Short communication

Ramifications of C~~ovid~~OVID- 19 on child~~hood~~~~ren~~ obesity : A global perspective.

[i]**Abstract:**

The COVID-19 pandemic has had far-reaching ramifications that extend far beyond the ~~virus itself~~clinical disease. C~~Those c~~hildren around the world have been impacted by the socioeconomic, psychological,and physiologic effects brought about by the emergence and response to this virus. This is especially true for children already suffering from obesity. They have been placed in an almost impossible situation due to the negative effects of living in relative isolation.

Using logistic regression, the hazard factors for loss of life in young overweight COVID-19 patients were investigated. According to our data, obesity is linked to many~~may be~~ health risks for teenage COVID-19 patients. They have a significant death rate, with worsening irritant responses, greater vascular damage, and elevated rates of lung consolidation ~~activity liable contributing to the high death rate~~. Younger c~~C~~hildren infected with COVID-19 who were hospitalized had a high proportion of comorbidities. I~~,~~ ~~i~~nfants had less severe illness. ~~,~~ O~~an o~~bese child were more likely to necessitate mechanical ventilation, as well as higher indicators of Inflammation at the time of admission. ~~and~~ W~~w~~hile in the hospital childhood obesity was linked to serious COVID-19 disease. Europe is no *exception, t~~T~~hree* weeks have passed since Italy's mandatory countrywide lock-down~~lockdown~~ began; lifestyle, diet, exercise, and sleep were collected and compared to data on children gathered in 2019. The additional weight accumulated during the lock-down~~lockdown~~ may not be readily reversed, and if better practices are not

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re-established, it may contribute to obesity in adulthood. The United States similarly has reported increasing weight gain in youth aged 2-19 during the pandemic.

Key words: Repercussions, Childhood Obesity~~Kiddos~~, Overweight~~Chubbiness,~~ 2019-N~~n~~ovel C~~c~~oronavirus, Pandemic.

Introduction

Children around the world have been impacted by the socioeconomic, psychological,and physiologic effects brought about by the emergence and response to this virus. In India for example, t~~T~~he second wave of COVID-19 ~~in India~~ has left parents scrambling for information on how to safeguard their children. They want to know ~~and~~ what to do if their child or a family member exhibits symptoms or tests positive for the virus. As the number of adults in India who have tested positive for COVID-19 has grown, so has the number of children who have contracted the virus. However, there has been no dramatic increase in the total percentage of children in India who are infected with COVID-19. One hallmark of the current wave is that, unlike the previous wave, whole homes are now infected with the virus.(1)

In Europe, ~~According to~~ the most current UK National Child Measurement Programme (data obtained prior to the pandemic), 21% of children aged 10-11 are fat, with the percentage rising to 27.5 ~~percent~~% in more impoverished regions. This is expected to increase with the Covid-19 lock-downs~~lockdowns~~, which have impacted 75 ~~percent~~% of pupils worldwide. ~~—~~ W~~w~~eight gain is linked to time spent out of school during holiday closures, and it is more prevalent among those from lower socioeconomic backgrounds; this seems to be equally true for lock-downs . Families are more prone to consume cheaper and more calorie-dense meals when faced with food insecurity (nearly 20% of UK households are in worse financial shape today than before the ~~epidemic~~pandemic). Physical activity has dropped as well, children are no exception~~!~~. Prior to the ~~epidemic~~pandemic, more than half of youngsters did not

meet the recommended levels of physical exercise. Despite constraints permitting 60 minutes of activity in a local region on a normal lock-down~~lockdown~~ day, approximately 30% of youngsters report not leaving the house. With parks, leisure centers, and sports clubs closing and screen time increasing, young people~~'~~s' physical activity has decreased even more; this is especially true among ethnic minority populations.(2)

The body mass index (BMI) is a measurement that determines if a youngster is obese~~fat~~ or ~~fleshy~~overweight. Overweight is~~t~~ defined as BMI over the 85th percentile but below the 95th percentile for young people and teens of the identical age and sex. Obesity in toddlers and juvenile of the same gender~~sexuality~~ and age is characterized as a BMI of the 95th percentile or above. Instead of utilizing the B~~ody mass index~~MI of 30kg/m2 to sort~~s~~ out~~s~~ who is obese as in grown-ups.~~the uses for Instead of utilizing the BMI sorts used for grown-ups~~, a child's obesity~~mass~~ status is ~~being~~ calculated ~~by~~ using an age and sex-specific percentile for BMI. This is due to the fact that a child's~~kids~~ body composition changes ~~with changes~~ with age and difference between boys~~men~~ and girls.(3)

Impact of obesity on children

In 2019, it was anticipated that in some form, 38.3 million children under the age of five were overweight. In over two decades, there has been little improvement in reducing childhood obesity among children under the age of five. A retrospective cohort research which was carried out in France, patients with considerable obesity (BMI >40 kg/m^2) who came into contact with COVID-19 were more prone to obligate invasive mechanical ventilation, irrespective of age, high pressure or diabetic(4). Multiple studies are now available that show the dangers of adult obesity along with COVID infection.

In Asia,~~We~~ a retrospective study of~~studied~~ 13 young patients who died with COVID-19 and 40 matched survivors ~~in a retrospective investigation.~~ showed obesity was a possible risk factor for high mortality. T~~t~~he risk factors for death in these young obese COVID-19 patients were studied using logistic

Comment [John Scze1]: My issues with this standard if you wish to elaborate. If an entire country's children are obese or overweight then one might underestimate the number of unhealthy patients (eg those that are overweight/obese) Should we not find a point in time when children were generally healthy or examine a country with a generally healthy population to create objective cut offs for particular ages.

We could further refine this with increasing knowledge of genetics to personalize as more data becomes available.

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Comment [John Scze2]: You could also right "young males and females"

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Comment [John Scze3]: This is a separate study and is referenced so you do not need to identify personally. It also can bias reviewers that may have either positive or negative views of you, your institution, locality or country. For future papers I recommend you depersonalize.

regression. ~~Obesity may be a risk factor for high mortality in young COVID-19 patients,~~ Aaccording to ~~our~~ this study's findings, obese children suffered from~~with~~a worse~~ned~~ inflammatory response~~s~~, an increase~~d~~ in heart damage, and an increase~~d~~in coagulation activity. This findings likely contributing to the high mortality. Obesity inhibits diaphragm excursion, affects immunological responses to viral infection, is pro-inflammatory, and causes hyperglycemia and oxidative stress, all of which have negative effects on cardiovascular function. COVID-19 will influence younger people more than previously thought in populations with a high prevalence of obesity~~, according to our findings.~~(5)

In the USA, a study by Philip Zachariah et al. a total of 50 children and teens were admitted for COVID-19 infection. The disease~~The disease~~ presente~~d~~d itself~~itself~~ in a variety of ways. ~~in that same recent retrospective analysis of youth hospitalized for COVID-19.~~As in the study from Zhang Fengqin et al. t~~T~~he risk of serious illness was not enhanced in infants or immunocompromised people. Respiratory symptoms, though prevalent, were not always evident~~, a total of 50 children and teens were admitted for COVID-19 infection in this research study~~. Babies with coronavirus who were brought to the medical center had a high rate of comorbidities and~~,~~ newborns had less severe illness.~~,~~ T~~t~~hose who were obese had~~were more~~ greater rates of mechanical ventilation.~~, as well as~~ Higher levels of inflammation markers~~higher indications of i Swelling~~ at the start of treatment and while in the hospital was linked to more severe~~fatal~~ illness.(6)

In a literature review by Aliva De and Deepa Rastogi (USA)~~The impact of systemic immune respons~~they outline the ~~es and~~ metabolic problems, which are closely connected to truncal adiposity in the abscense of atopy.~~, as well as atopy isn't present~~, ~~on~~They also raise concerns for medication non-responsive asthma and its links to obesity. Their 2019 report shows 18%of US children are obese, a number that has likely risen due to the COVID pandemic.[*] ~~S~~symptoms of asthma and pulmonary function impairments in children who are overweight~~,~~ has been generally constant. A~~-~~topic asthma

~~Because ongoing asthma drugs further successful for atopic asthma, atopy inquiry desire to show care by separating asthmatic that responds to existing drugs after asthma that does not.~~ can be differentiated from obesity-related asthma by the lack of response to existing atopy asthma medications. This review suggests that the~~e~~ detection of metabolic deregulation in obese children may aid in the identification of children who ~~are fat~~ are more likely to get this form of asthma.(7)

A review published by MaidoTsenoli, Jane ElizabethMoverley Smith, and Moien AB Khan express the concerns coming from the United Kingdom on COVID-19 and childhood obesity. Childhood obesity has been rising and COVID-19 has made matters worse. The authors encourage e~~E~~vidence-based, targeted, long-term therapies to address these issues. Obviously such interventions~~with~~ will require enough funding ~~are required~~. Optimism and a desire for the both public and private transformation ~~interaction~~ through modern technologies and old customs, may offer hope for change. To reverse the current trend of weight growth, significant adjustments in individual and family performance and nutrition, as well as political and scholastic policies at the highest levels, are required.(8)

An Italian long-term study ~~The researchers~~ questioned 41 obese children and teenagers in the city ofVerona~~, Italy, who were part of a long-term study.~~ t~~T~~hree weeks into Italy's mandated national lockdown. , L~~l~~ifestyle data on nutrition, activity, and sleep were collected and compared to data on children collected in 2019. ~~The additional weight accumulated during the lockdown may not be readily reversed, and if better practices are not re-established, it may contribute to obesity in adulthood," Faith explains.~~"Depending on the duration of the lockdown, the excess weight gained may not be easily reversible and might contribute to obesity during adulthood if healthier behaviors are not re-established," " This is due to the fact that obesity in childhood and adolescence tends to accompany people throughout their lives and predicts adult weight status."(9) These issues are similar to the other

Comment [John Scze4]: My personal observation from working in large organizations such as the NHS and USA government projects is that government initiatives often fail to do things cost effectively

Comment [John Scze5]: Write more about your own thoughts on how this can be achieved in your country and other countries.

countries mentioned above and must be addressed in the near future. The policy of isolation remains prominent in many societies and does have serious unintended consequences.

~~The participants in the study were 41 obese children and adolescents who took part in a observational study across time research in Verona, Italy. At the start of the nationwide lockdown and three weeks later, which required house confinement, lifestyle data such as nutrition, exercise, and sleep habits were obtained during the lockdown,~~This Italian study shows isolation affected teens eating habits. V~~v~~ariations in the amount of vegetables consumed remained unchanged~~, although~~and fruit consumption rose (P=0.055) . All through the shutdown, however, consumption of potatoes chips, red meat, and sugary drinks rise dramatically (P values ranging from 0.005 to 0.001). Time spent participating in sports reduced by 2.30 (SD 4.60) hours per week (P = 0.003). ~~, but~~ B~~b~~ed time rose by 0.65 (SD 1.29) hours per day (P = 0.003)~~,~~. The amount of dwell period in front of the screen rose by 4.85 (SD 2.40) hours / day (P 0.001)(10).

Effect of covid19 in children

The novel coronavirus epidemic had a wide-ranging effects and consequence that go far beyond the virus itself. Due to the harmful nature of living in relative isolation, those youngsters already suffering with obesity have been placed in a~~n almost~~very difficult s~~cenario~~ituation. It is critical that health care practitioners and policymakers recognize that juvenile obesity is an extremely important issue.~~more than just an increase in calorie consumption, a lack of physical exercise, and a resulting energy imbalance;~~ It~~it~~ involves a complex set of elements that, when combined, produce the ideal obese genic storm. This life-altering epidemic has exacerbated the storm, which will regrettably have far-reaching implications when youngsters approach adulthood.(10)

The corona virus ~~threatens an enormous acute care crisis in which~~ was and is a serious threat that has infected hundreds of thousands of people ~~might become infected~~around the world, sometimes fatally.~~,~~

Comment [John Scze6]: Insert you comments on this Italian study. Perhaps this is another opportunity for you to drive you point that this is a global issue. I have given you a couple of ideas if you like.

Comment [John Scze7]: What are your comments on this reduction in activity? This is a good spot for them.

Comment [John Scze8]: I do not think this is bad in and of itself. What are your comments? I would say children often stay up to late playing games and watching movies.

Comment [John Scze9]: Is this unique to Italy. What about your local experience?

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Comment [John Scze10]: I'm not sure policymakers or health practitioners see the bigger picture but it is better not make assumptions about your audience. Just let them know what you want them to see/understand about juvenile obesity. Add into this paragraph your thoughts on the issue to better help local and global officials and colleagues understand.

~~and tens of thousands of people might die~~.(11) COVID-19's effects on the poor and the role of society have been addressed~~.~~ (~~12~~)~~. The COVID-19 virus gets~~and infects people of all ages~~ infected~~ (12,13).Closure of schools as a result of the corona virus (COVID-19) epidemic has affected more than 1.5 billion children's schooling ~~and young people~~ throughout the world. It ~~should be~~ is obvious that school closures will have detrimental affect on poorer students who do not have access to private teaching that in some cases never stopped during lock-downs (eg private tutors, colleges, schools). It is concerning that officials would continue to lock-down schools and prevent unvaccinated children from receiving an education. Not only does education have~~ve~~ the potential to aid in uplifting the children of poor families it can help make their families and communities stronger. ~~closing~~ the achievement gap between low- and high-income pupils.(14).

Comment [John Scze11]: I am quite opposed to the ideas of communism/socialism ("narrowing the gap" is usually how they refer to things) God created us all differently and special in our own way. I'm content with my brother or sister doing better in life and do not think I would do better if they were knocked down.

The hidden impact of covid-19 in children

Globally, it is was found that about 8 in 10 children felt that they were learning little or nothing at all, and about two thirds of parents and caregivers reported their child had received no contact from teachers since their schools closed. Three-quarters of households lost income as a result of COVID-19, and the vast majority of households (96%) reported having trouble paying for an essential items or service. This brief global review~~Results also~~ shows the~~a~~ significant impact on the psycho-social well-being~~wellbeing~~ of children and their caregivers. More than 8 in 10 children reported an increase in negative feelings. One third of households had a child or caregiver reporting violence in the home. Children reported that violence was higher when schools were closed, compared to when they were attending in person.

Comment [John Scze12]: Why might this be? Caregiver burn out? Violence could be detected if child had to attend school so potential offender would think twice about harming child?

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Recommend including:

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