



Assess the knowledge regarding prevalence and risk factors of childhood obesity during COVID-19

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Abstract

Obesity-related wellbeing costs derive so from its short and long-term co-morbidities. Firstly, obese children are at higher danger of glucose intolerance, non-alcoholic fatty liver disease, dyslipidemia, and hypertension. The present study objective is to assess the prevalence and risk factors of childhood obesity during covid-19 in urban center Ramapuram. The Descriptive cross-sectional research design was utilized for this investigation. The independent variable in this study is Prevalence and risk factor of obesity on covid -19. The dependent variables in this study are obesity among childhood. The study was conducted at the Ramapuram urban centre among childhood who attending obesity during covid-19. The study was conducted at Ramapuram Urban centre, The sample size is 30samples. Out of which 30samples in urban. People who satisfied the sampling criteria and are accessible at selected village during the period. The results of the survey showed that regarding age group out of 30samples of 15(50%) samples were Toddler, 9(30%) were Preschooler, 6(20%) were under school age. Majority of them had adequate knowledge 55%. Obesity, glucose intolerance and hypertension in childhood were strongly associated within premature death from endogenous causes in this population. In obesity between the ages of 5 and 14 years was more likely to have occurred at younger ages, primarily among children who had entered kindergarden overweight.

Keywords: prevalence, risk factors, obesity, children's, COVID-19, knowledge, urban centre

Introduction

Obesity health costs derive also from its short and long-term co-morbidities. Firstly, obese children are at higher risk of glucose intolerance ^[1], non-alcoholic fatty liver disease, ^[2] dyslipidemia ^[3], and hypertension ^[4]. In addition, childhood obesity tends to persist during adulthood ^[5]. It has been estimated that about 80% of severe obese children at the age of 2 years will be obese during adulthood. Moreover, several evidence link childhood obesity to the burden of Non-Communicable Diseases in adult population. Obesity is responsible for increased risk of type 2 diabetes, cardiovascular disease, finally leading to increased morbidity and mortality ^[6-10].

The outbreak of a new corona virus disease, COVID19, was recognized as a pandemic in March 2020. It has widely spread in many geographical locations. To date (18 May 2020), over 4.5 million people have been affected by this disease and more than 300,000 deaths have been reported ^[11]. The widespread transmission of COVID-19 along with the increasing number of infected cases and deaths have caused great psychological distress such as depression, anxiety, and stress across various populations in many countries ^[12, 13]. These undesirable mental health cost are associated with various factors such as being seriously

worried about being infected, having no psychological support, disturbed sleep, and lower self-perceived health condition ^[14, 15]. Fake news and incorrect updates about COVID-19, especially in social media, have created panic, insecurity, and fear among the public ^[16].

The corona virus 2019-nCoV (COVID-19) infection is a public health emergency of international anxiety in which a corona virus has been identified as the cause of an outbreak of respiratory illness. It was first detect in Wuhan, China ^[17] spreading rapidly to other countries worldwide ^[18, 19]. On the 12th March 2020, the World and Health Organization (WHO) announced the new Corona virus outbreak pandemic and according to WHO official website of the World Health Organization ^[20] more than 2,500,000 people have been confirmed to have a COVID-19 infection internationally. Pandemics cause a challenge to emotional spirit and can lead to delicate levels of stress ^[21]. Anxiety is a common response to any stressful situation. Processes and maladaptive lifestyle changes potentially major to the onset of psychiatric conditions ^[22].

A purpose of the study (1) To assess the prevalence and risk factors of obesity during covid 19 among children. (2) To find out the relationship between the prevalence and risk factors of obesity during covid 19 among children. (3) To

associate the level of obesity during covid 19 among children.

Materials and Methods

Quantitative approach and descriptive cross-sectional research design was used to assess the knowledge regarding prevalence and risk factors of childhood obesity during covid-19 in Ramapuram urban centre. Purposive sampling method was used to recruit the samples. 30 samples fulfilled the inclusion criteria and were found to be eligible after the survey. The investigator introduced herself, explained about the purpose of the study and their right to participate or withdraw from the study to the participants and the informed consent was obtained from all participants.

Results and Discussion

Section A

Table 1: Frequency and percentage distribution of the knowledge about dash diet among Obesity Children's

Knowledge About Dash Diet	Frequency	Percentage
Inadequate knowledge	55	55%
Moderate knowledge	35	35%
Adequate knowledge	10	10%

Table I shows that out of 30 samples 55(55%) have inadequate knowledge, 35(35%) have moderate knowledge and 10(10%) have adequate knowledge.

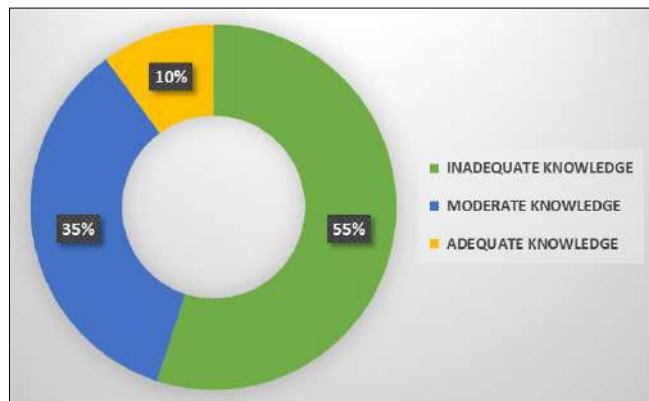


Fig 1: Level of knowledge

Section B

Table 2: Distribution of mean and standard deviation of level of knowledge about childhood obesity during covid 19 among children in Ramapuram

Level of Knowledge	Mean	Standard Deviation
Inadequate	1.83	0.83
Moderate	1.63	0.92
Adequate	0.73	0.69

Table II Shows the mean and standard deviation of level of knowledge of children in Ramapuram about childhood obesity during COVID-19. The mean score for inadequate knowledge is (1.83), moderate knowledge is (1.63) and adequate knowledge is (0.73) and standard deviation score for inadequate knowledge is (0.83), moderate knowledge is (0.92) and adequate knowledge is (0.69).

Angelo Pietrobelli (2020) conducted longitudinal observational study in Italy. The sample included 41 children and adolescents with obesity. The Aim of the study is to assess Effects of COVID-19 Lockdown on Lifestyle Behaviours in Children with Obesity the result shows were no changes in reported vegetable intake; fruit intake increased ($P=0.055$) during the lockdown. By contrast, potato chip, red meat, and sugary drink intakes increased significantly during the lockdown (P value range, 0.005 to <0.001). Time spent in sports activities decreased by 2.30 (SD 4.60) h/wk ($P=0.003$), and sleep time increased by 0.65 (SD 1.29) h/d ($P=0.003$). Screen time increased by 4.85 (SD 2.40) h/d ($P<0.001$).

Conclusion

During this covid-19 pandemic, the prevalence and risk factor of childhood obesity were moderate. Obesity, glucose intolerance and hypertension in childhood were strongly associated within premature death from endogenous causes in this population. In obesity between the ages of 5 and 14 years was more likely to have occurred at younger ages, primarily among children who had entered kindergarden overweight.

References

1. Di Sessa A, Umano GR, Miraglia Del Giudice E, Santoro N. From the liver to the heart: cardiac dysfunction in obese children with non-alcoholic fatty liver disease. *World J Hepatol* 2017;9(2):69-73.
2. Deeb A, Attia S, Mahmoud S, Elhaj G, Elfatih A. Dyslipidemia and fatty liver disease in overweight and obese children. *J Obes* 2018;2018:8626818.
3. Freedman DS, Mei Z, Srinivasan SR, Berenson GS, Dietz WH. Cardiovascular risk factors and excess adiposity among overweight children and adolescents: the Bogalusa heart study. *J Pediatr* 2007;150(1):12-7 e2.
4. Ward ZJ, Long MW, Resch SC, Giles CM, Craddock AL, Gortmaker SL. Simulation of growth trajectories of childhood obesity into adulthood. *N Engl J Med* 2017;377(22):2145-53.
5. Bjerregaard LG, Baker JL. Change in overweight from childhood to early adulthood and risk of type 2 diabetes. *N Engl J Med* 2018;378(26):2537-8.
6. Turer CB, Brady TM, de Ferranti SD. Obesity, hypertension, and dyslipidemia in childhood are key modifiable antecedents of adult cardiovascular disease: a call to action. *Circulation* 2018;137(12):1256.
7. Turer CB, Brady TM, de Ferranti SD. Obesity, hypertension, and dyslipidemia in childhood are key modifiable antecedents of adult cardiovascular disease: a call to action. *Circulation* 2018;137(12):1256-9.
8. Charakida M, Deanfield JE. BMI trajectories from childhood: the slippery slope to adult obesity and cardiovascular disease. *Eur Heart J* 2018;39(24):2271-3.
9. Singh AS, Mulder C, Twisk JW, van Mechelen W, Chinapaw MJ. Tracking of childhood overweight into adulthood: a systematic review of the literature. *Obes Rev* 2008;9(5):474-88.
10. Reilly JJ, Kelly J. Long-term impact of overweight and obesity in childhood and adolescence on morbidity and

- premature mortality in adulthood: systematic review. *Int J Obes* 2011;35(7):891-8.
11. WHO, Coronavirus (COVID-19) pandemic [online]. Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019> 2020. Accessed May 18, 2020.2
 12. Bo HX, Li W, Yang Y *et al*. Posttraumatic stress symptoms and attitude toward crisis mental health services among clinically stable patients with COVID-19 in China. *Psychol Med* 2020;27:1-7.
 13. Rajkumar RP, COVID-19 and mental health: A review of the existing literature. *Asian J Psychiatr* 2020;52:102066.
 14. Altena E, Baglioni C, Ellis JG *et al*. Dealing with sleep problems during home confinement due to the COVID-19 outbreak: practical recommendations from a task force of the European CBT-I academy. *J Sleep Res* 2020, 4.
 15. Li N, Han L, Peng M *et al*. Maternal and neonatal outcomes of pregnant women with COVID-19 pneumonia: a case-control study, *Clin Infect Dis* 2020.
 16. Ornell F, Schuch JB, Sordi AO *et al*. Pandemic fear and COVID-19: mental health burden and strategies. *Braz J Psychiatry* 2020, 3.
 17. Li, Q, Guan X, Wu P, Wang X, Zhou L, Tong Y *et al*. Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. *N Engl J Med* 2020;382:1199-207.
 18. Day M. COVID-19: surge in cases in Italy and South Korea makes pandemic look more likely. *BMJ* 2020, 368.
 19. World Health Organization. Geneva: coronavirus disease (COVID-2019) situation reports [Internet]. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports> [Accessed 24 Apr 2020].
 20. Crouse Quinn S. Crisis and emergency risk communication in a pandemic: a model for building capacity and resilience of minority communities. *Health Promot Pract* 2008;9(4Suppl):18S-25S.
 21. Gover V. Maternal depression, anxiety and stress during pregnancy and child outcome; what needs to be done. *Best Pract Res Clin Obstet Gynaecol* 2014;28:25-35.