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The health-related quality of life in normal and obese children

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KEYWORDS

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Abstract *Background:* Overweight and obesity have a major impact on the quality of life (QOL) in different patterns and magnitudes.
Objective: To assess the effect of obesity on the quality of life in children.
Patients and methods: The study was carried out on 111 children aged from six to twelve years in National Nutrition Institute. They were divided according to age into two groups; group I for children ⩽8 years (n = 42) and group II for children >8 years (n = 69). Only obese children of nutritional cause of obesity were included in this study. The data were collected by different tools, questionnaire and clinical Assessment.
Results: Results showed that; in group I (⩽ 8 years); 20 children were of normal weight (47.6%) and 22 were obese (52.4%), while in group II (>8 years old); 29 of them were of normal weight (42.0%) and 40 were obese (58.0%). The Mean ± SD of body mass index (BMI), height and weight in normal and obese children were significantly different. The socioeconomic class relation between normal and obese children was significantly different. The total quality of life score was ⩾75 (very good QoL) in 95.0% and 82.8% of normal weight children, while the percentage was only 4.5% and 5.0% in obese children (⩽8 years and >8 years, respectively). On the other hand, the total score was ⩽25% (bad QoL Life) in only 0.0% and 6.9% of normal weight children, while it was 31.8% and 17.5% in obese children (⩽8 years and >8 years, respectively). There was a negative correlation relationship between total quality of life scores and BMI, waist circumference, weight and a positive correlation relationship between quality of life scores and father's and mother's education and father's occupation.
Conclusion: Obesity in children had a negative impact on their quality of life.

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Introduction

The prevalence of overweight and obesity in children and adolescents has risen in both developed and developing countries in recent decades.[1]

Overweight and obesity are reported to be associated with an increased risk of development of hypertension, coronary arteriosclerosis, elevated cholesterol, type 2 diabetes, joint problems, stroke, and certain types of cancers.[2] Health consequences of overweight and obesity are not just limited to physical health; overweight and obese children experience problems including body dissatisfaction, negative body image, low self-esteem, depression, stigmatization and social marginalization which can influence their psychological and social health issues.[3]

For children, overweight is defined as a body mass index (BMI) at or above the 85th percentile and lower than the 95th percentile of the same age and sex while obesity is defined as a BMI at or above the 95th percentile of the same age and sex.[4,5]

Obesity is the result of caloric imbalance and is affected by various genetic, behavioral, and environmental factors. Behavioral factors include unhealthy eating habits and dietary pattern, sedentary lifestyle and lack of physical activity. Moreover, the environmental factors (parents, peer, school and community) can per se influence children's dietary intake and physical activity and consequently their weight status.[6] In a small number of cases, childhood obesity is due to genes such as leptin deficiency or medical causes such as hypothyroidism and growth hormone deficiency or side effects due to drugs (e.g. steroids).[7]

WHO, [8] defines quality of life as "the individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns", in other words, a global view that considers many dimensions of the human beings.

Measures of health related quality of life (HRQoL) assess important aspects of health that are not detected by traditional physiological and clinical measurements. These aspects include the effect of a health condition on the child's daily activities, physical symptoms, social interactions, and emotional well-being.[9]

A recent comprehensive review suggests that increasing weight status has a moderate to strong negative influence on overall HRQoL in pediatric populations.[10] The same review found an inverse linear relationship between HRQoL and BMI for most studies.[10] Subsequent studies analyzing the effect of age further, suggest the association of lower HRQoL and obesity is weak and/or absent in very young children (aged 2–5 years) but appears more in school years, and steadily strengthens with age.[11] Numerous studies report that females have lower HRQoL scores in one or more domains [12] which is most often physical functioning.[12] In contrast, other studies have found no significant gender-effects on HRQoL.[13]

Due to difficulty of curing obesity, prevention could be the key strategy for controlling the current epidemic of obesity. Most approaches have focused on changing the behavior of individuals on diet and exercise. However, successful approaches to reduce obesity needs to take into account the social and cultural context in which obesity occurs.[14]

Primary preventive efforts are likely to have optimal effects if started in early childhood, and if designed to include parents. Great succession obesity prevention is likely to be achieved by creating supportive environment and promoting the healthy dietary, habits and physical activities.[15,16]

The objective of this study is to assess the effect of obesity on different domains of quality of life in children.

Patients and methods

A case controlled study was carried out on children aged from six to twelve years (of both sexes) in National Nutrition Institute, over a period of 10 months from January 2015 to October 2015. Obese children were recruited from obesity clinic, while healthy control children were recruited from the general outpatient clinic.

A total number of 111 children were included in the study; they were divided according to age into 2 groups; group I ($n = 42$) for children $\leqslant 8$ years (15 boys, 27 girls) and group II ($n = 69$) for children > 8 years (29 boys, 40 girls).

Only obese children of nutritional cause of obesity were included in this study, while obese children due to other causes (genetic syndromes, endocrinal diseases and psychiatric disorder) were excluded.

Informed consent was taken from all selected participants (consent was usually taken from the parents) and they received

Table 1 PedsQL™ Quick View^{SM} Scoring.

Response choices	Never	Almost never	Sometimes	Often	Almost always
Raw scores	0	1	2	3	4
0–100 Scale scores	100	75	50	25	0

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