



ORIGINAL ARTICLE

Study of the knowledge and practices of the physicians in Mansoura and Zagazig in regard to early childhood obesity.

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ABSTRACT

Background: The study aims to assess the awareness of health care providers regarding early childhood obesity in terms of their daily clinical practice and their knowledge of its common comorbidities. Hopefully, our study will drive more attention and raise the awareness of health care providers and the medical community to the magnitude of this health problem.

Methods: The survey was conducted using a questionnaire of two parts to collect data that help to assess the awareness of health care providers in Zagazig and Mansoura hospitals and primary healthcare units regarding early childhood obesity.

Results: Data collected showed that growth charts are not routinely used at every visit nonetheless when used correct definitions and long-term complications were not properly identified by a significant percentage of the respondents.

Conclusion: there is inadequate knowledge and awareness of healthcare professionals in Zagazig and Mansoura regarding childhood obesity therefore training programs are required on a national scale to tackle such a serious health problem.

Key words: childhood obesity, overweight.



INTRODUCTION

Childhood obesity is a serious and urgent health problem. In the last 10 years, there has been a considerable effort worldwide to develop and implement educational, medical, and public health interventions designed to reduce its growth [1].

Worldwide, the estimated prevalence of overweight and obesity for children under 5 was reported to be 6.9% in 2010, while in countries such as the USA, UK, and Australia, this figure may be as high as 20% to 23%. This is important, not only because of tracking poorer health outcomes in later childhood, adolescence, and adulthood but also because, at a health system level, overweight and obesity represent a major economic burden [2].

In Egypt, the prevalence of overweight and obesity was 17.7% and 13.5% respectively [3]. Although the definition of obesity and overweight has changed over time, it can be defined as an excess of Body Fat (BF). There is no consensus on a cut-off point for excess fat of overweight or obesity in children and adolescents. The Centre for Disease Control and Prevention (CDC) defined overweight as at or above the 95th percentile of BMI for age and at risk for

overweight as between 85th to 95th percentile of BMI for age. European researchers classified overweight as at or above 85th percentile and obesity as at or above 95th percentile of BMI [4].

As for early childhood obesity (up to 2 years), the weight for height chart is used to differentiate between overweight and obesity. Children who are $\geq 85\%$ are overweight, and children who are $\geq 95\%$ are obese [5]

Although the quality of research into both prevention and treatment has improved, high-quality multicenter trials with long-term follow-up are required. Meanwhile, prevention and treatment approach to increase energy expenditure and decrease intake should continue. Recent data suggest that the increase in childhood obesity prevalence might be abating; increased efforts should be made to keep this potentially exciting trend [6].

METHODS

Written informed consent was obtained from all participants, the study was approved by the research ethics committee of the Faculty of Medicine, Zagazig University. The study was done according to The Code of Ethics of the World Medical Association

(Declaration of Helsinki) for studies involving humans.

Study population: This research was a cross-sectional study that was conducted in governmental and private health facilities at Zagazig and Mansoura cities in Egypt. The target population was physicians specializing in pediatrics, pediatric gastroenterology, pediatric endocrinology, nutrition, neonatology, and family medicine working in both governmental and private sectors. The questionnaire was divided into two main sections. The first section included questions on demographic details of participants such as gender, age, practice setting, and subspecialty. The second section included questions assessing physician’s knowledge about early childhood obesity, including its importance for short- and long-term health, systematic use of growth charts during each visit, growth parameters (head circumference, weight, length, weight/height ratio), cut-off criteria for infant overweight and obesity, and awareness of obesity comorbidities (cardiovascular disease, fatty liver disease, decreased life span, hypertension, type 2 diabetes). The questionnaire was administered to the sample as hard copies through one-on-one interviews. The interview was cut to an end and the questionnaire was not to be completed if the respondent answered question number 7 as early childhood obesity is not a serious health problem, answered question number 8 as he did not plot growth parameters for every child at every, or answered the question number 10 as YES defining childhood obesity and overweight as the same entities.

Study design: A multistage sampling technique was used to collect responses for this study. Firstly, the two main subgroups were identified according to the location to include respondents from Zagazig and Mansoura cities. Secondly, a non-probabilistic quota sampling technique was used to collect responses within each subgroup. Finally, 131 and 100

responses were collected from Zagazig and Mansoura respondents, respectively.

Statistical analysis: Data collected was entered and analyzed using Microsoft Excel software. Data were then imported into Statistical Package for the Social Sciences (SPSS version 20.0) (Statistical Package for the Social Sciences) software for analysis. According to the type of data qualitative represent as number and percentage, quantitative continues group represented by mean ± SD, the following tests were used to test differences for significance; difference and association of qualitative variable by Chi-square test (X2). Differences between quantitative independent groups by t-test or Mann Whitney, correlation by Pearson's correlation or Spearman’s. The P-value was set at <0.05 for significant results & <0.001 for high significant result.

Data was collected and submitted to statistical analysis. The following statistical tests and parameters were used: Mean deviation, Standard deviations, and the chi-square (X2) test which was used to compare two groups regarding the distribution of different variables.

RESULTS

67.8 % feel that obesity is serious issue, 25.2 % said that obesity is very serious, and seven percent said it's not important (Table 1). 59.2% of the respondents who apply the use of charts plot the weight only. 8.6% opted for the W\L chart (Table 2).

Of the respondents who used the charts at every visit, only 8.6% plotted the weight for length (Table 3).

The vast majority did not regard obesity and overweight as same entities as only 5.9% thought they are similar. 37.8% of the respondents who use the charts were right regarding the cut-off point of overweight and 41.7% were right regarding obesity (Table 4). 17.4% thought that cardiovascular diseases could complicate childhood obesity while 21.3% chose fatty liver disease.

Table 1: respondent’s opinions regarding the seriousness of childhood obesity

		N	%
Seriousness of obesity	Very serious	58	25.2
	Serious	156	67.8
	Not serious	16	7.0
	Total	231	100.0

Table 2: respondents who reported the use of charts at every visit.

		N	%
Use of charts at every visit	Yes	103	44.6
	No	128	55.4
	Total	231	100.0

Table 3: which parameters are usually plotted by the respondents.

		N	%
Parameters plotted by chart users	Weight	61	59.2
	Length	17	16.5
	HC	16	15.5
	Weight / Length	9	8.6
	Total	103	100.0
Not using the charts		128	

Table 4: knowledge about cut-off points for overweight and obesity

		N	%
Diagnosing overweight	Weight/Length >75 centile	34	33.1
	Weight/Length >85 centile	39	37.8
	Weight/Length >90 centile	13	12.6
	Weight/Length >95 centile	1	0.9
	Don't know	16	15.5
	total	103	100%
Diagnosing obesity	Weight/Length >85 centile	20	19.4
	Weight/Length >90 centile	24	23.3
	Weight/Length >95 centile	43	41.7
	Weight/Length >120 centile	3	2.9
	Don't know	13	12.6
	Total	103	100.0

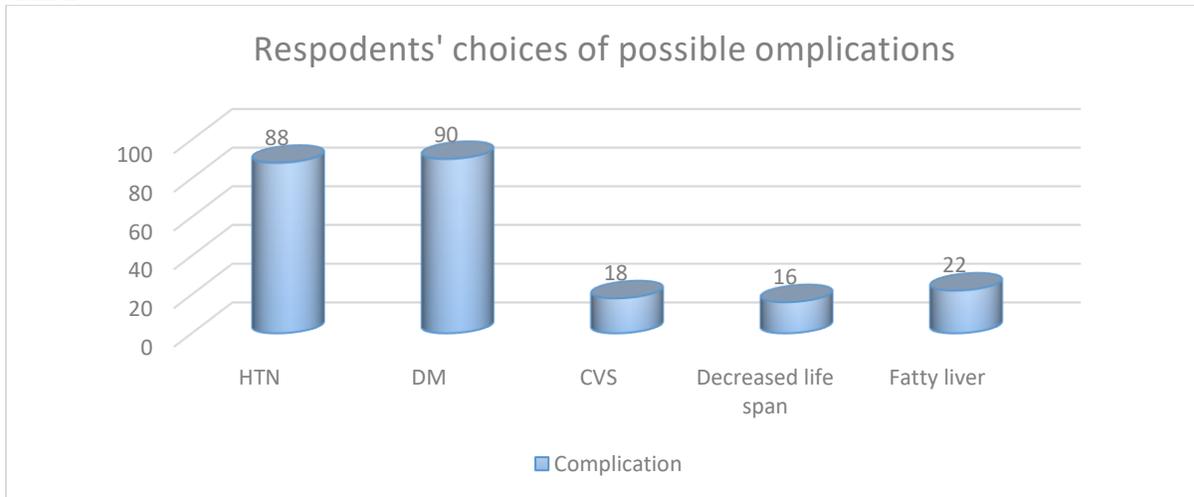
Table 5: knowledge about the source of charts used to plot the parameters.

		N	%
Type of charts	Know	42	40.7
	Don't know	61	59.3
Type	WHO	37	33.9
	CDC	5	4.8
	Don't know	61	59.3
	Total	103	100.0

FIGURE 1



FIGURE 2



DISCUSSION

Egypt has an increasing prevalence of early childhood obesity and its associated complications. However, more data must be collected to get accurate figures regarding this serious health problem. Many factors have been linked to this phenomenon including changes in dietary pattern, particularly early introduction of sweetened beverages and premature introduction of cow’s milk and complementary feeding [7].

Tackling this problem requires joint efforts by all involved parties including both families and healthcare professionals [8]. In our study, we have explored many aspects regarding the awareness of healthcare professionals about the diagnosis and complications of early childhood obesity.

Our study showed that 67.8% of the respondents considered early childhood obesity a serious health problem. Moreover, 25.2 % of them considered it very seriously.

Despite that, a large percentage of respondents regarded early childhood obesity as a serious or even a very serious health problem, 55.4% of them mentioned that they are not used to plot growth parameters on growth charts at every visit. This can be linked to our sample’s demographics having 86.1% of the respondents below 40 years of age and 90% working at governmental facilities known for their over crowdedness. This trend was also found in other studies as it was found that about 66% of GPs in Australia did not measure children’s height or weight on a routine basis [9]. Furthermore, a study comparing the practices of physicians in several countries in Europe regarding childhood obesity showed that only 6.1% of physicians in Ukraine use growth charts routinely [10].

However, 94.3% of the respondents considered childhood obesity and overweight as two separate entities, those who were right regarding their choices to the accurate definition of overweight and obesity

on growth charts were 37.8 % and 41.7 % respectively. Furthermore, only 8.6 % of them stated that they use the weight/length chart at every visit (Table 3). This indicates that many respondents are not familiar with the definitions of childhood overweight and obesity, let alone proper management and possible complications.

Physicians in Mansoura and Zagazig did not seem to have sufficient awareness in respect of the long-term complications of early childhood obesity as only 15.5% of respondents linked short life span to early childhood obesity. Moreover, only 21.3% considered fatty liver disease as a long-term complication of early childhood obesity (Figure 2). These findings were also mirrored in a study that was carried out in the Middle East and North Africa region which showed that 49.1% of physicians did not associate decreased life span with early childhood obesity [11]. Lack of regular professional training programs explains improper management of early childhood obesity and deficient awareness of its complications [12].

A significant finding is that 59.3% of the respondents did not know about the different types of growth charts. Additionally, these figures are compatible with the previously mentioned study done in the Middle East and North Africa which found that only 0.7% of physicians answered all the questionnaire correctly [11].

Study limitations: Our study was conducted on a scale of healthcare professionals in only two cities in Egypt. Further assessment of awareness and knowledge of healthcare professionals is needed on a larger scale to obtain accurate data valid for generalization worldwide or at least at a national level.

CONCLUSIONS

It has become clear that childhood obesity is a serious worldwide health hazard. Regarding the healthcare providers in Zagazig and Mansoura cities, there is a considerable level of awareness in respect of the magnitude of the problem. However, knowledgeable practice is inadequate; therefore, more practical measures must be applied to tackle this issue.

Many physicians within our study were lacking knowledge about diagnostic criteria and appropriate use of relevant tools. This means that approaching early childhood obesity at a national scale demand initiating regular professional training programs on diagnosing and managing childhood obesity and its related complications.

RECOMMENDATIONS

From the above, we establish that further professional education is urgently needed to raise awareness about early childhood obesity and to meet its inclining prevalence with adequate knowledge.

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