

Parents' Efficacy for Child Healthy Weight Behavior in Elementary Schools in Hilla City

كفاءة الأبوبين لسلوك الوزن الصحي للطفل في المدارس الابتدائية في مدينة الحلة

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المستخلص

الأهداف: تهدف الدراسة الحالية الى (1) تقييم كفاءة الأبوبين لسلوك الوزن الصحي للطفل، (2) التعرف على الاختلاف في كفاءة الأبوبين لسلوك الوزن الصحي للطفل بين مجاميع جنس الأبوبين، الحالة الإقتصادية الإجتماعية، جنس الطفل، و ترتيب الطفل بين افراد الأسرة، (3) إيجاد العلاقة بين عمر الأبوبين، عمر الطفل، مؤشر كتلة الجسم للطفل، الحالة الإقتصادية الإجتماعية للعائلة، عدد الأطفال في العائلة وكفاءة الأبوبين لسلوك الوزن الصحي للطفل.

المنهجية: إجريت دراسة وصفية إرتباطية للفترة من 11 تشرين الثاني 2018 إلى 25 ايار 2019 تهدف الى تقييم كفاءة الأبوبين لسلوك الوزن الصحي للطفل. إجريت الدراسة في 30 مدرسة ابتدائية في مدينة الحلة، تم تحديد هذه المدارس من خلال عينة عشوائية بسيطة من بين 125 مدرسة. تتكون اداة البحث من قسمين: القسم الاول يمثل المعلومات الديموغرافية الخاصة بالأبوبين والطفل والقسم الثاني يمثل مقياس كفاءة الأبوبين لسلوك الوزن الصحي للطفل، والذي يتكون من 21 فقرة بناءً على الدليل الإستراتيجي لسلوكيات الوزن الصحي. تم تحقيق صدق الاداة من بواسطة احد عشر خبيراً. تم جمع العينة خلال الفترة من 10 كانون الثاني إلى 5 آذار 2019 و قد تم تحليل البيانات بإستخدام الحزمة الإحصائية للعلوم الإجتماعية الإصدار 24.

النتائج: أظهرت الدراسة ان معظم التلاميذ يأكلون ثلاثة او أكثر من حصص الفواكه و الخضروات خلال اليوم الواحد، وكذلك التقليل من إستهلاك الدهون و السكر، و الإنخراط في النشاط البدني لمدة ساعة واحدة في اليوم، و عدم إمضاء اكثر من ساعتين في حالة خمول بدني خلال ايام العطل و الإجازات و نهاية الأسبوع. علاوة على ذلك، التلاميذ يقللون من إستهلاك الدهون و السكريات و يتناولون وجبات خفيفة صحية عندما يحتاجون الطعام. و أيضاً، في حالات الأجهاد و المزاج السيء و التذمر فإنهم لا يقللون من إستهلاك الدهون و السكريات و كذلك الوجبات الخفيفة الصحية.

التوصيات: توصي الدراسة بإنشاء أنشطة صحية تهدف الى زيادة الوعي عند الأبوبين و ذلك من أجل تبني انماط و سلوكيات صحية لأطفالهم.

الكلمات المفتاحية: كفاءة الأبوبين؛ سلوك الوزن الصحي للطفل

Abstract

Objectives: The study aims to (1) Assess the parents' efficacy for child healthy weight behavior. (2) Identify the difference in parents' efficacy for child healthy weight behavior between the groups of parent's gender, family's socioeconomic status, child's gender, and child's birth order, (3) Find out the relationship between parents' age, child's age, child's body mass index, family's socioeconomic status, the number of children in the family and parents' efficacy for child healthy weight behavior.

Methodology: A descriptive correlational study is conducted for the period from November 11th, 2018 to March 25th, 2019 to assess the parents' efficacy for child healthy weight behavior. The study was carried-out in (30) primary schools that were selected through a simple random sampling of (125) schools from Hilla City. The instruments was composed of two parts , the first part was the demographic data and the second part was the Parent Efficacy for Child Healthy Weight Behavior (PECHWB) Scale, it consists of 41 items based on Australian guidelines for healthy weight behaviors. The validity of the instrument was achieved by eleven experts. Data were collected for the period from January 10th to March 5th, 2019. Data were analyzed using the statistical package for social sciences (SPSS) version 24.

Results: The study results revealed that most of pupils eat three or more serves of fruit and vegetables per day, minimize high fats and sugar intake, engaging in one hour of physical activity per day, and being no more than two hours in sedentary behavior per day on holidays/vacations and on weekends. Furthermore, they minimize high fats and sugar intake and eat healthy snacks on their demands/request. Moreover, they do not minimize high fats and sugar intake and eat healthy snacks when they are stressed or in bad mood and when they complain.

Recommendations: The researcher recommends establishing health activities that aim to raise the public's awareness of fostering healthy lifestyle and behaviors for their children.

Keywords: Parents' Efficacy; Child Healthy Weight Behavior

Introduction:

In 2014, the obesity prevalence among 6 to 11-year-old children was 17.5% in the United States (U.S), this poses a significant public health concern especially given that youth with obesity have a 70% higher chance of becoming adults with obesity ⁽¹⁾.

The cause of childhood overweight and obesity is an energy imbalance between calories consumed and calories expended. A number of factors are underlying this including a dietary shift towards increased intake of energy-dense foods that are high in fat and sugars and decreased physical activity levels due to increasing sedentary behavior, such as television viewing, changes in transportation, and increasing urbanization ⁽²⁾.

Obesity is associated with children's physical and mental health including (a) medical comorbidities such as metabolic risk factors, asthma, and dental health issues and (b) psychological comorbidities such as internalizing and externalizing disorders, attention-deficit hyperactivity disorder, and sleep problems. Moreover, childhood obesity is linked to adult diabetes, coronary heart disease, and a variety of cancers ⁽³⁾.

The factors that affect risk for becoming overweight are numerous. Age, gender, social norms; socioeconomic class; parents' knowledge, attitudes, and beliefs; and children's knowledge, attitudes, and beliefs have been found to affect food intake and physical activity. Increased prevalence of childhood overweight may be attributed to an interplay of behavioral, environmental, and social factors ⁽⁴⁾.

The behavioral factors associated

with obesity in children, including sleep duration, physical activity, screen time, and nutritional habits. Environmental factors may include family preferences regarding food type and amount, meal time, dining out, and lifestyle (whether they are sedentary or physically active) and presence of fast food and soft drink in schools could also affect children's eating behavior. Social factors may include changes in work demands and family life ⁽⁴⁻⁶⁾.

Parental Self-Efficacy is a potentially important cognitive construct, related to child and family functioning that can be broadly defined as the expectation caregivers hold about their ability to parent successfully. PSE was found to be related to parents' belief in their ability to supply the social, cultural, and emotional support their children need for efficient and successful functioning throughout their developmental trajectory. When self-efficacy is generally positive, it is considered to help parents respond to their children in a more appropriate and suitable way while handling challenging and stressful situations effectively, and conversely, parents with low PSE may find it more difficult to parent effectively in the face of challenging child situations ⁽⁷⁻⁸⁾.

Unhealthy eating habits during childhood may interfere with optimal growth and development while setting the stage for poor eating habits during adolescence and adulthood ⁽⁹⁾. In an increasingly obesogenic environment, parents are likely to face considerable challenges in raising healthy children. Over the past 40-years, changes to the urban landscape and social topography of Western culture have resulted in

environments that minimize energy expenditure, promote sedentariness, and encourage excessive food consumption. The obesogenic environment can affect all parents, but the challenges it presents are particularly relevant for parents of obese children⁽¹⁰⁾.

Methodology

A descriptive correlational study is conducted for the period from November 11th, 2018 to March 25th, 2019 to assess the parents' efficacy for child healthy weight behavior. The study was carried-out in (30) primary schools that were selected through a simple random sampling of (125) schools from Hilla City. The study included 352 students who were selected throughout the use of a systematic random sampling. Students selected by using the proportional stratified sampling from each school (of the total number of students were randomly selected by interval number. The study instrument included the sociodemographic characteristics for both the pupils and parents. The Parent Efficacy for Child Healthy Weight Behavior (PECHWB) Scale was used to measure parenting efficacy for child healthy weight behaviors. It consists of 41 items based on Australian guidelines for healthy weight behaviors. Items correspond to four subscales representing the guidelines for fruit and vegetable intake, limiting high-fat/sugar foods, daily physical activity and time spent in sedentary activities, with each item consisting of a healthy weight behavior in the context of a specific relevant barrier (e.g., 'on holidays', 'when child demands/requests', 'when weather is

bad'). Parents rate their confidence to support each healthy weight behavior in the face of each barrier on a scale of 0–100 (0 = not at all confident to 100 = extremely confident). The PECHWB internal consistency of the total score and subscale scores of PECHWB was high (>0.90). The convergent validity was evidenced by significant positive correlations ($r = 0.20$ to 0.29).

Data were collected for the period from January 10th to March 5th, 2019. The investigator explained the study and its objectives to the students. Data were analyzed using the statistical package for social science (SPSS) version 24. The statistical measures of frequency, percent, mean, standard deviation, Pearson correlation, ANOVA, and Independent-sample t-test were used.

Ethical considerations

The Institutional Review Board (IRB) in college of nursing /university of Baghdad reviewed contents of program and questionnaire before conducting a study. Informed consent was taken orally before participating in the study. After that information regarding study title and objectives had been given. Two official requests were submitted through the College of Nursing / University of Baghdad to medical city directorate/ Ministry of Health (MOH) to take approval for data collection from Iraqi center for cardiac disease and Al-Karkh health directorate/ Ministry of Health (MOH) to take approval for data collection from Ibn-Albetar specialist center for cardiac surgery in Baghdad city.

Results:**Table (1): Pupils' Sociodemographic Characteristics (N= 352)**

Variable	Frequency	Percent
Age (Years): Mean (SD): 11.45± .86		
10	43	12.2
11	143	40.6
12	139	39.5
13	22	6.3
14	2	0.6
15	3	0.8
Gender		
Male	91	25.9
Female	261	74.1
Grade		
Fifth	153	43.5
Sixth	199	56.5
Child's birth order		
1 st	119	33.8
2 nd	113	32.1
3 rd	60	17.1
4 th	35	9.9
5 th	19	5.4
6 th	2	0.6
7 th	4	1.1

The pupils' mean age is $11.45 \pm .86$; around two-fifth age 11-years ($n= 143$; 40.6%), followed by those who age 12-years ($n= 139$; 39.5%), those who age 10-years ($n= 42$; 12.2%), those who age 13-years ($n= 22$; 6.3%), those who age 15-years ($n= 3$; 0.8%), and those who age 14-years ($n= 2$; 0.6%).

Most are females ($n= 261$; 74.1%) compared to males ($n= 91$; 25.9%). More than a half are fifth-graders ($n= 199$; 56.5%) compared to sixth-graders ($n= 91$; 25.9%). Lastly, around a third come in the first birth order ($n= 119$; 33.8%), followed by those who come in the second birth order ($n= 113$; 32.1%), those who come in third birth order ($n= 60$; 17.1%), those who come in fourth birth order ($n= 35$; 9.9%), those who come in the fifth birth order ($n= 19$; 5.4%), those who come in the seventh birth order ($n= 4$; 1.1%), and those who come in the sixth birth order ($n= 2$; 0.6%).

Table (2): Mean and Standard Deviation for the Factors of Parents Efficacy for Child Health Weigh Behaviour

Items	Mean	Standard deviation
Child eats 3 or more serves of fruit/day	254.12	108.1
On school-days	44.09	26.9
On weekends	55.38	27.8
On holidays/vacations	56.74	29.1
Child complains	27.29	24.3
Child stressed/bad mood	29.10	28.3
Spouse does not support me	42.51	38.6
Child eats 4 or more serves vegetables/day	95.27	49.2
On school-days	42.53	26.8
On holidays/vacations	51.77	28.7
Minimize high fats and sugar intake	492.35	175.1
On school-days	43.12	27.2
On weekends	48.7	25.5
On holidays/vacations	49.35	27.1
I have a busy schedule	34.66	28.1
Child demands/requests	51.77	28.3
Child complains	33.49	27.1
Child stressed/bad mood	33.67	29.1
Child is outside the home	43.78	29.4

Spouse does not support me	40.08	36.4
When at a restaurant	52.88	31.3
Ordering take-away food	57.91	32.8
Eating healthy snack (low in fat/sugar)	220.06	97.6
Child complains	40.24	29.5
Child demands/requests	55.15	27.3
Child stressed/bad mood	36.1	26.5
Child outside the home	47.1	43.9
Spouse does not support me	40.5	36.5
Engaging in 1 h of physical activity/day	342.91	154.7
On school-days	49.80	32.4
On weekends	55.47	30.6
On holidays/vacations	59.73	30.1
Child stressed/bad mood	34.73	28.7
Child has busy schedule	33.62	28.3
Weather is bad (hot, cold, rain)	36.77	29.6
Child not motivated to be active	31.99	28.1
Spouse does not support me	42.04	44.8
No more than 2 h sedentary behavior/day	397.99	157.55
On school-days	34.09	28.7
On weekends	46.09	29.9
On holidays/vacations	47.73	29.5
When I am unwell	56.57	32.6
I have a busy schedule	37.33	29.0
Child stressed/bad mood	43.83	28.4
Weather is bad (hot, cold, rain)	46.67	28.8
Child demands/requests	46.78	31.1
Spouse does not support me	38.38	36.1

Most of pupils eat three or more serves of fruit per day on holidays/vacations and on weekends (Mean = 56.74 ± 29.1 ; 55.38 ± 27.8) respectively. On the other hand, they eat less serves of fruit when they complain and when they are stressed or in bad mood (Mean = 27.29 ± 24.3 ; 29.10 ± 28.3) respectively.

Concerning eating vegetables, pupils eat four or more serves of vegetables on holidays/vacations than on school-days (Mean = 51.77 ± 28.7 vs 42.53 ± 26.8). Regarding minimizing high fats and sugar intake, they do so on ordering take-away food, when at restaurant, on their demands/request, and on holidays/vacations (Mean = 57.91 ± 32.8 ; 52.88 ± 31.3 ; 51.77 ± 28.3 ; 49.35 ± 27.1) respectively. On the other hand, they do not minimize such foods when they complain, when they are stressed or in bad mood, and when the parents have a busy schedule (Mean = 33.49 ± 27.1 ; 33.67 ± 29.1 ; 34.66 ± 28.1) respectively. With respect to eating healthy snack (low in fat/sugar), pupils do so more on their demands/request and when they are outside the home (Mean = 55.15 ± 27.3 ; 47.1 ± 43.9) respectively. On the other hand, they eat healthy snack less when are stressed or in bad mood, when they complain, and when the spouse does not support his/her partner (Mean = 36.1 ± 26.5 ; 40.24 ± 29.5 ; 40.5 ± 36.5) respectively.

Concerning engaging in one hour of physical activity per day, pupils do so more on holidays/vacation and on weekends (Mean = 59.73 ± 30.1 ; 55.47 ± 30.6) respectively. Contrarily, they do so less when they are not motivated to be active, when they have busy schedule, and when they are stressed or in bad mood (Mean = 31.99 ± 28.1 ; 33.62 ± 28.3 ; 34.73 ± 28.7) respectively.

Regarding being no more than two hours in sedentary behavior per day, they be so when they are unwell, on holidays/vacations, on their demands/request, when the weather is bad, and on weekends (Mean = 56.57 ± 32.6 ; 47.73 ± 29.5 ; 46.78 ± 31.1 ; 46.67 ± 28.8 ; 46.09 ± 29.9) respectively.

Table (3): Correlations among Pupil's Age, Birth Order, Family's Socioeconomic Status and Factors of Parents' Efficacy for Child Healthy Weight Behaviour.

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Pupil's age	-								
2. Pupil's birth order	-.043-	-							
3. Socioeconomic status	-.219 ^{**}	-.168 ^{**}	-						
4. Fruit consumption	-.021-	.089	.129 [*]	-					
5. Vegetables	-.054-	.021	.130 [*]	.386 ^{**}	-				
6. High-fat and sugar	-.055-	.051	.068	.464 ^{**}	.198 ^{**}	-			
7. Healthy Snack	.004	.048	.151 [*]	.446 ^{**}	.148 [*]	.539 ^{**}	-		
8. Physical Activity	-.048-	.035	.116	.411 ^{**}	.144 [*]	.504 ^{**}	.468 ^{**}	-	
9. Physical Inactivity	.053	.018	.089	.279 ^{**}	.185 ^{**}	.447 ^{**}	.351 ^{**}	.298 ^{**}	-

****.** Correlation is significant at the 0.01 level (2-tailed).

***** Correlation is significant at the 0.05 level (2-tailed).

There are statistically significant positive correlations between family's socioeconomic status and pupils' eating for three or more serves of fruit/day, eating four or more serves vegetables/day, and minimizing high fats and sugar intake ($r = .129$ at $p < 0.05$; $r = .130$ at $p < 0.05$; $r = .151$ at $p < 0.05$) respectively.

Table (4): Independent Samples Test for the Factors of Parents' Efficacy for Child Healthy Weight Behavior between Pupil's Gender Groups

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Fruit consumption	Equal variances assumed	1.208	.273	1.045	264	.297	14.13919	13.52445	-12.49032	40.76869
	Equal variances not assumed			1.064	240.574	.289	14.13919	13.29184	-12.04406	40.32243
Vegetables	Equal variances assumed	3.954	.048	.244	264	.807	1.50461	6.16643	-10.63703	13.64625
	Equal variances not assumed			.252	249.163	.802	1.50461	5.98226	-10.27763	13.28685
High-fat and sugar	Equal variances assumed	.907	.342	1.740	264	.083	37.94304	21.81183	-5.00424	80.89033
	Equal variances not assumed			1.741	228.041	.083	37.94304	21.79786	-5.00792	80.89401
Healthy Snack	Equal variances assumed	1.153	.284	-.047	264	.963	-.56968	12.22867	-24.64782	23.50846
	Equal variances not assumed			-.048	252.602	.962	-.56968	11.79349	-23.79577	22.65641
Physical Activity	Equal variances assumed	.052	.820	2.073	264	.039	39.85781	19.22577	2.00246	77.71317
	Equal variances not assumed			2.038	213.753	.043	39.85781	19.55937	1.30386	78.41177
Physical Inactivity	Equal variances assumed	.072	.788	1.149	264	.252	22.62094	19.68837	-16.14529	61.38716
	Equal variances not assumed			1.142	222.610	.255	22.62094	19.81120	-16.42056	61.66243

There is a statistically significant difference in pupil's engaging in one-hour of physical activity per day between pupils' gender groups (p -value = .039).

Discussion

Most of pupils eat three or more serves of fruit per day on holidays/vacations and on weekends respectively. This could be explained as that mothers have more time than other days of the week.

Concerning eating vegetables, pupils eat four or more serves of vegetables on holidays/vacations than on school-days. This could be explained as that mothers have more time than other days of the week. As well, the available for both of mothers and children to meet on holidays/vacations and on weekends is longer than that of other days of the week.

Concerning engaging in one hour of physical activity per day, pupils do so more on holidays/vacation and on weekends respectively. Contrarily, they do so less when they are not motivated to be active, when they have busy schedule, and when they are stressed or in bad mood respectively. This may be explained as that pupils in other days of the weeks may be required to accomplish homework that needs several hours per day.

There are statistically significant positive correlations between family's socioeconomic status and pupils' eating for three or more serves of fruit/day, eating four or more serves vegetables/day, and minimizing high fats and sugar intake respectively. This may be explained as that the better the socioeconomic class, the better the ability the family must shop healthy foods.

There is a statistically significant difference in pupil's engaging in one-hour of physical activity per day between pupils' gender groups. Further analysis demonstrated that male pupils engage in more hours of physical activity than female pupils. This may be explained as that the quality and quantity of games

available and accessible to males are more than that available to females.

Recommendations

1. Establishing health activities that aim to raise the public's awareness of fostering healthy lifestyle and behaviors for their children.
2. Media-based education targeting parents about healthy weight behaviors for their children.
3. Conducting similar studies for larger sample size in different areas across Iraq.

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