International Journal of Advanced Biotechnology and Research (IJBR)
ISSN 0976-2612, Online ISSN 2278–599X,
Vol-8, Issue-4, 2017, pp293-297
http://www.bipublication.com

Research Article

Negative Consequences Associated With Overweight and Corpulence among Children and Youngsters

[1]Sajjad Hussain Najam, [2]Mavra and [3]Anum Irshad

[1]BHU, Sahiwal. Pakistan.
[2]DHQ Bahawalpur. Pakistan.
[3]Sahiwal Teaching Hospital, Sahiwal. Pakistan.

ABSTRACT

Increasing prevalence of overweight and obesity in childhood youngsters have been reported worldwide. The prevalence figures vary; approximately 30% in the USA and the Mediterranean countries, 20% in other parts of Europe with lower rates, under 10%, in Africa and Asia. The aims of present studies were to evaluate the secular trends in BMI distribution and the prevalence of overweight and obesity of children in birth cohorts. The ability of parents to assess the weight class of their children was also analyzed. Data was analyzed by qualitatively. Difference in the growth of the children in the five birth cohorts began to emerge starting from the age of one year. Instead, changes in the mean BMI of newborns or in 0.5-year-old children between birth cohorts were not obvious in the longitudinal analysis. During the past four decades, in contrast to the obesity epidemic, the entire BMI distribution of toddlers has shifted to a lower level and toddlers have become slimmer. Getting closer to puberty the BMI distribution started to skew to the right. In teenagers the upper parts of BMI distribution have risen to higher levels while lower BMI percentiles have remained quite stable. Young adolescents, especially boys, have become taller and heavier. Overweight seems to be more common in children living in rural than in urban areas. The rural vs. urban difference was greater in children over 5 years than at younger ages. The falling BMI seen in toddlers might indicate that the age of adiposity rebound now occurs earlier. The purpose of our study is to evaluate the synergy between air pollution and obesity in causing damage to health. We try to create a sort of guideline of conduct tending to modify the lifestyle. The goal is to improve health both directly by increasing the possibility of movement of children and indirectly by reducing air pollution. It's been shown that obesity, reduced physical activity and air pollution are cofactors that can cause systemic diseases. This is most evident in children because they are more susceptible, have immature metabolism, phenomena of bio-accumulation. Children breathe proportionately more air volume than adults so they inhale a higher concentration of pollutants, also breathe more being lower near the ground. An obesity prevention program is needed in public health and education should start early in childhood. The skills of health care professionals are needed to help parents to build up a realistic perception of their child`s weight status.

INTRODUCTION

As we all know that obesity is a serious health issue faced by the world nowadays. It is equally dangerous for the young and old people around the world and is socially detrimental. It is worth mentioning that obesity does not come alone, it is always accompanied by a number of associated diseases. Youngsters, around the world, are becoming the target of overweight and obesity. It is the most burning public health issue all over the world. The statistics reveal that the existence of the disease is increasing in magnitude and force during the past decades, almost in every part of the world. Additionally, the consequences of obesity are not limited to the physical health only rather it equally effects social and mental health of the people suffering from overweight and obesity. For example, obese people are often found

suffering from heart disease. Moreover, etiology (the scientific study of the causes of disease) and corpulence have compound relations which are not fully explained yet. Currently, the ratio of overweight and obese persons in the world is shocking and still on a rise (Manore, Larson-Meyer, Lindsay, Hongu, & Houtkooper, 2017).
Following information was obtained from a German Health Interview and Survey team;

COUNTRY	Percentages of Overweight and Obese		
	Men	Women	Children
Germany	49%	34%	13%
USA	27%	38%	15%
Europe	30%	35%	13%
Pakistan	18%	20%	12%

The table above shows a rapid upward surge in overweight as compared to the early 1980s, while the obesity has doubled its number (Schienkiewitz, Mensink, Kuhnert, & Lange, 2017), (Yearley, 2017).
Considering human evolution, human body has got all the ability to accrue as much energy as possible to ensure survival in any given environment. However, biological and environmental scenarios have noticeably changed during the years resulting in a society having more obese and overweight. Today, the motorized machines have resulted in reduced physical activity. The food has been evolved, the culture and eating habits are changing and all this unlimited food is available in multiple shapes and sizes at an affordable price almost everywhere in the world. Specifically, the developed countries boost the appeal for overeating. Scientifically speaking, corpulence and overweight are the results of disequilibrium between energy intake and energy outflow for a longer period. Energy balance is calculated by calories intake vs calories consumed and is reasonably effected by a large combination of biological and environmental elements. These elements disturb energy equilibrium to dissimilar extents, at odd stages and may interact. Therefore, one cannot say for sure the particular contributing causes which lead to overweight. As a whole, any factor that disrupts energy balance, even at a minute level, may cause this menace of obesity (Hilpert et al., 2017).

Factors Responsible for Overweight and Obesity

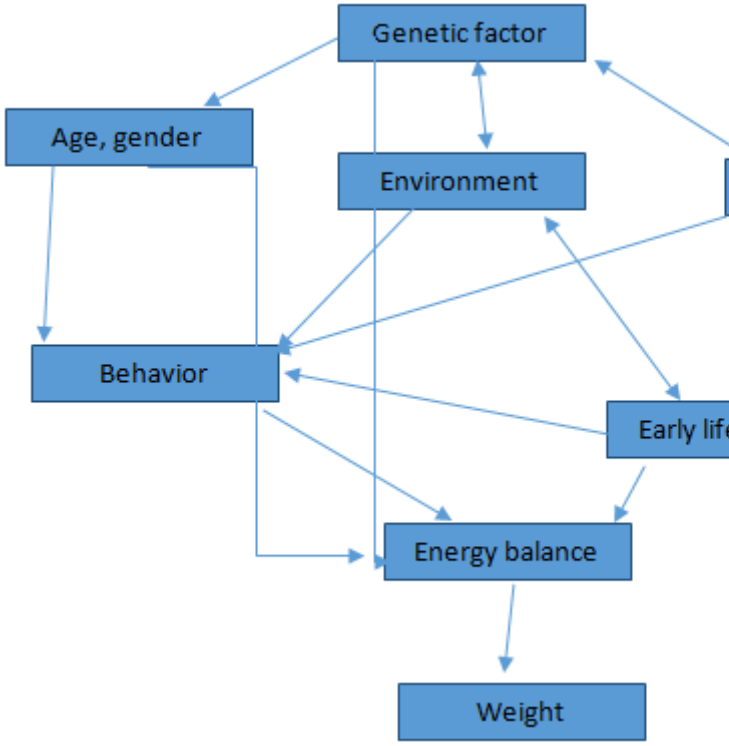

Figure 1: Overview of factors responsible for overweight and obesity
Source: Self illustrated

The effects of overweight and corpulence are multilayered and including physical, psychological and socio-economic deficiencies. Physically, many symptoms may arise. Reduced will power, deteriorating body performance, lack of stamina and fatigue are a few of them, affecting different functions and reducing the overall body output. Corpulence may have several impacts such as social unrest, lower quality of life, increased sickness, a higher elevated risk of CVD – Cardio Vascular Disease (related with the heart and the blood carrying tubes). Obese adults may suffer from diabetes (a disease in which the patient produces a lot of urine and feel very thirsty), which is also related with CVD and contributes to the risk of heart attack in obese people. Cancer and Cardio Vascular diseases are considered as the leading causes of death in the societies worldwide. As far as children and teenagers are concerned, clinical aspects of overweight and obesity may

not be evident and are therefore less likely to appear at an early stage. As far as children and teenagers are concerned, clinical aspects of corpulence may not be evident and are therefore less likely to appear at an early stage. Higher proportion of CVD risks have been seen in overweight children. Since the therapy and treatment charges of obesity and related diseases such as diabetes mellitus or CVD are very high, it may cause a situation of economic distress in obese people. Moreover, obesity and overweight may refrain an overweight person to undertake and execute routine work assignments. These factors are a great test for the people struggling against obesity and overweight (Hilpert et al., 2017).

Medically, obesity is an extreme case of overweight. Particularly, when focusing on children and adolescents, some systematic problems have to be resolved. Although, different simple measures for overweight and obesity exist but it is still undecided which is the best available practical measure for evaluation of overweight and obesity. As the obesity and CVD are closely related to each other, one must know the causes of CVD risk factors. The term CVD risk factors might include high blood pressure, serum lipoproteins (protein that combines with a lipid and carries it to another part of the body in the blood), and glycosylated hemoglobin (a red substance in the blood that carries oxygen and contains iron) (Evangelista et al., 2017).

Objectives

Overweight and obesity should be discouraged and prevented at an early stage in life. For this purpose, it is also mandatory to locate and isolate health related risk as early as possible. Health related behavior and preferences such as a healthy balanced diet, meal timings, eating habits and tastes will be developed in childhood and mostly continue until adulthood. The need is to carry the healthy childhood habits to the old age with slight but careful changes at a later stage. Additionally, overweight and obese persons are often labelled with different odd names, which can affect mental health and social life. Obesity control at an early stage will have the ability to reduce the risk of physical, mental and social outcomes of the disease.

Research Questions

What factors affect the overweight and obesity in children and adolescents?

Literature Review

Overweight means an imbalance between the body weight and corresponding value related to body height. In other words, it means when weight of the body surpasses a standard value related to height of the body, overweight prevails. Obesity is defined as an excess body fat buildup to a limit where body performance is set below a standard level. Obesity arises either due to hypertrophy (an increase in size of an organ or tissue because its cells grow in size) of prevailing fat cells or due to a combination of hypertrophy and hyperplasia of fat cells. The degree of fat buildup, differs noticeably among people. The Body Mass Index (BMI) changes significantly because of physiological changes in body structure during the growth phase among children and adolescents. Therefore, BMI values once measured are not fit for use among children and adolescents at another stage (Carrillo-Larco et al., 2017).

Assessment of Overweight and Obesity

To define overweight and obesity, a measurement of body fat and specified limits for excess body physique is needed. For precise measurement of body fat several methods are in vogue. All these methods provide the top calculations of body fat for evaluation of spread and control of disease based research but these techniques are mostly very expensive and involves lengthy and complex procedures (Reijven, Sundaram, Vroomen, Brouns, & Geerlings, 2017).

Body Mass Index (BMI)

Though BMI is a simple technique, extensively used for the calculation of overweight but it does not directly measure the body fat. It is calculated as body weight in kilograms divided by the squared body height in meters. The BMI is often used for epidemiologic research studies since it generates stable results, easy to obtain, affordable and does not require any surgical procedures. But, some disadvantages and

limitations are inevitable. For example, the relationship between BMI and body fat is dependent on age, origin, body composition and puberty phase. Is BMI an appropriate method to calculate body fat? Many studies have been conducted to search the answer to this question. Different age groups and sampling methods have been used. Still it makes a definite statement difficult. One of the most prominent observation was that there may be a large percentage of body fat within a given BMI. It means that in some cases BMI does not necessarily show the exact percentage of body fat of an obese person. Hence, not all subjects with the same BMI also have the same body fat arrangements. This shows that although the BMI is the most commonly used index for the definition of overweight and obesity, it is less authentic on the individual level to judge the fat within a given body. Some simple techniques such as waist circumference, skinfold thickness, blood pressure, lipoprotein profile etc. are helpful indicators to guess the individual health risk (Wang et al., 2017).

METHODOLOGY

It will a qualitative study. This research study adopts the quantitative research strategy. The decision will be drawn from the study of the literature.

CONCLUSION

Corpulence among youngsters is increasing in all parts of the world. Today, this is the hot public health issue worldwide. Overweight and obesity are linked with a severe Cardio Vascular Disease (CVD) risk profile, even among children. However, the long-term CVD symptoms due to overweight and obesity among children and youngsters are less clear. Health related behavior and habits, developed at an early stage, will mostly continue as one grows up Therefore, risk factors should be identified, assessed and stopped as early as possible to avoid severe damage to obese. Earlier studies included small, misleading population samples that are focused on a limited age range.

A German survey team has finally gathered the data for overweight and obese in Pakistan. This data allows analyses broad in scope as compared to the data available before. The CVD risk factors in overweight were analyzed. A regular link between Cardio Vascular Disease risks and overweight was identified, even among children younger than 11 years of age which supports the argument that obesity and heart diseases are closely related. Youngsters among 13-19 years of age, BMI produced relatively better results when studied with other parameters such as waist and height ratio of the body, skin thickness etc. Children, whose parents are overweight, have a higher tendency of being obese and overweight and should be the target for prevention at an early stage. Combining BMI with other simple techniques such as waist circumference and waist to height ratio may produce more useful results for studying spread and control of disease. Although, BMI is unable to judge the percentage of fat in a body but it is extensively used in combination with other parameters for the calculation of overweight due to its simple arithmetic techniques.

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