retests and statistical analysis. Results of socio-economic factor showed illiteracy (17.8%, 21.4%), basic education was (17.8%, 8.9%) (39%) house wife & (32%) private work among mothers & fathers respectively. In addition, food habits reflected that; 45% of total children did not had their breakfast, average intake of milk & dairy products was only 4.14 units/wk. and water intake represented 775ml⁄day besides soft drink &tea (1.58 , 1.9 cups ⁄day) respectively. While nutritional assessment revealed that 85% of them had underweight, 36% of total children suffered pale face and injury gums. Comparing with RDA & RNI, it was found that average intake before dietary intervention for protein ,vitamin C, calcium ,iron and selenium were deficient as 79% ,59%,57.6%, 80% and 69% respectively and excessive for sodium as 310%. The deficient were improved after dietary intervention for 125%, 120%, 130%, 136%,112 and 142 respectively, also clinical signs & food habits were improved. There were statistically significant differences between before and after dietary intervention in fat , water, vitamins A, C, B 12 and elements sodium, calcium, iron and selenium at ($P < 0.05$ & $P < 0.01$) as improvement situation. Also statistical significant relationships between fish makril intake, fresh vegetable & fruit and epilepsy & hyperactive improvement status were documented ($P < 0.01$). Statistically significant differences were founded also before and after dietary intervention as improvement for number, length of seizures and hyperactive status ($P < 0.01$). The study recommended by increments for intake of dietary protein, calcium, iron and selenium, fresh vegetables & fruits, sea fish as source of omega3 also water intake must be increased to 1.75 liters / day.

Keywords:
Epilepsy - Seizures – Epileptics Status - Attention Deficit Hyperactive Disorder - Nutritional Status - Food Habits - Dietary Intervention.

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List oF Appreviations

ADDCH	Attention Deficit Disorder Connected With Hyperactivity.
ADHD	Attention Deficit Hyperactive Disorders.
AEDS	Anti Epileptic Drugs.
BMI	Body Mass Index.
Ca	Calcium.
CHO	Carbohydrate.
CT	Computed Tomography.
D	Day.
ECG	Electrocardiogram.
Ed.	Education.
EEG	Electroencephalogram.
FAO	Food Agriculture Organization.
Fe	Iron.
Fig	Figure.
GABA	Gamma- Amino Butyric Acid.
H/A	Height for Age.
HDL	High Density-Lipoprotein.
Hr	Hour.
HT	Height.
IU	International Unit.
LDL	Low Density-Lipoprotein**.**
Mg	Magnesium.
Na	Sodium.
NO.	Number.
Nutr. **Ed**.	Nutrition Education .

Following

List oF Appreviations

RDA	Recommended Dietary Allowance**.**
RNI	Reference Nutrients Intake.
SD	Standard Divination.
Se	Selenium.
SES	Socio-Economic Situation.
SL	Seizure Length.
SN	Seizure Number.
Univ	University.
Vit	Vitamin.
W/A	Weight for Age.
WHO	World Health Organization.
WK	Week.
WT	Weight.
Yrs.	Years.
Zn	Zinc.

Introduction