

COVID-19 Pandemic in Lifestyle

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The spread of the COVID-19 (SARS-CoV-2) pandemic worldwide has forced countries to handle the crisis in different ways, declaring a national state of alarm and establishing a mandatory home lockdown. The COVID-19 infection represents a strong stress stimulus, which can induce high levels of perceived risk, fear, and anger, while forced quarantine at home may provoke an experience of boredom and loneliness, eliciting negative mental and behavioural responses in people. Furthermore, the more time people remain at home, the more intense the resulting mental, emotional and lifestyle problems.

Keywords: COVID-19 ; lifestyle ; unhealthy habits ; mental health ; personalized medicine ; sociology ; sociology of health

1. Introduction

The spread of the COVID-19 (SARS-CoV-2) pandemic worldwide has forced countries to handle the crisis in different ways, declaring a national state of alarm and establishing a mandatory home lockdown. However, the COVID-19 infection represents a strong stress stimulus, which can induce high levels of perceived risk, fear, and anger, while forced quarantine at home may provoke an experience of boredom and loneliness, eliciting negative mental and behavioural responses in people ^[1]. Furthermore, it seems that the more time people remain at home, the more intense the resulting mental, emotional and lifestyle problems ^[2]. This situation has disrupted life and consequently altered multifaceted lifestyle behaviours. Therefore, collateral damages of the pandemic simply inadequate nutrition, including the risk of being overweight, underweight, addiction to screens, social isolation, disrupted sleep, and reduced physical activity with increased sedentariness. These indirect effects of the COVID-19 outbreak have a potential mental health impact, particularly for vulnerable groups, and require effective and targeted measures.

2. Weight-Related Lifestyle Behaviors and the COVID-19

During the worldwide COVID-19 crisis and lockdown restrictions, health-protective behaviours against weight gain, such as eating a healthy diet, may be more challenging to achieve and maintain. A decrease in dietary diversification, with an aggravating effect of lockdown on disrupted consumption patterns, elevated symptoms of generalized anxiety disorder, decreased physical activity levels and perceived weight gain, enhances the risk of overweight and obesity ^[3]. More time at home may cause additional eating, along with sedentariness. Stress-related to fear and the continuous bombardment of news by the media about the spread of the pandemic may push one to consume so-called “comfort foods” (mainly composed of sugar or fats) or bring about a greater consumption of snacks between meals, with a consequent heightened risk of developing obesity ^[4]. In a cross-sectional survey conducted in the United Kingdom, 79% of participants reported a decline of at least one of five weight gain protective lifestyle behaviours studied (eating healthy, bingeing on food, exercising, sleep, alcohol consumption). In particular, subjects diagnosed with psychiatric illness or obesity resulted in an increased risk of weight gain during the COVID-19 crisis ^[5]. A web-based survey conducted in France suggests that weight gain may also interpret as the result of the observed increase in addiction-related habits (caloric/salty food intake, screen use, substance use) during lockdown ^[6]. Similarly, a Spanish study observed a rise in emotional eating during the months of confinement, “food craving” (the desire to consume a specific kind of food), and eating to compensate for boredom or anxiety with an increase in weight ^[7]. People living with obesity and mental health problems may be more likely to show lifestyle behaviours associated with weight gain during the COVID-19 crisis ^[8]. It described that a higher BMI (body mass index) was predictive of more significant overeating and lower physical activity ^[8].

3. Sleep Disruptions Due to COVID-19

Sleep disturbances have affected a significant number of people around the world during the COVID-19 pandemic lockdown. The loss of daily routines due to home confinement and change in work, family habits and financial concerns, the limited exposure to natural light, and reduced opportunities to exercise may negatively affect sleep. Alterations in daily

schedules have impacted circadian rhythms and energy balance with a significant repercussion of confinement on several external synchronizers of the biological clock [9]. More frequently observed sleep symptoms have been insomnia/disrupted sleep, daytime symptoms such as dozing off unintentionally in the day, difficulties falling/staying asleep, later bedtimes, abnormal behaviours in sleep, sleep-disordered breathing, restless legs, sleep phase disturbances, and nightmares [10]. Sleep quantity and quality were corrupted during the pandemic [11]. An Italian study found that more than half of the population had reduced sleep quality and sleep habits during the COVID-19 lockdown. Related risk factors for poor sleepers were female gender, living in Central Italy, loss of a close one because of COVID-19 infection, changed sleep-wake rhythms, elevated levels of stress, anxiety, and depression [12]. A study conducted in South Korea has demonstrated that the total time participants spent sleeping was significantly higher than before the pandemic; nevertheless, since satisfaction with sleep decreased, they may have had a poor sleep quality [13]. Particularly in students, the increased use of social media applications led to a significant delay in falling asleep, usually at much later hours than usual, a lengthening of the duration of sleep and a general feeling of tiredness [14]. A reported impact on mental health (depressive symptoms and anxiety) was most strongly associated with more difficulties falling asleep, sleep disruption, nightmares, and daytime sleepiness. It has been suggested that worsening sleep quality may partly mediate the association between sedentary behaviours (physical inactivity, high TV viewing, high computer/tablet use) and mental health indicators (loneliness, sadness, anxiety) [15].

4. Consequences of COVID-19 Lockdown on Lifestyle Behaviors of Children and Adolescents

The closure of schools due to lockdown has reduced possibilities for physical activities and social life. Children and adolescents have been deprived for a long time of educational environments, social activities, and consequently contact with peers, with a disruption of daily schedules and a significant reduction of affective, cognitive, and physical stimuli. Decreased organized physical activity, increase in sedentariness, screen time, and consumption of caloric and sugary food with a consequent higher susceptibility to weight gain may enhance the significant problem of childhood obesity [16].

Nei bambini in età prescolare, si è osservato durante la quarantena una riduzione dell'efficienza del sonno, un aumento dei problemi internalizzanti (cioè comportamenti antisociali) o esternalizzanti (cioè comportamenti ansiosi o depressi), e una riduzione dell'attività fisica totale [17], mentre è stato dimostrato che livelli più elevati di attività fisica sono stati associati a un miglioramento dello stato dell'umore tra i bambini e gli adolescenti nella pandemia [18]. C'è anche preoccupazione per la scoperta che lunghi periodi di restrizioni alla libertà di movimento possono influenzare negativamente l'idoneità cardiorespiratoria nei bambini e negli adolescenti, un segno distintivo fondamentale della salute nei giovani, misurato attraverso un ritardo durante il confinamento COVID-19 del normale sviluppo di VO₂ max (massimo consumo di ossigeno). Alti livelli di VO₂max nell'infanzia e nell'adolescenza sono associati a valori più bassi dei fattori di rischio cardiovascolare (circonferenza vita, pressione sanguigna, colesterolo totale, indice di massa corporea) e minori probabilità di sindrome metabolica in età avanzata; pertanto, i giovani devono raggiungere livelli sufficienti di attività fisica per preservare indicatori di salute affidabili [19].

In uno studio trasversale che ha indagato sulla prevalenza delle abitudini di vita e dei problemi di salute mentale negli adolescenti cinesi durante la pandemia di COVID-19, è stato osservato che modelli nutrizionali migliori e un'attività fisica moderata erano entrambi associati a livelli più bassi di sintomi depressivi e ansiosi. Al contrario, l'attività altamente attiva è rimasta associata a sintomi di insonnia, depressione e ansia inferiori [20].

Il comportamento sedentario può avere gravi conseguenze sulla psicopatologia esistente ed emergente nei bambini e negli adolescenti, poiché è stato annoverato tra i possibili fattori di rischio per lo sviluppo di insonnia, depressione, ansia e psicosi [21]. I potenziali benefici per la salute mentale di mantenere un effetto positivo, impegnarsi in attività fisica e limitare il tempo libero davanti allo schermo sono stati evidenziati per i bambini durante la pandemia, in particolare per i bambini con sovrappeso/obesità [22]. Esistono alcune strategie promettenti per combattere il comportamento sedentario nei giovani, ad esempio l'organizzazione di opzioni di spazio pubblico con il distanziamento fisico individuale, attività di esercizio tramite videoconferenze dal vivo, videogiochi a gioco attivo che consentono di impegnarsi in attività di esercizio indoor e soprattutto un'adeguata educazione dei genitori sui benefici per la salute mentale delle attività regolari [23]. Una migliore comprensione dei cambiamenti comportamentali e di socializzazione degli studenti durante il blocco COVID-19 è fondamentale per programmare strategie critiche ed efficaci per la gestione della salute mentale dei bambini. Dormire e mangiare, tempo davanti allo schermo, attività fisica e tempo libero rappresentano le variabili più significative che influenzano le molte conseguenze della chiusura delle scuole e del lockdown [24].

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