

UDC 616-056.52-052.3(578.7)

CHILDHOOD OBESITY IN SRI LANKA

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Introduction

Worldwide obesity has nearly tripled since 1975. According to the World Health Organization (WHO) over 340 million children and adolescents aged 5–19 were overweight or obese in 2016. 39 million children under the age of 5 were overweight or obese in 2020 [1]. Excess bodyweight is the 6th most important risk factor contributing to the overall burden of diseases worldwide. What are Obesity and Overweight? Overweight and Obesity are defined as abnormal or excessive fat accumulation that may impair your health [2]. For children under 5 years of age WHO defines Overweight as «weight-for-height greater than 2 standard deviations above WHO Child Growth Standards median»; and Obesity as «Weight-for-height greater than 3 standard deviations above the WHO Child Growth median». Overweight and obesity are defined as follows for children aged between 5 to 19; Overweight is BMI-for-age greater than 1 standard deviation above the WHO Growth Reference median and Obesity is greater than 2 standard deviations above the WHO Growth Reference median [3].

Goal

«Childhood obesity» is on the rise in Sri Lanka. Therefore, the main goal of this article is focused on the children who are considered obese in Sri Lanka, to point out the physiological, psychological, social and emotional factors that contribute towards this immense rise of numbers. Sri Lankans being proud citizens with a great historical background, and being a community that still continues many traditions from the past, it is very hard to be able to alter their mindsets into the currently changing world. There are many stereotypical myths and norms that people stick to. This specific reason itself is a huge challenge, to draw the line to such a rapidly increasing childhood obesity phenomena, apart from all the other factors which are discussed in this article.

Material and methods of research

The global level statistics and percentages were referred from the World Health Organization (WHO) official website. The statistical data related to Sri Lanka were from the Sri Lankan College of Pediatricians official website (slcp.lk). Consultant in Pediatrics Dr. Nishadi Ranasinghe working at Sirimawo Bandaranayake Specialized Children's Hospital (SBSCH) — Sri Lanka also provided access to their Child guidance and Pediatric nutrition clinics to gather information regarding childhood obesity in Sri Lanka. The definitions and other related data were also from PubMed articles specially having to mention Dr. S. Gunawardena's combined research publication on «Physical and psychosocial quality of life in the children with overweight and obesity from Sri Lanka» which had a vast amount of knowledge-reference no [4].

Results and discussion

In 2016, the global prevalence of childhood obesity was 7,8 % in boys and 5,6 % in girls [3, 4]. A recent study has shown that children among 5–18 years old in urban Sri Lanka showed an obesity prevalence of 10,3 % and overweight prevalence of 11,3 % [1]. Obesity, especially in childhood has a negative impact on a child's overall health which includes physical, psychological and social well-being [4]. Metabolic complications associated with childhood obesity and the impacts on their quality of

life including physical and psychosocial well-being have been studied previously in Sri Lankan children [2, 3] but there is a shortage of proper explanation to specific factors that led Sri Lanka to the current statistics. Therefore, I would like to discuss each contributing key point in my article as follows.

Imbalanced food habits. Sri Lanka's staple food is rice. Cultivation of paddy and production of rice has been central to social, cultural, religious and economic activities of the island. Therefore, almost every Sri Lankan household cooks rice on a daily basis. It is also not a surprise to know that there are some families that eat rice for all three meals of their day, as it is not just easy to prepare but also cost friendly. A 100g of rice has 28g of carbohydrates, and I'm not totally accusing the fact that we eat rice for childhood obesity but it is commonly known to us that we should have a «balanced» diet. The word «balanced» is not justified in this rice eating phenomena because Sri Lankans tend to serve a huge plate of rice with very little amounts of vegetables and meat. So basically, any child at a growing age in Sri Lanka who requires a lot of protein for their development, lack protein but of course their cravings are satisfied with the huge plate of rice served all three meals. Therefore, Sri Lankan children tend to be shorter in height compared to other children around the world of their ages but with increased fat in their bodies.

Overfeeding in infancy. Since we previously pointed out food habits, overfeeding in infancy is something we cannot neglect. Many Sri Lankan mothers are unaware of the necessary feeding regimes that should be carried out according to their newborn baby's age and weight. Especially mothers from rural areas does not have access to the internet to self-educate themselves and to be aware of the danger they are dragging their babies into. Some stereotypical mothers believe that the more they feed, the healthier their babies will be, which is very hard to be changed. No matter how well the Mid-wife service is organized regionally in Sri Lanka, the mothers tend to listen to their parents (child's grandparents/ great-grand parents) and to ignore the medical personal's advice. Its unbelievable how many pediatrics working in Sri Lanka has stated that one of the most common complaints among new mothers is that their child is not eating well, and after taking their history its only over-feeding which they were unable to accomplish.

Trend of fast food for convenience among school children. If you walk in a school lane in Sri Lanka you will be surprised for the number of fast-food restaurants you will see among them schools. And after school they are filled with school aged children eating oily, starchy food which has very low nutrient benefits. School cafeterias were requested by the government in 2016 to have healthy snacks and fruit or milk beverages which was limited to yet another government statement that didn't see results. Young growing aged teenagers are rushed into extra tutorial classes after school and for their convenience, they sure fill up in fast-food restaurants before classes.

Sedentary lifestyle. Sri Lankan growing children used to have a very active childhood back in the days. School students were involved in sports and extracurricular activities. Children from villages has spacious gardens, back yards to play in the evening, rivers to swim and their parent's paddy fields to give a helping hand at. Urban areas also have jogging pathways, swimming pools, grounds and sports complexes. But with time children growing up got competitive with education and focused only on their educational development and not physical. To top all of that the COVID-19, quarantine lifestyle was a huge punch of these growing kids. Children were limited to their electronic devices not only for education but for entertainment as well. Even now in Sri Lanka most of the leading schools continue online education where they get off from their beds in the morning just to sit in front of their laptops/ tabs/ iPads for 5-6 hours a day. Play time which used to be playing cricket with the neighboring kids have been limited to Candy-Crush, Call of Duty. You want to meet a friend living at a distance? You got FaceTime, Zoom meetings and so much more

where you can continue to sit from home and accomplish. This is definitely pandemic friendly, but in the long run these growing bodies are missing out a lot in exercises. Most of the adolescents have online earning methods through social media platforms such as Instagram, Tiktok. These children tend to stay at home and spend hours on creating content and brands pay them. Sounds very convenient and easy but if these children don't at least spend 30 minutes of their busy day to burn their unnecessary fat, «Childhood Obesity» will always be a hot topic in Sri Lanka for years.

Gestational diabetes. Sri Lanka is a country full of hospitality and humanity. People are waiting for an opportunity to offer help to another. Imagine being a pregnant mother in such a country? You are always pampered with the most delicious Sri Lankan cousins by your friends, family, relatives and neighbors. Not just the essential nutrients but anything the pregnant mother would like to eat, us Sri Lankans will provide. For an example; Jackfruit, sweet potatoes and huge packets of rice that 2–3 grown men could eat. Sri Lankans call pregnancy craving «Dola-Duka» and would blame any unhealthy weight gaining during pregnancy on that concept. Therefore, Gestational diabetes rates in maternity wards are quite unexpectedly high compared to other countries [4].

Childhood undue stress. I personally as a child who was brought up in a Sri Lankan background knows the competition which causes unavoidable stress in children. The education system in Sri Lanka is overly competitive. Children are no longer not just involved in exercises and sports but also playing in the evenings because of the educational stress either their colleagues or their parents and teachers put them into. Stress interferes with cognitive processes of the body, it can affect one's behavior by causing overeating and consumption of foods that are high in calories, fat or sugar. Stress also decreases physical activity and shortens sleep. Stress also triggers physiological changes in the hypothalamic-pituitary-adrenal axis. Finally, stress can stimulate biochemical hormones and peptides such as leptin, ghrelin and neuropeptide Y [4].

Family genetics and syndromes. Severe cases of obesity, such as Mendelian syndrome of obesity or obesity caused by mutations in single genes, provide strong evidence for a role of genetic factors in childhood obesity [3]. Children with Down syndrome are more likely to be overweight or obese than the general population of children without Down's syndrome [1]. Overall thyroid dysfunction was found more in obese individuals [2]. Hypothyroidism causes decreased fat metabolism which was a clinically proven cause for childhood obesity in Sri Lanka. Laurence-Moon-Biedl syndrome is a rare genetic syndrome which has childhood obesity as a symptom has also been reported in several Pediatric hospitals in Sri Lanka.

Conclusion

Based on the evidences from the childhood obesity cases in Sri Lanka, and the previously publishes researches, gathered here are the most common contributing factors for childhood obesity to have an immense rise in Sri Lanka. These factors are preventable. Childhood obesity itself is preventable unless is caused by a genetic factor. This study documents the modifiable factors of childhood obesity in Sri Lanka as well as elsewhere.

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