

Prevention Of The Obesity Among Primary School Children In Baghdad City

الوقاية من السمنة بين اطفال المدارس الابتدائية في مدينة بغداد

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الخلاصة:

الهدف : تهدف هذه الدراسة التعرف على ظاهرة السمنة بين اطفال المدارس الابتدائية في مدينة بغداد ومعرفة العلاقة بين بعض المتغيرات

المنهجية: أجريت دراسة وصفية مدينة بغداد بين طلاب المدارس الابتدائية لكلا الجنسين 2 تشرين 2011/ 26 / 2012. اختيرت عينه من 520 طالب وطالبة من 12 في مدينة بغداد بيانات العينه من

استبانته مصممة خصيصا لهذا الغرض التي تتألف من جزأين، الجزء الأول يشمل الخصائص الديموغرافية للطفل والابوين ويشمل الجزء الثاني العادات الغذائية الجسمية ومستوى السمنة بين اطفال المدارس الابتدائية. وملنت فقرات الاستبانته بطريقة المقابلة واجراء قياس الوزن والطول من خلال الدراسة الاستطلاعية وتحديد مصداقيتها من خلال الخبراء وتم تحليل البيانات من تطبيق التحليل لإحصاء الوصفي (التكرارات والنسبة المئوية)

لنتائج : (31.5%) من الأطفال مصابين بالسمنة اظهرت نتائج الدراسة أن هناك علاقة كبيرة بين السمنة والصفات الديموغرافية للطفل (عمر الطفل، جنس الطفل، الصف، ترتيبه في الأسرة، وعيش الطفل مع العائلة ووظيفة أولياء الأمور الاقتصادية والاجتماعية، الدخل الشهري للأسرة والإقامة) والعادات الغذائية والنشاط البدني. وعلاوة على ذلك، لا يوجد أي اقتران كبير بين بدانة الأطفال وعدد الأطفال في الأسرة، ومستوى تعليم الوالدين.

الاستنتاج التوصيات: تطبيق تقييم السمنة لدى بين المدارس الابتدائية عن طريق الوقاية منها خاصة في سن الأطفال وزيادة وعي المجتمع حول مخاطر السمنة بين اطفال المدارس الابتدائية. التنقيفية.

Abstract:

Objective: The aim of study was to assess the obesity in primary school age children in Baghdad City, and find out the relationship between the variables like (age, gender, and economic status, level of education of parent) with obesity

Methodology: A descriptive study conducted in Baghdad City among primary school students of both sexes, in the period from 2nd October 2011 to 26th February 2012. Selected sample of 520 students from 12 schools in Baghdad. Sample data collected through the use of questionnaire especially designed for that purpose, and height and weight measurements, which consists of two parts, the part I includes demographic characteristics of the child and the parents part II includes dietary habits to questionnaire reliability was identified through a pilot study and competence. Data analyzed through the use of descriptive statistics (Frequency and percentage).

Results: The results of the study indicated that (31.5%) of children with obesity and the results of the study showed that there is a significant relationship between obesity and child demographic characteristics (age, sex, class, arranged for the child in the family, and children living with one or both, parent function, the monthly income of the household and residence) dietary habits and physical activities. Furthermore, no association aged between childhood obesity and (the number of children in the family and the level of education of parents).

Conclusion: This study reported high prevalence of obesity among school age students in Baghdad city.

Recommendations: application of assessment of children obesity and the preventions particularly at the age of children and to increase community awareness about the risks of epidemic of obesity among primary school children by conducting seminars and educational programmers.

Keywords: Obesity, Prevention, Children.

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INTRODUCTION:

Childhood overweight and obesity have reached epidemic proportions and are major public health problems nationally and globally. Between 1970 and 2004, the Assessment prevalence of overweight almost tripled among U.S. preschoolers and adolescents and quadrupled among children aged 6 to 11 years. In 2003-2004, 17.1% of children aged 2 to 19 years were at or above the 95th percentile of Body Mass Index (BMI) compared to 5-6% in the 1970s, and these percentages are higher in non-Hispanic Blacks and Mexican Americans (20.0% and 19.2%) than in Whites (16%). Obesity rates are also high among American Indian children with a prevalence estimate of 22% for boys and 18% for girls. Currently, about 25 million U.S. children and adolescents are overweight or obese (1, 2), and children from families that are of low socio-economic status are disproportionately affected (1). Obesity during childhood has been associated with numerous adverse effects including a variety of health complications such as hypertension, dyslipidemia, left ventricular hypertrophy, atherosclerosis, metabolic syndrome, type 2 diabetes, sleep disorders, and non-alcoholic fatty liver disease as well as psychological effects such as stigmatization, discrimination, depression and emotional trauma. Obesity in childhood also substantially increases the risk of being an obese adult. In addition, adults who were obese during childhood have higher risk of developing hypertension, dyslipidemia, metabolic syndrome, diabetes, and coronary heart disease than those who were not obese during childhood (2). Obesity Cause of there is many obese people around the world, and there are many reasons why they are obese. The top reasons, a lack of

exercise, and unhealthy food. Also children are which sit near TV, and start eating popcorn. (3). The final reason is the spreading of the fast food restaurants. People now prefer to eat at these places and not their home which increases the obese people because the food is not healthy and it contains a big amount of fat and calories. In conclusion, there are many obese people around the world, and there are many reasons why they are obese. The top reasons are eating fast food, not exercising (4). The aim of study was to assess the obesity in primary school age children in Baghdad City, and find out the relationship between the variables like (age, gender, and economic status, level of education of parent) with obesity.

METHODOLOGY:

A descriptive study conducted in Baghdad which include sample of 520 students from 12 schools among primary school Baghdad city for the period 2nd October 2011 to 26th February 2012. Sample data collected through the use of a questionnaire especially designed for that purpose which consists of two parts. Part I include demographic characteristics of the child and parents. Part II includes 22 Items of height and weight measurements, including dietary habits and physical activity. Questionnaire reliability was determined through a pilot study and competence. Data analyzed through the use of descriptive statistics (Frequency and percentage).

RESULTS:**Table.1.Distribution of Primary School Children according to demographic characteristics of the study Sample**

Student's Demographics Characteristic	Total N=520		Boys N=386		Girls N=134	
	No.	%	No.	%	No.	%
Age /Years						
6-11	375	72.1	289	74.9	86	64.2
12	145	27.9	97	25.1	48	35.8
Class in school						
1-4	363	69.8	283	73.3	80	59.7
5-6	157	30.2	103	26.7	54	40.3
Number of siblings						
1-6	206	39.6	153	39.6	53	39.6
7	314	60.4	233	60.4	81	60.4
Birth order in the family						
1-3	173	33.3	134	34.7	39	29.1
4	347	66.7	252	65.3	95	70.9
Live with						
Their parents	461	88.7	339	87.8	122	91.0
Other persons	59	11.3	47	12.2	12	9.0

This table revealed that (74.9%) of the study sample were boys and (64.2%) were girls at age between (6-11), while (73.3%) of boys and (59.8)% of girls were at grade (class) (1-4) in school, most of the sample (60.4%) have (7 or more) siblings in their families, while (66.7%) of the students their birth order was (4 or more), while the majority of the sample (87.8%) of boys and (91.0%) of girls were living with one or both parent.

Table 2.Distribution of the Demographic Characteristics of the Parents in the study sample

Parents' Demographics Characteristic	No.	%
Father employment		
employed	344	66.2
unemployed	176	33.8
Mothers' employment		
employed	338	35.0
un employed	182	65.0
Father education		
below secondary	263	50.6
secondary and up	257	49.4
Mother education		
below secondary	315	60.6
secondary and more	205	39.4
Income/monthly		
Adequate + some adequate	394	75.8
Inadequate	126	24.2

This table reveals the findings about the father's shows that the fathers were employed presented (66.2 %). They had low education (50.6% below secondary school level). The findings about the mothers showed that 35% were employed, and an even greater proportions than men, were educated at low level (60.6%). The family income was considered inadequate by a quarter of the sample.

Table3. Distribution of Eating habits and Physical Activity of the students in the study sample

Eating habits and physical activity	Total N=520		Boys N=386		Girls N=134	
	No	%	No	%	No	%
Infant feeding						
Bottle	391	75.2	286	74.1	105	78.4
Breast	129	24.8	100	25.9	29	21.6
Cause of obesity						
Obesity not related to disease	184	35.4	143	37.0	41	30.6
Obesity related to disease	336	64.6	243	63.0	93	69.4
Child eating unhealthy food						
eating healthy food	255	49.0	183	47.4	72	53.7
eating unhealthy food	265	51.0	203	52.6	62	46.3
Child eating high calories food						
don't eating high calories food	115	22.1	91	23.6	24	17.9
eating high calories food	405	77.9	295	76.4	110	82.1
Obesity in father and mother						
have obesity	287	55.2	210	54.4	77	57.5
don't obesity	233	44.8	176	45.6	57	42.5
Parent think obesity is good healthy						
don't think obesity good healthy	115	22.1	91	23.6	24	17.9
think obesity good healthy	405	77.9	295	76.4	110	82.1
Child eating fast food						
don't eating fast food	223	42.9	158	40.9	65	48.5
eating fast food	297	57.1	228	59.1	69	51.5
Child has irregular mail						
has regular mail	197	37.9	144	37.3	53	39.6
has irregular mail	323	62.1	242	62.7	81	60.4
Parent reward child for eating all food						
don't reward child for eating all food	208	40.0	159	41.2	49	36.6
reward child for eating all food	312	60.0	227	58.8	85	63.4
Family history of obese (Relatives)						
Relatives (other than parents) is obese	189	36.3	136	35.2	53	39.6
Relatives (other than parents) is no obese	331	63.7	250	64.8	81	60.4
Physical Activity Frequency						
1-2 times per day	404	77.7	298	77.2	106	79.1
3 times per day	116	22.3	88	22.8	28	20.9
Body Mass Index (BMI)						
Normal BMI	183	35.2	123	67.2	60	32.8
Over Weight	173	33.3	133	76.9	40	23.1
BMI Excess Weight	164	31.5	130	79.2	34	20.8

This table shows that the majority (75.2%) of the children were bottle fed during infancy. High proportions of parents (64.6%) were the thought obesity is a disease, and (36.3%) of the families had a history of obesity. The parent reported (55.2%) were obese. Comparing with (44.8%) were non obese. A small proportion of parents were of the opinion that obesity is not good for health (22.1%) and many parent rewarded their children for eating (60.0%). More than half (51.0%) of the parents reported that their children eat unhealthy

foods; (77.9%) eat high caloric foods; (57.1%) eat “fast foods”; and furthermore, they eat irregularly (62.1 %). Among the parent factors regard obesity showed that, obesity was present in both father and mother in (55.2%) of the sample. Furthermore, relatives other than mother and father were reported being obese in (36.3%) of the sample. Also this table indicates that three-quarters of the children reported that they were physically active. For those who answered “yes”, a follow up question inquired about how frequently the child exercised (1, 2, or 3 times and up per day). Almost (80%) reported exercising one to two times a day.

Table 4. Distribution of the study shows the proportion and relationships between the sample gender and their Body Mass Index (BMI)

Body Mass Index	Total N=520		Boys N=386		Girls N=134	
Normal BMI	183	35.2%	123	67.2%	60	2.8%
Overweight	173	33.3%	133	76.9%	40	23.1%
BMI Excess Weight	164	31.5%	130	79.2%	34	20.8%

A total 164 (31.5%) of the children were found to have excess weight and 173 (33.3%) of the children were found to have over weigh (defined as obese in this study).

DISCUSSION:

When comparing genders, there were more boys than girls. The gender differences might be explained by site recruitment where the visited schools were more single gender boy schools and single gender female or mixed gender schools. These demographic characteristic are similar to these studies reported (5, 6, 7). The present study in table (1) indicates the majority of the children’s ages range from (6 – 11 and most of them are in grades 1-4. More than children of number 7 or more. Furthermore (66.7%) of the children were fourth in the birth order and (88.7%) of them lived with one or both parents demographic characteristics are in congruent with the study conducted by (8) and (9). Table (2) the employment status for fathers was (66.2%) were employed and (65.0 %) of the mothers were employed. When assessing the parents’ educations, the educational level of the fathers who completed secondary education was higher than that for the mothers. Parents reported that their monthly family income was deemed adequate by (75.8%). This agrees with several studies according to (4, 6). Several studies have demonstrated that

breast-feeding is associated with a lower cardiovascular risk profile in general, and a lower risk of obesity in childhood and adolescence in particular, but others showed no relationship at all. Possible confounders are the social class and other factors related to the decision to breast-feed (3). Potentially behavioral benefits that may result from breastfeeding are taste preference, and self-regulation of energy intake (4). The initiation and the duration of breast-feeding may reduce the risk of later overweight, in addition to the other benefits of breast-feeding; however, not all studies have found breast-feeding to be protective against the future development of obesity. Children who were bottle-fed seem to be more at risk of obesity later in childhood than those who were breast-fed. The explanation for this finding could relate to permanent physiological changes caused by some intrinsic factor unique to human milk or to psychological factors, such as locus of control over feeding rate (baby versus parent) or taste preferences (10). The majority of the children were bottle fed comparing with those mothers who are breast fed during infancy. This is expected with the habits of Iraqi cultures

where the majorities of the women prefer and demand bottle feeding as healthier and easier than Breast feeding especially for the employed women. Eating between meals was significantly related to high BMI. The study showed that (92.9%) of overweight children eat between meals in comparison with (87.8%) of normal weight children. The type of food was not recorded for it is difficult to assess (10). The present study is similar with above study. In table 3, more than half of the subjects (about child) stated that obesity is perceived as caused by a disease. Half of the children reported eating unhealthy foods, of the children also reported eating high caloric foods; while (57.1%) reported eating "fast food". Furthermore, (62.1 %) of the children were eating irregularly. When assessing BMI, (31.5 %) of the children's have an excess body weight. Parents factors in regard to obesity show that, obesity was present in both father and mother in (55.2%) of the sample. Furthermore, relatives other than mother and father reported being obese in (36.3%) of the sample; and (77.9 %) of parents thought obesity represents "good health". Many parents rewarded their children for eating (60.0%); and more boys were body mass index (79.2%) compared to girls (20.8%) and activity Frequency. (22.3 %), (n=116); that less than once per day and Twice (77.7 %), (n=404); These results are supported by (11) which stated that all variables related to eating habits and physical activity may affect on incidence and prevalence of obesity among primary school children. This resulted in an overview of causes of childhood overweight and obesity as presented (10). These studies agree with the present study findings toward infant feeding and feeling anxious child, feel bad about obesity. This study agrees with findings present study of concerned to income in the present study and corresponded with the result. The explanation for this finding could relate to permanent physiological changes to psychological factors, such as locus of control over feeding rate (baby versus

parent) or taste preferences (10), (11) and (3). These demographic characteristic are similar to the present study with findings concerned to eating habits and Supported item unhealthy, and irregular food eating. In other studies, (5) reported prevalence of overweight and obesity of (14.3% and 11.1%) in USA, (10.0 and 6.0%) in Russia and (3.4 and 3.6%) in China. The weight and height of the children were measured and body mass index for the children (BMI) was calculated. The BMI measures were compared to (6) standardized charts; and the BMI were classified as normal or excess weight. A total (31.5 %) of the children were found to have excess weight (defined as obese in this study) (6, 7). These studies above coincide the BMI measures in researcher's measurement the body mass index. This study is in agreement with the findings of the present study. In that period the overall prevalence of overweight was (14.0%) in (7-12) year old boys and (14.1%) in girls, but obesity was rare, with estimates of only (1.7%) in boys and (1.2%) in girls. In Croatia, the prevalence of overweight in childhood (7-14 years) was (10.6%) (In 1997-2000, and (11.9%) in 2000-2005. The prevalence of obesity increased in the same period from (3.5%) (1997-2000) to (6.9%) (2000-2005), both estimates were based on weight for height measurements (7, 9) list however a number of constraints with respect to the interpretation of the results.

CONCLUSION: This study reported high prevalence of obesity among school age students in Baghdad city.

RECOMMENDATIONS:

1. Application of assessment of children obesity and the preventions particularly at the age of children
2. To increase community awareness about the risks of epidemic of obesity among primary school children by

3. conducting seminars and educational programmers

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