Influence of Fast Foods and Soft Drinks Consumption on Incidence Of Overweight and Obesity among Students Aged (15-19 Years Old) Attending Governmental Schools in Bahri Locality, Khartoum State

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ABSTRACT

Background:

Fast food intake which has become a prominent feature of the diet throughout the world and is still increasing specially among younger population is associated with weight gain. Overweight and obesity among adolescents is not only an important public health problem but also a problem affecting economic growth in developing countries.

Design, Setting, and Objectives:

This cross sectional, school based study investigated students attending six government secondary schools located in the area from Bahri Bridge to Shambat in Bahri Locality, Khartoum State.

The main objective of this study was to investigate the association between frequency consumption of fast foods (FFs) and soft drinks (SDs) and the incidence of overweight and obesity among adolescent students.

Methodology:

Data was collected from 162 subjects, 38% were males and 62% were females, using systematic random sample technique. Relevant information was collected by direct interviewing questionnaire covering parents' education and occupation, students' data that covered age, weight and height, 24 hour recall to determine energy and protein intakes and food frequency questionnaire to record FFS / SDs dietary patterns. Nutrition status was assessed by WHO 2007 cut-off points for age and gender-specific BMI.

Findings:

Results revealed that energy sources were similar and protein intakes were adequate for both gender but adequacy of energy intake was higher for females than males (84.2% vs.70.4%).

Anthropometric measurement revealed that the mean BMI for males and females was normal but males were taller than females. Females compared to males significantly suffered more underweight (21.0% vs. 7.0%), overweight (33.0% vs. 30.0%) and obesity (11.0% vs. 5.0%). Stunting also was more in males than females.

Fast-foods and soft drinks were significantly consumed by more female than males (90.0% vs. 80.6% and 93.0% vs. 69.4% respectively).
Findings also revealed that there was a significant positive association with frequency of consumption of FFs and SDs and their portion sizes and frequent outlets visits with BMI classification of students.

**Conclusion:**

It seemed that frequency of consumption of fast foods and soft drinks, their portion sizes and frequent outlets visits are the major factors that influence the incidence of overweight among adolescents in this study. Future intervention programs must take into account these risk factors.
ملخص الدراسة

تمهيد:

اصبح تناول الوجبات السريعة والمشروبات النانة سمة بارزة من سمات النظام الغذائي في جميع أنحاء العالم، وله زائد خاص بين الاطفال المراهقين الصغيرة وتؤدي إلى زيادة الوزن واليسود بين المراهقين، والتي أصبحت ليست مجرد مشكلة صحية عامة وفقط، بل أنها مشكلة تؤثر على النمو الاقتصادي في الدول النامية.

منهجية البحث:

أجريت هذه الدراسة قصيرة المدى في المنطقة الممتدة من جسر بحري وحتى منطقة شميات في مملكة بحرية بولاية الخزامى. وقد كانت النتائج المستهدفة هي طابع الصغير الثالث في سته مدارس ثانوية حكومية في هذه المنطقة.

وقد تم جمع البيانات من 162 عينة تم اختيارها عن طريق تقنية الاختيار العشوائي المنظم. وتم جمع المعلومات ذات الصلة بواسطة استبيان محاسن ومختبرة أشتهي على تسجيل اعمار الطلاء وقياساتهم الجسدية من أطوال وأوزان، وعمر ومستوى الوالدين التعليمي، أنانس الحياة المختلفة كممارسات النشاطات الجسمانية وتكارها وتكرار زيادة منافذ الوجبات السريعة وبعض العادات الغذائية ذات الصلة بزيادة الوزن.

وقد استعمل استبيان التجربة اقتراحًا واختبرًا للغذاء المتناول خلال 24 ساعة البعض لتحديد كمية الطاقة المتناوله وبروتينات. أما استبان تبعد الطعام فقد استعمل لدورة صغيرة تقرب المباحة الغذائية في تكرار تناول الوجبات السريعة والمشروبات النانة خلال اليوم وغير مرة، ومسة جزء المأخوذ منها.

تم تقييم حالة الغذاء للمباحين بمقارنة مؤشر كتلة الجسم والطول بالنسبة للعمر والجنس بالقياسات المعيارية العالمية التي أوصت بها منظمة الصحة العالمية عام 2007 على أساس الانحرافات المعيارية أو ما يسمى الحز.

النتائج:

أخذت النتائج بان مصادر الطاقة كانت مماثلة وكان مألوف البروتين كافي لكلا الجنسين لكن كتلة استهلاك الطاقة فكان أعلى بالنسبة للذكور (22.7% مقابل 70.4%).

وكتشفت القياسات الأولية أن معدل كتلة الجسم عند الذكور والإناث طبيعي (7.22 و23) إلا أن الذكور أقل من الإناث وبالرغم أن إناث البالغين بشكل كبير من نفس الوزن (21.7% مقابل 7.0%) زيادة الوزن (3.3% مقابل 30.0%) والنساء (11.0% مقابل 5.0%) أكثر من الذكور، وأن قصر القامة عند الذكور أكبر من عند الإناث.

وقد تبين أيضا أن تناول الوجبات السريعة والمشروبات النانة عند الإناث أكثر من الذكور (90% مقابل 68.0% و93% مقابل 69% على التوالي) مما ترتيب على مزيج في الوزن والسمه بحسب الكهيات المستهلكة ونسبة منافذ الوجبات السريعة.

الاستنتاج:

يدوي أن استهلاك الوجبات السريعة والمشروبات النانة وتكرار زيادة منافذ الوجبات السريعة تعتبر من العوامل الرئيسية التي تؤثر في زيادة زائدة من الوزن والبدانة عند المراهقين، في هذه الدراسة لذلك يجب أن تؤخذ عوامل الخطر هذه بعين الاعتبار عند وضع البرامج الوقائية لمحاربة هذه المشكلة.
Chapter Six

CONCLUSIONS and RECOMANDATIONS

1.6- CONCLUSIONS

This cross-sectional study was conducted in six government secondary schools in Bahri Locality, Khartoum State to investigate the influence of frequency consumption of FFs/SDs on overweight among the third years' students aged 15 to 19 years and other objectives of the study.

From the result, it is seemed that:

1- Majority of fathers had high education compared to mothers and they were either self-employed or public employees while the mothers were housewife.

2- Males were heavier and taller than females but females compared to males suffered more underweight, overweight and obesity.

3- Energy and proteins intake for males and females were 1935 and 1857 kcal/day respectively; energy sources were similar, adequacy of intake was higher for females than males and protein intakes were adequate for both sexes.

4- Males are more active than females and they visited outlets more than them.

5- The frequency of FFs and SDs consumption was highly prevalent among these adolescents. However females consumed more FFs and SDs than males.

6- Other factors such as duration of physical exercise and parent’s education and occupation had insignificant association with the frequency consumption of FFs and SDs and overweight and obesity among these adolescents.

7- Mother Job status had a significant association with incidence of overweight and obesity among adolescents.
8- The level of knowledge about influence of FFs and SDs consumption was not high.

9- Overweight and obesity were not of genetic origin among these adolescents.

**6.2- RECOMANDATIONS:**

1- Further studies are needed to elucidate relationship between FFs and SDs intake and incidence of overweight and obesity.

2- Nutrition counseling should be introduced in secondary schools to guide students on healthy food habits to reduce future risks of chronic diseases.
REFERENCES:


Magboul complied data by indirect methods.


Rahama E (2013). Dietary intake of girls (14- 17 years) attending secondary schools in Alameer area, Ombada locality, Khartoum State. MSc thesis, AUW.

Romaguera-Bosh, Dora; InterAct, Consortium (2013). "Consumption of sweet beveragesand type 2 diabetes incidence in European adults: results from EPIC-InterAct.". Diabetologia.


