

## Interplay between body mass index and COVID-19, a harbinger of danger for Pakistan

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Madam, Coronavirus disease-19 (Covid-19), is a viral respiratory illness caused by severe acute respiratory syndrome virus 2(SARS-CoV-2). This highly contagious virus is primarily transmitted through respiratory droplets from an infected individual, and has, at present, claimed over 2.9 million lives worldwide. Various studies in the past have revealed numerous risk factors associated with Covid-19 which include cancer, chronic lung disease, chronic kidney disease, chronic liver disease, diabetes (type 1 or type 2), and heart conditions etc.<sup>1</sup>

There has been growing evidence which suggests obesity as a significant risk factor for severe covid-19 disease but due to potential collider bias there is a probability that this association might be fictitious. However, recent literature surfaced a cohort conducted by Gao, M., et al. comparing data from a population of around 7 million in England, which assessed the association between unit change in Body Mass Index (BMI) and severe Covid-19 infections. It's results showed a j-shaped association between BMI and hospital admissions due to Covid-19 and death while there was linear association between ICU admissions due to Covid-19 and BMI. This goes on to show that, both overweight and underweight individuals are at higher risk of severe Covid-19 infections and subsequent hospitalization.<sup>2</sup>

These results and the fact that more than half of the population's BMI does not fall in the normal range (18.5-24.9) escalate the threat for Pakistan, as the country already has over a million cases of Covid-19 with a 2% death rate.<sup>3</sup> Studies show that 15% of children in Khyber Pakhtunkhwa, 48% in Quetta, Balochistan, 54% in rural areas of Sindh and 24% in urban areas of Pakistan were

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underweight<sup>4</sup> while a quarter of the total Pakistani population is either overweight or obese.<sup>5</sup>

Fortunately, this threat can be tackled by creating awareness among the urban and rural areas of Pakistan through campaigns led by influencers, companies that promote Corporate Social Responsibility (CSR), social media platforms, posters and banners in hospitals and through doctors. Furthermore, government relief funds and public private partnerships should be set up for rural areas, specially in Sindh since it has the highest percentage of underweight children. In order to deal with obesity, lifestyle modifications which include a balanced diet with regular exercise is required.

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