

**THE EFFECT OF COVID – 19 QUARANTINE
ON BEHAVIOR HABITS AMONG POPULATIONS**

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Abstract

Social isolation due to pandemic is a potential factor that contributes to weight gain by unfavourable changes in lifestyle such as stress-induced eating, excessive screen time, combined with active food consumption, sedentary behaviour and reduced opportunities for physical activity and sport. The loss of freedom and control, a sense of being trapped, and ultimately the separation from society may have dramatic effects and can be detrimental including significant psychological and psychiatric disturbances with long-term consequences.

Key words: *COVID- 19 pandemic, behavioural habits, population, self-quarantine, social distancing*

INTRODUCTION:

Social distancing and self-quarantine were encouraged to level the epidemic curve in the hope of moderating the effects the virus may have had on the healthcare system, as well as on morbidity and mortality indicators. This caused schools, universities, tourist places, offices and companies and any non-essential stores to close. In some countries citizens were forbidden to leave their homes, allowing only a visit to a pharmacy, grocery store and supermarket or outpatient clinic, emergency center, hospital. However, only essential stores were open, where individuals had to take precautions by wearing a mask and gloves, and standing two metres apart from each other in order prevent catching the virus. In stores for food products and pharmacies were introduced daily hours of disinfection and sanitizing agents were placed at the front entrance of every store and public building. More stricter guidelines had been implemented across the globe including periodic or daily sanitizing of the squares, streets, public areas, sidewalks, and other surfaces exposed to the contact of large flows of people. All these epidemiological measures have had a significant impact on every aspect of citizens' lives - social, mental, physical, cultural, existential. According to a significant number of scientific research, COVID-19 quarantine has mainly affected individual behavioural habits in a negative direction.

GOAL:

The presented study aims are to examine the effects of COVID-19 quarantine on behavioural habits amongst the general population.

MATERIALS AND METHODS:

In order to achieve the set goal, online and literature searches were made. The local and foreign scientific articles were reviewed. Reports from international projects, expertise of medical institutions and organizations were reviewed and analysed.

DISCUSSION AND RESULTS:

Since the beginning of the global pandemic in March 2020, civilians had been made to go into quarantine and lot of people had been staying at home. Self-isolation has resulted in

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changes in individual lifestyle mostly affecting sleep patterns, psychological attitudes, diet and physical activity habits. At the same time, no country was immune from the economic damage caused by the coronavirus pandemic. For working people, quarantine has led to a change in their manner of dealing. Some people had to work from home, or to work part-time, and for many of them - to lose their jobs, because their employer closed or due to the bankruptcy of their business. As a result of the rapid implemented efforts to limit contact among individuals and many shutdown orders, Covid-19 outbreak has affected the unemployment rates in each demographic group, in every region and in every sector such as manufacturing, industry, trade, culture and the field of services. The pandemic has also caused an unprecedented crisis in education. Schools all over the world gradually started closing as part of measures to contain the spread of the virus and countries rapidly tried to turn to distance learning solutions. (1) Yet many of the world's children – particularly those in poorer households – do not have internet access, personal computers, TVs or even radio at home according to UNICEF. Students lacking access to the technologies needed for home-based learning had limited means to continue their education. The crisis revealed that most education systems were largely unprepared and ill-adapted to ensure continuity of inclusive education outside schools. (1) On the other hand, for school students, prolonged isolation at home and an online form of education has also provoked change in their established daily routine activities. This confinement is stressful in itself as individuals are sharing the limited space for a prolonged period with few close contacts, but having constant access to news about the dramatic and negative nature of coronavirus infection around the world, much of it through electronic media. (2) Lockdown resulted in a drastic increase in "screen time", especially among employees and students, which inevitably reflects on their mental health and state of sleep and wakefulness. Longer time spent looking at screens is associated with shorter sleep and lesser sleep efficiency. (3) A shift to later bedtime, delayed sleep onset, reduction in nighttime sleep duration and increased daytime napping have been reported in a study by Gupta R. and co-authors.(2) Sleep occupies about a third of our lives and is vital to fulfil physiological needs, particularly in terms of cognitive function and mood. Disrupted sleep is very distressing for most individuals and may have a negative impact on their quality of life. (4) Home confinement is known to produce such effects due to disruption in circadian rhythm and homeostatic process (reduced sleep pressure) (4, 5) The circadian pacemaker drives rhythms such as sleep-wake activity and endocrine secretions, which are markedly affected by light and darkness. (4, 6- 8) Bright light in the evening will delay the 'clock' and bright light in the morning is necessary to synchronise individuals to a 24-hour rhythm. Staying up late at night or all night in the presence of artificial light is a disturbance in the "natural" daily light/dark cycle, which is responsible for an impaired melatonin secretion, as well as a disruption of the circadian oscillator.(9- 12) When there is a lack of sleep or the duration of sleep is shorter than usual, the action of the second regulator- homeostatic process is increased and compensated by extending subsequent sleep and by raising its depth. (13, 14) The organization of work schedules, shift work, including work at night interferes with individual sleep preferences. To worsen the problem, the internet, email, video games and television also contribute to this sleep deficiency. It has been established that some people experienced greater time flexibility regarding social schedules due to, working at home, leading to improved individual sleep-wake timing, whereas others are experiencing sleep restriction and circadian misalignment. (15) Lack of sleep can impair psychological functioning, alters the memory, concentration and decision making, leads to mood changes, disrupts the immune response and makes individuals more susceptible to contracting the virus. (16) The pandemic situation itself predisposes society to increased exposure to factors that may affect and decrease mental health.(17) Individuals had to self-isolate and quarantine at home, avoid

social activities for sports and leisure that they had participated in previously, and follow the new guidelines to decrease the spread of the virus. The general public may also, receive biased information such as daily statistics concerning COVID-19 infection and deaths reported from the news or social media. With the lifestyle changes and biased information, the general population may avoid contact with other individuals due to a phobia of getting the infection. The issue is even more complicated and delicate in patients with diagnosed psychological disorders. These anti-epidemic restrictions and daily mass media attack may trigger a psychological problem in people with visibly good health, as well as may lead to the appearance of a new episode or complication in patients with mental health conditions. (18-21) Many scientific studies have reported that perception of uncertainty, anxiety and depressive feelings are influenced by a number of predictive factors amid the COVID-19 pandemic, such as age, religious beliefs, availability of family support, high loneliness, being divorced/widowed, being single, lower household income, living in urban areas, perceived risks of unemployment, poor self-rated health, lower self-efficacy to protect themselves, worry about being infected, quarantine status, having an acquaintance infected with COVID-19, a past history of mental stress or medical problems, the presence of chronic conditions, and the presence of specific physical symptoms.(1, 17, 20, 22-30) The combination of psychological distress, insomnia and/ or mental health problems especially the onset of anxiety and depression due to this unprecedented situation had an impact also on the eating behaviours. (31) Social distancing affects nutrition patterns by promoting snacking, eating palatable and home-cooked meals, increasing the use of food delivery and the number of daily meals. (32- 35) The sudden start of the lockdown triggered panic buying and stockpiling of food as a coping mechanism in conditions of uncertainty and obscurity. (36-39) This scenario coupled with changes in eating routines influenced individual behaviours. Consuming unhealthy foodstuffs, eating out of control, snacking between meals were exhibited in people from different continents as noted by Cecchetto C. and co- authors. Increased food intake, particularly of pleasurable, energy dense victuals is a potential behavioral response to environmental stress.(40- 43) It is hypothesized that hyperpalatable eatables may serve as “comfort food” that acts as a form of self-medication to dispel unwanted distress. (40) This effect may be exacerbated in overweight or obese individuals. Emotional distress, limited social contacts and poor quality of life during lockdown have led to increased self-reported emotional eating and more frequent binge eating. (31) Additionally, the stress is an important key factor in the development of addiction to delicious food rich in fats and / or sugars and it contributes an elevated risk for overweight, obesity and other metabolic diseases.(44, 45) High levels of psychoemotional stress combined with unhealthy nutrition models and sedentary behaviour can provoke a huge variety of health conditions such as cardiovascular diseases, arterial hypertension, stroke attack, immune dysfunction, and accelerated rates of disease progression.(46- 50) The presence of these diseases and other comorbidities associated with physical inactivity can worsen the quality of personal health during the outbreak. (51- 53) Despite highly variable measurement methods, which have been applied in different research, it was described a significant decreased level of self-reported or objectively assessed physical activity, regardless of geographic location, health status, race, gender and age as noted by Lancet. Quarantine measures have influenced the ways in which people can be active and have led to an increased frequency of sedentary behaviour. (54, 55) Self-isolation further reduces the amount and intensity of bodily movement, resulting in a general increase in inactivity. (56, 57) Some studies have assessed the importance of physical activity related to mental health in the period of a pandemic. (51, 58-61) From a psychological point of view, exercise gives people the opportunity to have “time out” from the stressor, and regular exercise improves self-efficacy to overcome the difficulties they face. (62) Restricting

both indoor and outdoor sports, fitness and collective physical activities created additional prerequisites for the manifestation of more mental health problems and difficulties with maintaining a healthy weight. (63- 66) Changes in mental wellbeing, mood and feeling and life satisfaction were greatly correlated with changes in lifestyle behaviours, including social participation, physical activity, diet, and sleep according to a study by Ammar A and co-authors. (56) The negative psycho-emotional effect of COVID-19 home confinement have been accompanied by a negative effect on the majority of daily routines and habits, involving social exclusion, increasing sedentary activity and screen time, pure sleep quality and lower propension of healthy diet.

CONCLUSION:

In response to the COVID-19 pandemic, many countries around the World have imposed restrictive measures to maintain social distancing and to stay at home in order to reduce the spread of the viral infection. Ultimately, even though the purpose of mandatory policy during the pandemic is to protect societies and save lives, it can provoke other potential physical and psychological threats to health. Research has revealed that the COVID-19 lockdown has led to psychological distress, poor quality of sleep, unhealthier food choices and dietary pattern, and significant tendency to sedentary behaviour, and physical inactivity. Although the World Health Organization (WHO) had developed specific recommendations on nutrition and physical activity for self-quarantine and isolation in this unprecedented period, it was too complicated and difficult to follow such guidelines.

ETHICAL CONSIDERATIONS:

Ethical issues (including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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